



*Ice # 64-A-1462*

*Bot 5*

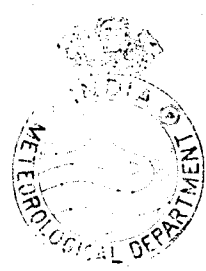
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Director General of Observatories

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h.	m.	s.	km	
January 1932								
01	Chatra	Z	eP	23	51	30	7750	Slight
02		NE	eS	00	00	39		
01	Bokaro	NE	iP	23	51	50	8030	Slight
02			iS	00	01	13		
01	Dehra Dun	NE	eP	23	51	52		Slight
02			e	00	01	07		
01	New Delhi	ZE	eP	23	51	54	8180	Slight, Rarefaction
02		E	iS	00	01	24		
01	Hyderabad	N	eP	23	52	44	8980	Slight
02		NE	iS	00	02	52		
		N	SS		07	56		
01			Lr		13	59		
			M		23	46		Per.=16 sec. Gr.dis=6 μ
		E	M		23	47		Per.=17 sec. Gr.dis=6 μ
01	Poona	Z	iP	23	52	50	9260	Slight, rarefaction
02		N	iS	00	03	11		
			PS		03	54		
			Lq		14	58		
			M		25	39		
01	Bombay	NE	eP	23	52	52	9260	Slight
		E	e		55	36		
02		NE	eS	00	03	13		
			PS		03	58		
		N	M		27	36		Per.=20 sec. Gr.dis=4 μ
02	Calcutta	E	i	00	01	08		Slight
			e		01	50		
			e		19	04		
02	Shillong	Z	eP	02	25	17		Slight, distant
02	New Delhi	Z	iP	05	43	20		Slight, rarefaction
			i		43	23		
			i		43	38		
02	Shillong	Z	iP	03	15	19		Slight, distant rarefaction
	New Delhi	Z	iP	03	16	53		Tremor, rarefaction
02	Shillong	Z	eP	11	05	39		Slight, distant
02	Shillong	Z	e	11	29	23		Slight, tremor
02	Shillong	Z	iP	12	00	25		Slight, distant rarefaction
02	New Delhi	Z	eP	12	15	03		Slight, compression
	Shillong	Z	e	12	15	50		Slight, tremor
02	Epc: 80°N, 24.3°E. Svalbard region.							
	-H 12h 22m 58.7s, -h about 43 km (USCGS)							
	New Delhi	Z	iP	12	32	33		Slight, compression

DATE	STATION	COMPT.	PHASE	G	M	T	Δ	REMARKS
				h.	m.	s.	km	
January 1962								
02	Chatra	Z	iP	12	32	58		Slight, distant
	Contd.		i		33	42		
	Shillong	Z	iP	12	33	12		Slight, distant Rarefaction
02	Shillong	Z	iPg iSg	12	43	57	170	Slight, rarefaction
	Dehra Dun	NE	e	12	44	01		Slight
			e		48	47		
02	Visakhapatnam E		e	12	57	05		Slight
			e	13	00	48		
	Hyderabad	E N	M M	13	00	32		Per.=21 sec, Gr. dis=11 μ
					00	38		Per.=18 sec, Gr. dis= 7 μ
	Madras	E	e	13	02	29		Surface waves
02	Shillong	Z	eP	16	42	06		Slight, local
02	Shillong	Z	iPg iSg	18	14	34	220	Slight, compression
					15	00		
02	Shillong	Z	eP	19	11	47		Slight, distant
	Chatra	Z	eP	19	12	17		Slight, distant
02	Shillong	Z	iPg iSg	19	18	39	130	Slight, compression
					18	55		
02	Shillong	Z	e	21	11	59		Slight, tremor
02	Shillong	Z	eP	21	23	52		Slight, distant
02	Shillong	Z	ePg	21	54	18		Slight, local
02	Shillong	Z	e	23	23	16		Slight, tremor
03	New Delhi	Z	eP	01	16	41		Slight, compression
03	Shillong	Z	ePg iSg	02	37	51	190	Feeble
					38	14		
03	Shillong	Z	i	07	02	42		Slight, distant rarefaction
03	Shillong	Z	i	07	06	13		Slight, distant compression
03	New Delhi	Z	eP	07	51	52		Slight, rarefaction
03	Shillong	Z	iP	11	37	52		Slight, distant rarefaction
03	Shillong	Z	iP	11	52	45		Slight, distant compression
03	Calcutta	E	e e	12	52	43		Slight
					58	49		

DATE	STATION	COMPT.	PHASE	G M T h. m. s.	$\Delta$ km	REMARKS
January 1962						
03	New Delhi	Z	iP i	14 48 33 50 09		Slight, rarefaction
03	Chatra	Z	eP	15 14 30		Slight
03	Shillong	Z	iP	15 26 24		Slight, distant
03	Epc: 52.2°N, 177.5°E. Rats Islands, Aleutian Islands. -h = 68 km. -H = 17h 53m 05.3s (USCGS)					
	Shillong	ZE	iP i	18 03 59 08 43		Slight, compression
	Chatra	Z	iP	18 04 13		Compression, distant
	New Delhi	Z	iP	18 04 38		Slight, rarefaction
03	Bombay	NE	e	18 16 00		Slight
03	Shillong	Z	iP	19 25 07		Slight, distant rarefaction
03	Shillong	Z	iP	19 43 32		
03	Shillong	Z	iP	20 59 41		Slight, distant compression
03	Shillong	Z	i	21 36 48		Feeble, tremor
04	Shillong	Z	iP	00 03 21		Slight, distant compression
04	Shillong	Z	iP	01 18 11		Slight, distant rarefaction
	New Delhi	Z	eP	01 19 38		Tremor, compression
04	Shillong	Z	iP	04 23 35		Slight, distant compression
	New Delhi	Z	iP	04 24 59		Slight, compression
04	Epc: 33.9°N, 135°E. Near Shikoku, Japan (Felt) -H = 04h 35m 42.6s, -h = about 56 km (USCGS) Mag: 6 (Berk)					
	Tocklai	E	eP	04 42 43		Distant
	Shillong	ZE	iP PP N Z E i i	04 53 59 44 25 48 47 48 59 49 13 50 05	4140	Initial ground motion towards North, East and rarefaction
	Chatra	ZNE NE	iP PP PcP PPP S PPS SS	04 43 28 45 02 45 21 45 32 49 43 50 00 52 45	4590	

DATE	STATION	COMPT.	PHASE	G	M	T	$\Delta$	REMARKS
				h.	m.	s.	km	
January 1962								
04	Chatra	NE	Lq	04	53	00		
Contd	Contd		SSS		53	23		
			Lr		55	05		
			M		53	00		
	Calcutta	E	iP	04	43	36	4720	
			PP		45	24		
			PcS		49	31		
			eS		49	59		
			SS		53	01		
			Lq		53	31		
			Lr		55	24		
			M		58	31		
	Bokaro	NE	iP	04	43	17	4920	
			i		44	05		
			PP		45	32		
			PPP		46	14		
			e		49	22		
			S		50	22		
			PS		50	29		
			PPS		50	36		
			SS		53	37		
			Lq		54	22		
			M	05	00	12		
			Mn		05	26		
	Port Blair	N	e	04	43	54		Slight
	Visakhapatnam	NE	iP	04	44	26	5550	Initial ground motion towards North and East
			PP		46	20		
			PPP		47	27		
			iS		51	37		
		E	PS		51	47		
			PPS		51	56		
			SS		55	19		
			SSS		56	55		
	New Delhi	ZNE	iP	04	44	27	5440	Moderate, initial ground motion towards North, East and rarefaction
		ZE	PP		46	25		
			PcS/ScP		49	45		
		N	iS		51	31		
			PPS		51	49		
		ZE	SS		55	12		
		Z	Lr	05	01	01		
	Hyderabad	NE	iP	04	44	55	5730	Initial ground motion towards North and East
		E	PcP		45	55		
			PP		46	54		
			PcS		49	57		
			PPS		52	36		
			SS		56	10		
			e		58	18		
			SSS		58	36		
		N	Lr	05	00	45		
		E	Lr		00	57		
		N	M	04	44			Per=18 sec. Gr.dis=12 $\mu$
		E	M	04	46			Per.=18 sec. Gr.dis=15 $\mu$
	Madras	E	iP	04	45	04	6080	Initial ground motion towards East.
			PcP		46	04		

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h.	m.	s.	km	
January 1962								
04	Madras	E	PP	04	47	09		
Contd.	Contd.		PPP		48	29		
			iS		52	43		
			PS		52	53		
			PPS		52	59		
			ScS		54	46		
			SS		56	25		
			Lq		58	27		
			Lr	05	00	51		
			M		05	28		
	Poona	Z	iP	04	45	19	6220	
		N	PP		47	34		
			PPP		48	56		
			eS		53	07		
		E	PS		53	25		
		N	PPS		53	35		
			ScS		54	59		
	Bombay	NE	eP	04	45	24	6310	Slight
			e		47	24		
		E	e		48	47		
		N	PPP		48	55		
			eS		53	17		
		E	PS		53	32		
			PPS		53	56		
			e		55	03		
			SS		57	18		
			SSS		59	42		
		N	e	05	05	39		
			M		09	25		Per=15 secs, Gr.dis=5 μ
		E	M		12	25		Per=15 sec, Gr.dis=3 μ
	Kodaikanal	E	e	04	52	52		Tremor
04	Epc: 5°S, 130.4°E. Banda Sea. -H = 07h 34m 44.4s							
	-h about 222 km (JSCGS)							
	Shillong	Z	eP	07	43	04		Slight, distant
	Chatra	Z	iP	07	43	35		Slight, compression Distant
	New Delhi	Z	iP	07	44	35		Slight, compression
04	New Delhi	Z	eP	13	28	53		Slight, compression
			i		30	29		
04	Shillong	Z	i	13	21	14		Slight, tremor
04	Shillong	Z	i	18	19	30		Slight
04	Shillong	Z	i	19	43	15		Slight
04	Shillong	Z	i	19	59	27		Slight
04	Epc: 1.6°S, 99.6°E. Near Coast of Sumatra							
	-H = 20h 00m 54.4s, -h about 59 km (USCGS)							
	Shillong	Z	iP	20	06	44		Slight, distant Compression

DATE	STATION	COMPT	PHASE	G M T h. m. s.	$\Delta$ km	REMARKS
January 1962						
04	Chatra	Z	iP	20 07 10		Slight, compression Distant
	Contd.					
	Bombay	N E	e e	20 15 02 17 25		Slight
04	Shillong	Z	i	21 17 05		Slight
04	Shillong	Z	eP	21 30 38		Slight, distant
04	Shillong	Z	eP	21 51 02		Slight, near
04	Shillong	Z	iP	22 22 22		Slight, distant compression
04	Shillong	Z	iP	23 41 31		Slight, distant compression
05	Tocklai	E	eP iS	00 12 50 13 09	150	Slight
	Shillong	Z	iP	00 12 54		Slight, near
	Chatra	Z ZN	iP S	00 13 49 15 01	690	Slight, compression
05	Bombay	E N E	e e e	00 47 14 50 55 51 21		Slight
05	Kodaikanal	E	e	01 21 10		Tremor
05	Shillong	Z	eP	02 59 53		Slight, near
05	Epc: 36.4°N, 71.2°E. Hindukush. -H = 04h 27m 05.4s, - h about 182 km (USCGS)					
	New Delhi	Z	iP	04 29 04		Slight, compression
	Chatra	Z ZNE	iP S	04 30 43 33 38	1740	Slight, compression
	Bokaro	NE	iP	04 31 04		Slight
	Poona	Z	iP	04 31 06		Slight, compression
	Shillong	ZE E	iP PPP iS Lq	04 31 34 32 10 35 09 35 25	2160	Slight, rarefaction
	Visakhapatnam	NE	eP eS e	04 31 50 35 34 35 42	2260	Slight
05	Shillong	Z	iP	12 03 51		Slight, distant compression
05	Dehra Dun	NE	e	13 11 51		Tremor
	Chatra	Z	eP	13 12 05		Slight, distant

DATE	STATION.	COMPT	PHASE	G M T h. m. s.	Δ km	REMARKS
05	Shillong Contd.	Z	iP	13 12 53		Slight, distant compression
05	Epc: 1.6°S, 100°E. Near South Coast of Sumatra - H = 14h 01m 41.7s. -h about 25 km (USCGS)					
	Port Blair	E	e	14 05 54		Slight
	Shillong	ZE	iP	14 06 35		Slight
		E	i	07 50		
			i	11 36		
	Madras	E	iP	14 07 01	2650	Slight, initial ground motion towards West.
			e	07 08		
			PP	07 34		
			PPP	07 44		
			eS	11 15		
			e	11 28		
			Lq M	11 42 15 01		
	Vosakhapatnam	NE	iP	14 07 08		Slight, initial ground motion towards South and East.
			i	07 52		
	Poona	Z	iP	14 07 12		Slight, rarefaction
	Bokaro	NE	eP	14 07 41		Slight
			i	12 27		
	Chatra	Z	iP	14 07 59		Compression
	Bombay	E	e	14 08 30		Slight
			e	13 25		
			NE	e	13 40 16 27	
	Dehra Dun	NE	e	14 09 13		Slight
			e	15 01		
	Kodaikanal	E	e	14 10 40		Tremor
	Calcutta	E	e	14 10 41		Slight
			e	12 03		
	Hyderabad	E	M	14 15 26		Per.=15 secs, Gr.dis=4 μ Per.=21 secs, Gr.dis=8 μ
		N	M	16 08		
05	Shillong	Z	ePg	14 51 00		Slight, near
05	Shillong	Z	iP	15 53 39		Slight, distant compression
05	Shillong	Z	iP	18 11 53		Slight, local
05	Shillong	Z	iP	19 39 41		Slight, distant rarefaction
05	Chatra	Z	Pg	20 13 01	110	Slight, compression
			Sg	13 15		
	Shillong	Z	ePg	20 13 54	440	Slight
			Sg	14 42		



DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
January 1962								
05	Shillong	Z	i	21	39	45		Slight
05	Shillong	Z	iP	23	19	23		Slight, distant rarefaction
06	Shillong	Z	iPg iSg	04	17	21 17 27	50	Slight
06	Shillong	Z	iP	07	16	57		Slight, near. Compression
06	New Delhi	Z	iP	07	20	50		Slight, rarefaction
06	Shillong	Z	iP	10	51	13		Slight, distant compression
06	Shillong	Z	ePg iSg	19	03	36 03 49	100	Slight
07	New Delhi	Z	iP •i	01	27	52 28 08		Slight, rarefaction
07	Shillong	Z	iP	02	05	53		Slight, distant rarefaction
07	Epc: 43.4°N, 17.4°E. Yugoslavia. -h about 32 km. - H = 10h 03m 12.8s. (U.S.C.G.S) 2 killed 19 injured, heavy damage centering around Makarsha.							
	Dehra Dun	NE	eP iS	10	12	00 19 14	5610	Slight
	New Delhi	ZE E Z	iP iS i	10	12	06 19 16 35 20	5540	Slight, compression Initial ground motion towards West
	Bombay	NE	eP eS	10	12	27 19 51	5860	Slight
	Poona	Z	iP	10	12	32		Slight
	Chatra	ZNE	iP S	10	13	01 21 14	6670	Compression
	Hyderabad	E	e S M	10	13	15 20 59 38 54		Per=18 sec. Gr.dis=3 μ
	Visakhapatnam	E	eP eS	10	13	27 21 43	6740	Moderate
	Shillong	Z	iP	10	13	33		Slight, distant compression
07	Shillong	Z	iP	15	11	01		Slight, distant compression
07	Shillong	Z	iP	15	30	14		Slight, near
07	Shillong	Z	iP	17	00	45		Slight, distant rarefaction

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
January 1962								
07	Shillong	Z	iP	19	16	51		Slight, distant rarefaction
07	Shillong	Z	iP	19	34	57		Slight, distant compression
07	Shillong	Z	eP	20	25	49		Slight, distant
07	Shillong	Z	eP	20	36	24		Slight, near
07	Shillong	Z	iP	21	10	10		Slight, distant compression
07	Shillong	Z	eP	22	10	34		Slight, distant
07	Poona	Z	iP	22	20	02		Tremor
	New Delhi	Z	eP	22	20	35		Slight, compression
08	Shillong	Z	i	00	36	10		Slight, near
08	Shillong	Z	eP	01	17	11		Slight, compression
08	Epc: 37°N, 74°E. Hindukush Region. H = 01h 15m 10s (Shillong)							
	New Delhi	Z	iP	01	19	18		Slight, compression
		ZE	i		21	12		
		Z	i		26	22		
			i	02	00	21		
	Poona	Z	eP	01	19	30	2010	Slight, rarefaction
			PP		19	44		
			PPP		19	51		
			iS		22	50		
			SS		23	03		
			SSS		23	20		
			Lr		23	33		
		M		25	01			
	Chatra	Z	eP	01	19	31	2080	Slight
		NE	S		22	57		
	Shillong	ZE	iP	01	19	35	2090	Slight, compression
		E	iS		23	02		
			i		27	03		
	Dehra Dun	NE	eP	01	19	47		Slight
			e		26	18		
	Visakhapatnam	E	eP	01	19	57	2200	Slight
		NE	eS		22	35		
	Port Blair	E	iP	01	20	05		Slight
	Bombay	NE	e	01	21	30		Slight, distant
		E	e		22	40		
		NE	e		26	28		
			e		31	28		

DATE	STATION	COMPT	PHASE	G h	M m	T s	Δ km	REMARKS
January 1962								
08	Calcutta	E	e	01	23	04		Slight
Contd.	Madras	E	e	01	23	25		Slight
	Hyderabad	E	M	02	03	56		Per=19 sec, Gr. dis=9 μ
	Kodaikanal	E	e	02	09	58		Tremor
08	Shillong	Z	iP	17	13	33		Slight, distant compression
	New Delhi	Z	eP	17	15	22		Tremor, compression
08	Shillong	Z	iPg iSg	19	31	05 31 12	50	Feeble
08	New Delhi	Z	iP	20	05	17		Tremor, compression
08	New Delhi	Z	iP	21	32	55		Slight, compression
08	Epc: 36.5°N, 70.9°E. Hindukush. - h about 208 km - H 22h 25m 11.1s. (USCGS)							
	New Delhi	ZE	iP	22	27	22	960	Slight, Initial ground motion towards West and Rarefaction
			iS		28	59		
		E	SS		29	29		
			SSS i		29 30	45 01		
	Dehra Dun	NE N	eP PPP Lq i SS SSS M	22	27	25 27 38 28 37 28 47 28 58 29 10 29 30		Slight
	Bombay	NE E NE	eP eS e	22	29	05 32 17 32 27	2070	Slight
	Poona	Z E	iP e i SS SSS Lr/PcP M	22	29	09 29 22 32 36 32 52 33 08 33 24 35 00		Slight
	Bokaro	NE	iP e e e e M	22	29	11 32 22 32 44 32 56 33 19 34 43		Slight
	Shillong	Z	iP iS	22	29	39 33 21	2440	Slight, rarefaction
	Visakhapatnam	E NE	eP eS	22	29	57 33 39	2440	Slight

DATE	STATION	COMPT	PHASE	G M T h m s	Δ km	REMARKS
January 1962						
08	Madras	E	e	22 35 07		Slight
Contd.			e	35 42		
			e	37 24		
			e	38 06		
09	Shillong	Z	i	02 56 14		Slight
09	Chatra	Z	iP	05 21 13		Slight, distant
09	Shillong	Z	ePg	09 05 43		Slight, local
09	Madras	E	e	12 44 19		Slight, near
09	Epc: 42.9°N, 144.8°E. Near Coast of Hokkaido, Japan - H = 12h 40m 49.3s -h about 78 km (USCGS)					
	Tocklai	E	eP	12 49 01		Slight, distant
	Shillong	ZE	iP	12 49 13		Slight, initial ground motion towards West and compression
			i	51 17		
			e	56 15		
			i	59 33		
	Chatra	Z NE	eP eS	12 49 33 56 33	5370	Slight
	Bokaro	NE	eP	12 49 54		Slight
			e	51 54		
			e	57 33		
			e	13 00 02		
	Dehra Dun	NE	eP iS	12 50 12 57 40	5880	Slight
	New Delhi	ZNE E Z ZNE	iP i i PP iS PPS	12 50 22 50 35 50 47 52 27 58 03 58 21	6110	Slight, initial ground motion towards South, West and compression
		E	ScS	13 00 26		
		Z	M	15 19		
	Madras	E	e	12 51 16		Slight
			e	53 47		
			e	59 56		
	Poona	Z	iP iS	12 51 18 59 51	7050	Slight
	Bombay	NE E N E	eP PP eS PPS	12 51 26 53 47 13 00 06 00 42	7290	Slight
			e	01 29		
			SS	04 15		
09	Port Blair	E	e	13 50 30		Slight
09	Chatra	Z	eP	14 38 16		Slight
			e	39 06		

DATE	STATION	COMPT	PHASE	G M T			$\Delta$ km	REMARKS
				h	m	s		
January 1962								
09	Shillong	Z	eP	15	01	41		Slight, distant
09	Shillong	Z	eP	16	52	46		Slight, distant
09	Shillong	Z	e	17	46	30		Slight
09	Shillong	Z	eP	18	06	21		Slight, distant
09	Shillong	Z	e	19	30	31		Slight
09	Epc: 20.30S, 66.20E. Mascarene Islands Region - H = 19h 49m 29.7s. - h about 25 km (USCGS)							
	Poona	Z	iP	19	56	58		Tremor, compression
	Chatra	Z	eP	19	58	31		Slight
	Shillong	Z	iP	19	58	38		Slight, distant compression
	Bombay	N	e	19	58	49		Slight
			e	20	03	06		
	Madras	E	e	20	02	16		Slight
	Dehra Dun	NE	e	20	02	55		Feeble
			e		06	02		
09	Shillong	Z	eP	22	06	46		Slight, distant
	Chatra	Z	eP	22	07	17		Slight, distant
09	Epc: 48.30N, 147.50E. Sea of Okhotsk. - h about 480 km - H = 22h 13m 51.5 s (USCGS)							
	Shillong	Z	iP	22	21	53		Slight, distant rarefaction
	Chatra	Z	iP	22	22	11		Slight, distant rarefaction
	Poona	Z	iP	22	23	51		Tremor, rarefaction
09	Shillong	Z	iPg	22	45	55		Slight, local
10	Chatra	Z	eP	01	22	11		Slight, distant
10	Shillong	Z	iP	02	45	38		Slight, distant compression
10	New Delhi	Z	eP	05	34	21		Slight
10	New Delhi	Z	eP	06	41	43		Slight
10	New Delhi	Z	eP	07	41	02		Slight, compression
10	New Delhi	Z	eP	08	21	20		Slight, rarefaction
10	Shillong	Z	iP	12	36	28		Slight, distant compression

DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
10	Chatra	Z	iP	12	45	53		Slight, distant rarefaction
10	Shillong	Z	iPg	17	34	38		Slight, local
10	Shillong	Z	iPg iSg	17	39	07 39 37	270	Slight
10	Shillong	Z	eP	18	45	23		Slight, distant
10	Shillong	Z	iPg iSg	22	02	03 02 40	330	Slight
11	Epc: 27°N, 85°E. - H = 03h 01m 29s (Shillong) 28.1°N, 84.8°E, Nepal. - H = 03h 01m 33.0s - h about 38 km (USCGS). Felt at Kathmandu							
	Chatra	Z ZNE	iP PP PPP S S* SS SSS	03	02	09 15 22 35 37 44 56	220	Slight, compression
	Bokaro	NE	iP PPP i S SS e M	03	02	37 50 01 31 44 07 15	500	Slight
	Calcutta	E	eP iS SS M	03	03	04 05 04 21	580	Moderate
	Shillong	ZNE E	iP iS M	03	03	07 19 54	690	Slight, initial ground motion towards East and compression
	Dehra Dun	Z N	eP Lq iS Lr SS SSS M	03	03	09 09 22 26 31 45 57	700	Slight
	New Delhi	ZE	eP S	03	03	15 30	710	Slight, initial ground motion towards East and rarefaction
	Tocklai	E	eP	03	03	34		Slight
	Sehore	E	iP iS SS Lr	03	03	37 17 31 34	960	Moderate

DATE	STATION	COMPT	PHASE	G h	M m	T s	Δ km	REMARKS
January 1962								
11 Contd.	Visakhapatnam	NE	iP	03	04	02	1050	Moderate, initial ground motion towards North
			PP		04	12		
			PPP		04	21		
			iS		05	51		
			SS		06	07		
			SSS		06	17		
			M		07	01		
Hyderabad	NE	iP	03	04	23	1210	Slight	
		eS		06	27			
		Lr		07	08			
		N	M	07	47			Per.=17 sec, Gr.dis=4 μ
		E	M	07	48			
Poona	Z	iP	03	04	43	1480	Moderate	
		iS		07	13			
		SS		07	28			
		Lr/SSS		07	40			
		M		08	53			
Bombay	E	eP	03	04	49	1470	Slight	
		PP		05	02			
		PPP		05	11			
	NE	eS		07	18			
		SS		07	36			
	E	SSS		07	48	Per.=9 sec, Gr.dis=11 μ	Per.=7 sec, Gr.dis=10 μ	
	NE	Lr		07	52			
	E	M		10	44			
	N	M		11	04			
	Madras	E	iP	03	05	08	1690	Moderate, initial ground motion towards East
PP				05	22			
PPP				05	29			
Lq				07	55			
iS				07	58			
SS				08	15			
SSS				08	27			
Lr				08	37			
M				09	54			
Rg				10	38			
Kodaikanal	E	e	03	09	02			
11	Chatra	Z	eP	03	38	27	240	Slight
			S		38	55		
	Bokaro	Z	eP	03	39	57		Slight, near
11	Epc: 43.5°N, 17.7°E. Near Coast of Central Yugoslavia							
	- H = 05h 05m 01.6s - h about 25 km							
2 killed 20 injured, moderate property damage at Padgora, plóce and Makarsha. (USCGS). Mag: 5½ (Pas).								
Dehra Dun	NE	e	05	14	04			
		e		20	54			
Bombay	NE	eP	05	14	18	5750		
		eS		21	40			
Poona	Z	iP	05	14	23			

DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
11 Contd.	New Delhi	ZE	eP	05	14	48		Initial ground motion towards East
		E	i Lr		21 30	54 10		
	Chatra	Z NE	eP S	05	14	56 22	6420	
	Bokaro	NE	eP iS	05	15	01 23	6530	
	Shillong	Z	iP	05	15	23		Distant, compression
	Visakhapatnam	E	eP eS PS PPS	05	15	23 23 23 24	6630	
	Madras	E	eP PPP iS SKS SS Lq	05	15	23 19 23 25 27 31	6800	
	Hyderabad	E N	e M M	05	22	47 48 51		Per.=17 sec, Gr.dis=4 $\mu$ Per.=15 sec, Gr.dis=6 $\mu$
11	Shillong	Z	iP	07	00	16		Slight, distant compression
	Chatra	Z	iP	07	00	26		Distant, compression
	New Delhi	Z	iP	07	00	52		Slight, compression
	Poona	Z	iP	07	10	44		Tremor, compression
11	Bokaro	NE	iP	09	01	06		Slight, tremor
11	Shillong	Z	iPg iSg	09	30	34 46	90	Feeble
11	New Delhi	Z	eP	10	11	34		Slight, rarefaction
11	Chatra	Z	iP S	10	53	03 33	270	Slight, rarefaction
11	Shillong	Z	iPg iSg	15	52	53 13	170	Slight
	Chatra	Z	eP S	15	53	26 13	430	Slight
11	Chatra	Z ZNE	iP S	17	12	43 12	260	Slight, compression
	Shillong	Z	iP	17	13	40		Slight, distant rarefaction
	New Delhi	Z	eP	17	14	59		Slight, rarefaction



DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
11	Chatra	Z	eP S	17	26	14 26 42	230	Slight
11	Shillong	Z	ePg eSg	21	09	01 09 07	40	Slight
11	Shillong	Z	e	22	42	29		Slight, tremor
12	Shillong	Z	ePg iSg	04	03	34 03 43	70	Feeble
12	Shillong	Z	iP	04	36	31		Slight, distant compression
12	Shillong	Z	iPg iSg	05	16	10 16 25	110	Slight
	Chatra	Z	eP	05	16	55		Slight, distant
12	Shillong	Z	ePg iSg	06	25	37 26 03	220	Slight
12	Chatra	Z	eP eS	07	03	26 03 55	250	Slight
	Shillong	Z	iP	07	04	23		Slight, distant rarefaction
	Bokaro	NE	eP i	07	04	29 04 58		Slight, tremor
	New Delhi	Z	iP	07	05	44		Slight, rarefaction
12	Epc: 20.2°N, 145.9°E. Mariana Islands. - h about 103 km - H = 08h 50m 31.2s (USCGS)							
	Shillong	Z	eP	08	59	14		Slight, distant compression
	Chatra	Z	iP	08	59	46		Slight, distant rarefaction
	New Delhi	Z	iP	09	00	46		Slight, compression
12	Epc: 52.4°N, 177.7°E. Rat Islands, Aleutian Islands. - H = 10h 55m 00.8s. - h about 49 km (USCGS)							
	Shillong	Z	iP	11	05	56		Slight, distant compression
	New Delhi	Z	iP	11	06	34		Tremor, rarefaction
	Bombay	NE	e	11	17	55		
12	Shillong	Z	iPg	11	11	24		Slight, local
12	Epc: 42.5°N, 143.0°E. Hokkaido, Japan - H = 13h 38m 11.6s. - h about 100 km (USCGS)							
	Shillong	Z	iP	13	46	21		Slight, distant compression

DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
12	Chatra	Z	iP	13	46	43		Slight, distant compression
	Contd.							
	New Delhi	Z	iP	13	47	30		Slight, compression
12	Chatra	Z	eP S	14	46 47	54 22	240	Slight
12	Shillong	Z	iPg	16	48	24		Slight, local
12	New Delhi	Z	iP	20	57	23		Slight, compression
	Chatra	Z	iP	20	58	25		Slight, distant compression
12	Shillong	Z	iPg	22	04	57		Slight, local
12	Chatra	Z	iP	22	13	31		Slight, distant compression
12	Chatra	Z	iP	22	36	28		Slight, rarefaction
12	New Delhi	Z	iP	22	45	57		Slight, compression
12	Shillong	Z	iPg iSg	23	39 40	35 10	310	Slight
13	Shillong	Z	iPg	01	02	43		Slight, local
13	Shillong	Z	iPg iSg	01	05 06	46 07	170	Slight
13	Shillong	Z	iP	02	25	23		Slight, distant rarefaction
13	New Delhi	Z	iP	04	56	54		Tremor, compression
13	New Delhi	Z	iP	05	00	08		Slight, compression
13	Shillong	Z	i	05	36	59		Slight, distant
13	Epc: 2.9°N, 124.8°E. Celebes Sea. - h about 25 km - H = 08h 18m 18.7s (USCGS)							
	Shillong	Z	eP	08	25	48		Slight, distant
	New Delhi	Z	iP	08	27	31		Slight, rarefaction
	Bombay	NE	e e	08	35 35	18 25		Slight
13	Shillong	Z	iPg	12	44	24		Slight, local
13	Shillong	Z	eP	17	45	19		Slight, distant
13	Shillong	Z	iP	18	11	07		Slight, distant compression
	New Delhi	Z	iP	18	12	26		Slight, rarefaction

DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
13	Chatra Contd.	Z	iP	18	12	34		Slight, distant compression
13	Shillong	Z	e	22	04	21		Slight
13	Chatra	Z	e	23	51	07		
13	Shillong	Z	iPg iSg	23	50 50	32 44	90	Slight
	Chatra	Z	iP	23	51	18		Slight, compression
	Tocklai	E	iP	23	51	44		Slight, near
14	Chatra	Z	eP eS	06	25 25	27 57	270	Slight
14	New Delhi	Z	iP	08	27	32		Slight, compression
14	New Delhi	Z	eP	08	55	40		Slight, rarefaction
14	Chatra	Z	iP Sg	12	41 41	40 46	130	Slight, rarefaction
14	Chatra	Z	eP	13	42	07		Slight, distant
14	Chatra	Z	iP S	14	14 15	39 07	250	Slight, compression
15	Bokaro	NE	iP	08	33	43		Slight
15	Shillong	Z	eP	08	36	13		Slight, distant
15	New Delhi	Z	iP	12	27	06		Slight, rarefaction
15	New Delhi	Z	iP	14	47	57		Slight, compression
15	New Delhi	Z	iP	14	49	34		Slight, rarefaction
15	Shillong	Z	iPg iSg	15	34 34	25 52	230	Slight
15	Shillong	Z	iPg	15	42	47		Slight, local
15	Shillong	Z	iPg iSg	16	00 01	59 11	90	Slight
15	Epc: 6°S, 146.8°E. Near East Coast of New Guinea - H = 18h 21m 12.8s. - h about 140 km (USCGS) Felt: Henaganofi, Madang, Lae.							
	Shillong	Z	eP	18	31	19		Slight, distant
	Chatra	Z	eP e	18	31 32	49 23		Slight
	New Delhi	Z	iP	18	32	14		Slight, rarefaction
15	New Delhi	Z	iP	20	42	14		Tremor, rarefaction

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
January 1962								
15	New Delhi	Z	iP	22	18	37		Slight, rarefaction
15	Shillong	Z	iP	23	07	35		Slight, distant rarefaction
	New Delhi	Z	eP	23	09	00		Tremor, rarefaction
16	Shillong	Z	iPg iSg	00	44	31 45 05	300	Slight
16	New Delhi	Z	iP	06	56	10		Slight, rarefaction
16	Shillong	Z	eP eS	08	08	28 08 50	180	Slight
16	Shillong	Z	eP	11	49	41		Slight, distant
16	Epc: 30.5°S, 177.9°W. Kermadec Islands. - h about 39 km - H = 11h 35m 41.3s (USCGS). Mag = 6½ (Pas).							
	Shillong	ZE	e i	11	53	13 12 00 14		Distant
	Chatra	Z NE	e e e	11	53	54 12 00 33 04 26		Distant
	Visakhapatnam	E	e e	11	54	06 12 03 45		
	Bombay	E	e e e NE E N	11	54	11 57 37 12 01 07 05 07 06 35 44 03 48 40		Distant Per=21 sec, Gr. dis=4 μ Per=19 sec, Gr. dis=3 μ
	Madras	E	e e e	11	54	14 12 03 51 09 28		
	New Delhi	Z	ePKF	11	54	27		Rarefaction
	Bokaro	E NE	i i	12	00	54 03 45		Slight, distant
	Dehra Dun	NE	e e	12	01	15 05 15		Slight
	Hyderabad	E	e M	12	04	18 32 02		Per=18 sec, Gr. dis=6 μ
16	New Delhi	Z	i	12	15	14		
16	Shillong	Z	eP eS	12	28	17 28 58	370	Slight
16	Kodaikanal	E	e	12	30	57		Tremor

DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
January 1962								
16	New Delhi	Z	eP	13	45	43		Tremor, rarefaction
16	Shillong	Z	eP	16	15	10		Slight, distant
16	Epc: 36.5°N, 70.3°E. Hindukush. - h about 235 km - H = 16h 51m 24.9s (USCGS)							
	New Delhi	Z	iP iS	16	53	41 55 22	980	Slight, compression
	Chatra	Z	iP e	16	55	14 58 14		Slight, near
	Shillong	Z	iP	16	55	57		Slight, distant rarefaction
16	Shillong	Z	eP	17	33	24		Slight, distant
16	Dehra Dun	NE	e	17	55	06		Tremor
16	Shillong	Z	iP	19	26	01		Slight, distant rarefaction
17	Shillong	Z	iP	13	28	07		Slight, distant compression
	Chatra	Z	iP	13	28	39		Slight, distant rarefaction
	Poona	Z	iP	13	29	26		Slight, rarefaction
	New Delhi	Z	iP i	13	29	36 29 37		Slight, compression
17	Shillong	Z	iP	15	10	37		Slight, distant compression
17	Epc: 4.3°N, 128.3°E. Molucca Passage. - h about 25 km - H = 15h 29m 06.6s (USCGS)							
	Shillong	ZE	iP	15	36	49		Slight, distant compression
	Chatra	Z	eP	15	37	27		Slight, distant
	New Delhi	Z	iP	15	38	33		Slight, compression
	Poona	Z	eP	15	38	38		Slight
	Bombay	E	eP eS e	15	38	40 46 26 47 04	6190	Slight
	Dehra Dun	NE	e e e	15	38	53 46 16 48 53		Slight
	Calcutta	E	e	15	39	14		Slight
	Bokaro	NE	i	15	39	40		Tremor

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
January 1962								
17	Madras	E	e	15	39	41		Slight
Contd.			e		44	49		
17	Epc: 3.9°N, 126.6°E. Molucca Passage. - h about 74 kms - H = 15h 43m 18.3s (USCGS)							
	Shillong	ZE	eP	15	50	46		Slight, distant rarefaction
	Chatra	Z	eP	15	51	24		Slight, distant
	New Delhi	Z	iP	15	52	29		Slight, compression
17	Shillong	Z	iP	16	27	43		Slight, distant compression
17	Shillong	Z	eP	16	56	57		Slight, distant
17	Shillong	Z	eP	17	59	53		Slight, distant
17	Shillong	Z	iPg	18	43	13		Slight, near
17	New Delhi	Z	iP	19	12	46		Slight, compression
17	Shillong	Z	iP	20	54	58		Slight, near
17	Shillong	Z	iP	20	56	44		Slight, distant compression
17	New Delhi	Z	iP	20	59	09		Slight, compression
17	New Delhi	Z	iP	21	00	23		Slight, compression
17	Shillong	Z	eP	21	01	09		Slight, distant
17	New Delhi	Z	iP	21	02	09		Slight, rarefaction
17	Shillong	Z	iPg iSg	21	29	50 30 01	80	Slight
17	Tocklai	E	ePg eSg	23	22	01 22 15	120	Slight
	Chatra	Z	eP	23	23	13		Slight
17	Shillong	Z	iPg iSg	23	28	19 29 02	390	Slight
17	Shillong	Z	iPg iSg	23	48	09 48 15	50	Slight
18	New Delhi	Z	iP	05	57	29		Tremor, rarefaction
18	New Delhi	Z	iP	05	57	45		Tremor, rarefaction
18	New Delhi	Z	iP	05	57	57		Tremor, compression
18	Shillong	Z	iP	07	30	34		Slight, distant
18	Shillong	Z	iPg iSg	12	56	49 57 11	180	Slight, rarefaction

DATE	STATION	COMPT	PHASE	G M T h m s	$\Delta$ km	REMARKS
January 1962						
18	Chatra Contd.	Z	iP eS	12 57 44 58 39	510	Slight, rarefaction
18	Shillong	Z	iP	15 53 15		Slight, distant compression
	Chatra	Z	e	15 53 43		Slight
18	Epc: 4.2°S, 153.6°E. New Britain. - h about 127 km - H = 15h 45m 40.9s (USCGS)					
	Shillong	Z	iP	15 56 37		Slight, distant compression
	Chatra	Z	iP	15 57 04		Slight, distant compression
	New Delhi	Z	iP	15 57 55		Slight, rarefaction
18	Shillong	Z	iP	16 04 39		Slight, distant compression
	New Delhi	Z	iP i	16 04 53 03 03		Slight; compression
	Chatra	Z	iP iS	16 05 07 07 52	1630	Slight, compression
	Bombay	E	e	16 05 23		Slight
		NE	e	06 02 16 23		
	Dehra Dun	NE	e	16 06 12 15 58		Slight
18	Shillong	Z	iP	16 07 24		Slight, distant compression
	New Delhi	Z	iP i	16 08 41 08 51		Slight, compression
18	New Delhi	Z	eP	18 12 43		Slight, rarefaction
18	Shillong	Z	e	18 32 56		Slight
18	Shillong	Z	e	19 00 54		Slight
18	Shillong	Z	iP	20 19 44		Slight, distant compression
18	New Delhi	Z	eP i	21 18 59 19 52		Slight, rarefaction
	Dehra Dun	NE	e	21 19 17		Tremor
18	Shillong	Z	eP	22 08 41		Slight, distant
18	Chatra	Z	iP eS	22 51 59 52 25	230	Slight, compression

DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
January 1962								
18	Shillong	Z	P iSg	23	48	53 49 37	300	Slight
	Chatra	Z	eP	23	50	58		Slight, distant
19	New Delhi	Z	iP	03	42	24		Slight, compression
19	Shillong	Z	iP	03	10	57		Slight, distant compression
19	New Delhi	Z	iP i	11	15	54 16 02		Slight, rarefaction
19	Shillong	Z	e	17	53	37		Tremor
	Chatra	Z	iP	17	54	03		Slight, distant rarefaction
19	Shillong	Z	iP	19	43	06		Slight, distant rarefaction
	Chatra	Z	iP	19	43	24		
	New Delhi	Z	iP	19	44	24		Slight, compression
19	Shillong	Z	e	19	48	02		Slight, distant
19	Shillong	Z	iP	20	49	50		Slight, distant compression
	Chatra	Z	iP	20	50	31		Slight, distant compression
19	Shillong	Z	iP	20	52	37		Slight, distant rarefaction
19	Shillong	Z	iP	21	28	15		Slight, distant compression
19	Shillong	Z	iP	21	42	49		Slight, distant rarefaction
19	Chatra	Z	eP	22	27	54		Slight, distant
	Shillong	Z	eP	22	28	23		Slight, distant compression
19	Chatra	Z	eP eS	22	58	47 59 07	150	Slight
19	Shillong	Z	iPg iSg	23	46	58 47 32	300	Slight
20	Shillong	Z	eP iSg	02	44	49 45 29	370	Slight
20	New Delhi	Z	iP	03	36	41		Slight, compression
20	Dehra Dun	NE	e	03	41	41		Feeble



DATE	STATION	COMPT	PHASE	G M T			$\Delta$ km	REMARKS
				h	m	s		
January 1962								
20	Shillong	Z	iPg iSg	02	54	39 55 15	330	Slight
20	New Delhi	Z	iP	14	29	49		Slight, compression
20	New Delhi	Z	iP	14	45	24		Slight, rarefaction
20	Shillong	Z	iP	16	04	11		Slight, distant compression
20	Chatra	Z	eP eS	16	06	49 07 14		
20	Shillong	Z	ePg iSg	16	07	11 07 42	280	Feeble
20	Hyderabad	EN	eP eS	16	41	09 41 40	280	Slight
	Madras	E	eP Lr iS M	16	43	52 44 24 44 26 44 38	300	Slight
	Chatra	Z	eP e	16	44	00 43 06		Slight, distant
20	Shillong	Z	iPg iSg	19	29	51 30 07	330	Slight
	Chatra	Z	eP e	19	30	10 31 51		Slight, distant
20	Epc: 6.6°S, 152.1°E. Off South Coast of New Britain - H = 20h 14m 32.7s. - h about 33 km (USCGS).							
	Shillong	Z	iP	20	25	22		Slight, distant compression
	Chatra	Z	iP	20	25	50		Slight, distant
	New Delhi	Z	eP	20	26	40		Slight, compression
20	New Delhi	Z	iP i	23	02	21 02 29		Slight, compression
21	New Delhi	Z	iP	03	00	25		Slight, compression
	Shillong	Z	eP	03	01	51		Slight, distant
21	New Delhi	Z	eP	05	35	38		Tremor, rarefaction
21	Shillong	Z	iPg	06	23	13		Slight, local
21	Shillong	Z	iPg iSg	09	18	17 18 36	160	Feeble
21	Shillong	Z	iPg iSg	10	49	45 50 16	280	Feeble

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
January 1962								
21	Shillong	Z	eP	12	30	46		Slight, distant
21	New Delhi	Z	eP	13	12	13		Slight, rarefaction
21	New Delhi	Z	eP	16	49	01		Slight, rarefaction
21	Shillong	Z	i	18	30	02		Slight, tremor
21	Shillong	Z	iP	20	41	13		Slight, distant compression
21	Shillong	Z	iP	21	52	35		Slight, distant rarefaction
21	Shillong	Z	eP	23	41	12		Slight, distant
22	New Delhi	Z	iP	04	54	05		Slight, compression
22	Tocklai	E	eP	05	14	41		Slight, distant
	Shillong	Z	eP	05	15	08		Slight, distant
	Chatra	Z	eP	05	17	10		Slight, distant
22	Shillong	Z	iP	06	11	32		Slight, distant compression
22	New Delhi	Z	iP	07	17	06		Slight, compression
22	Epc: 52.4°N, 100°E. Lake Baikal Region - H = 07h 26m 45.3s. - h about 68 km (USCGS).							
	Shillong	Z	iP	07	32	28		Slight, distant compression
	Chatra	Z	iP	07	32	28		Slight, distant compression
	Dehra Dun	NE	e	07	32	29		Slight
			e		37	29		
	New Delhi	Z	iP	07	32	42		Slight, rarefaction
22	Bombay	NE	e	07	43	18		Slight
			e		45	31		
		E	e		47	52		
22	New Delhi	Z	eP	08	12	47		Slight, compression
22	New Delhi	Z	eP	09	08	29		Slight, compression
22	Shillong	Z	iP	09	16	53		Slight, distant rarefaction
22	Shillong	Z	eP	10	03	12		Slight, distant
22	New Delhi	Z	eP	10	08	00		Tremor, compression
22	New Delhi	Z	eP	12	35	53		Slight, rarefaction

DATE	STATION	COMPT	PHASE	G h	M m	T s	Δ km	REMARKS
January 1962								
22	Shillong	Z	ePg iSg	15	10	29 10 37	60	Slight
22	Shillong	Z	ePg iSg	18	16	03 16 11	60	Slight
22	Epc: 30.7°N, 80.6°E. Tibet-India Border - H=20h 22m 17.6s. - h about 25 km (USCGS)							
	Dehra Dun	Z	eP	20	22	59	260	Slight
		N	PP		23	04		
			PPP		23	12		
			Lq		23	20		
			iS		23	29		
			SS		23	40		
			SSS		23	50		
	New Delhi	Z	iP	20	23	15	390	Slight,
			Pg		23	26		compression
		ZNE	S		23	58		
			Sg		24	14		
	Chatra	ZNE	iP	20	23	54	390	Slight,
		Z	PP		24	01		compression
			PPP		24	12		
			i		24	29		
		N	iS		25	06		
		Z	SS		25	20		
			SSS		25	29		
	Bokaro	NE	eP	20	24	22		Slight
			e		26	52		
	Shillong	ZE	iP	20	25	00	1270	Slight,
		E	eS		27	09		rarefaction
	Poona	Z	eP	20	25	53		Slight, rarefaction
	Bombay	E	eP	20	25	40		Slight
		NE	e		29	37		
			i		29	44		
			Lq		30	04		
			Lr		30	59		
			M		32	36		Per=7 sec, Gr.dis=1 μ
	Madras	E	e	20	26	33		Slight
			eS		29	35		
			e		29	51		
			Lr		30	21		
			M		31	42		
	Visakhapatnam	E	e	20	27	32		Slight
		NE	i		29	23		
			i		29	38		
			e		29	50		
	Hyderabad	E	M	20	29	34		Per=9 sec, Gr.dis=2 μ
22	Shillong	Z	iP	21	40	03		Slight, distant rarefaction

DATE	STATION	COMPT	PHASE	G M T h m s	Δ km	REMARKS
January 1962						
22	Shillong	Z	ePg iSg	23 39 47 39 57	80	Slight
23	New Delhi	Z	iP	03 15 53		Tremor, rarefaction
23	Shillong	Z	eP eS	03 31 40 32 17	330	Slight
23	New Delhi	Z	eP	05 20 36		Slight, compression
23	Dehra Dun	NE	e	05 22 23		Tremor
23	New Delhi	Z	iP	05 24 31		Slight, rarefaction
23	Dehra Dun	NE	e	05 54 05		Tremor
	New Delhi	Z	eP	05 54 46		Slight, compression
23	Bokaro	NE	iP	07 10 28		Slight, tremor
23	New Delhi	Z	eP	07 51 10		Slight, rarefaction
23	Bokaro	NE	iP	08 36 57		Slight, tremor
23	Chatra	Z	iP eS	14 52 16 52 32	130	Slight, compression
	Shillong	Z	eP	14 53 29		Slight, distant
23	Epc: 52.5°N, 169.5°W. Fox Islands, Aleutian Islands - H = 15h 59m 20.4°S. - h about 25 km (USCGS)					
	Shillong	Z	iP	13 11 02		Slight, distant compression
	Chatra	Z	iP	13 11 12		Distant, compression
	New Delhi	Z	iP	13 11 32		Slight, compression
	Poona	Z	iP	13 12 22		Tremor
23	Chatra	Z	eP e	13 46 54 49 40		Slight, distant compression
	Dehra Dun	NE	e i	13 47 19 49 37		Feeble
	Shillong	Z	iP	13 47 33		Slight, distant compression
	New Delhi	Z	eP	13 47 56		Slight, compression
23	Chatra	ZN	iP eS	13 57 13 57 35	160	Slight, rarefaction
	Shillong	Z	eP	13 58 28		Slight, distant
23	Shillong	Z	iP	21 47 53		Slight, distant rarefaction

DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
23	Chatra Contd.	Z	iP	21	48	19		Slight, distant compression
	New Delhi	Z	iP	21	49	13		Slight, compression
23	Shillong	Z	iP	23	20	54		Slight, distant compression
	Chatra	Z	iP	23	21	20		Slight, distant compression
	New Delhi	Z	iP	23	22	15		Slight, rarefaction
23	Shillong	Z	eP	23	58	15		Slight, distant
24	Shillong	Z	eP	00	57	17		Slight, near
24	Shillong	Z	iP	04	58	47		Slight, distant compression
24	New Delhi	Z	eP	08	53	19		Slight, compression
24	New Delhi	Z	iP	08	53	28		Tremor, rarefaction
24	New Delhi	Z	iP	09	23	22		Slight, compression
			i		26	27		
24 Epc: 24.4°N, 122°E. Near Coast of Formosa								
- H = 15h 39m 46s. - h about 53 km (USCGS)								
	Shillong	ZE	iP	15	45	29		Slight, rarefaction
			i		49	51		
	Chatra	Z	iP	15	46	05		Slight, distant rarefaction
	New Delhi	Z	eP	15	47	18		Slight, compression
			i		47	41		
24	Shillong	Z	iP	17	51	33		Slight, distant compression
	Chatra	Z	eP	17	52	11		Slight, distant
	New Delhi	Z	eP	17	53	19		Slight, compression
24	Chatra	Z	eP	18	21	34		Slight
			e		22	31		
24	Shillong	Z	iP	18	32	28		Slight, distant rarefaction
24	Shillong	Z	iP	19	16	30		Slight, distant rarefaction
	Chatra	Z	eP	19	17	31		Slight
24	New Delhi	Z	iP	21	17	39		Slight, compression

DATE	STATION	COMPT	PHASE	G M T h m s	$\Delta$ km	REMARKS
January 1962						
24	Shillong	Z	iP	22 25 20		Slight, distant compression
24	Shillong	Z	iP	22 31 24		Slight, distant compression
25	Shillong	Z	eP	02 02 00		Slight, distant
25	Chatra	Z	iP iS	02 12 45 13 07	190	Slight, rarefaction
	Shillong	Z	ePg eSg	02 13 04 14 02	550	Slight
25	Chatra	Z	iP S	03 14 13 14 35	130	Slight, rarefaction
	Shillong	Z	iPg iSg	03 15 02 16 01	550	Slight, rarefaction
25	Bokaro	NE	iP	06 50 18		Slight, tremor
25	New Delhi	Z	iP	07 45 25		Slight, compression
25	Chatra	Z	iP	10 10 35		Slight, distant compression
25	Chatra	Z	eP eS	18 51 57 53 23	830	Slight, distant
25	Chatra	Z	eP S	22 10 11 10 39	240	Slight, distant
26	Shillong	Z	iP	03 23 10		Slight, distant rarefaction
26	Epc: 32.2°N, 138.1°E. South of Honshu, Japan - H = 05h 22m 51.3s. - h about 333 km (USCGS)					
	Shillong	Z	iP	05 30 02		Slight, distant rarefaction
	Chatra	Z	iP	05 30 32		Slight, distant compression
	New Delhi	ZE Z ZNE	iP i iS	05 31 30 32 46 38 26	5780	Slight, initial ground motion towards East and rarefaction
26	Epc: 35.1°N, 22.7°E. Mediterranean Sea, West of Crete - H = 08h 17m 37s. - h about 32 km (USCGS) Mag= 5-5½ (Pas).					
	New Delhi	ZNE	iP iS NE ZNE NE	08 26 04 32 49 32 55 33 07 33 43 36 35	5110	Initial ground motion towards South, East and compression

DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
January 1962								
23 Contd.	Bombay	NE	eP	08	26	10	5220	
		E	e		23	51		
			PP		28	05		
			PPP		28	43		
		NE	eS		33	02		
		E	PS		33	09		
			e		33	31		
			e		34	13		
		NE	ScS		36	01		
		E	SS		36	35		
		E	SSS		37	50		
Dehra Dun		NE	e	08	26	13		
		N	iS		32	49		
			SS		35	59		
			Lq		33	18		
			SSS		36	40		
			M		41	40		
Poona		Z	iP	08	26	18	5350	
		N	PP		28	12		
			iS		33	17		
			PS		33	24		
			PPS		33	35		
			ScS		36	07		
			Lq		37	33		
			SSS		37	58		
			Lr		40	05		
Chatra	Z		iP	08	27	09	6070	Compression
		ZNE	iS		34	48		
Bokaro	NE		eP	08	27	11	6110	
			iS		34	52		
Madras	E		eP	08	27	14	6390	Initial ground
			iP		27	17		motion towards
			i		27	27		West.
			i		27	43		
			PcP		28	03		
			PP		29	25		
			iS		35	11		
			PS		35	24		
			PPS		35	32		
			e		35	53		
			ScS		37	03		
			SS		39	01		
			Lq		41	30		
Visakhapatnam	E		iP	08	27	19		
		NE	e		35	13		
			e		35	30		
			e		35	38		
Shillong	ZNE		iP	08	27	39	6360	Compression
		NE	iS		35	51		
Tocklai	E		eP	08	27	53		Slight, distant
26 New Delhi	Z		iPg	11	57	36	20	Tremor,
			iSg		57	39		rarefaction

DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
January 1962								
26	Chatra	Z	eP	18	42	20		Slight
26	Shillong	Z	iP	21	52	18		Slight, distant compression
	New Delhi	Z	iP	21	53	19		Tremor, compression
27	Chatra	Z	iPg Sg	11	11	14	110	Slight, compression
					11	27		
27	New Delhi	Z	iP	12	49	57		Tremor, rarefaction
27	New Delhi	Z	iP i	12	50	25		Slight, compression
					50	41		
27	New Delhi	Z	eP	17	41	14		Slight, compression
27	Shillong	Z	iP	20	37	53		Slight, distant compression
27	Shillong	Z	eP	20	46	57		Slight, tremor
28	Shillong	Z	eP	04	04	07		Slight, distant
28	New Delhi	Z	iP	05	58	49		Slight, compression
	Shillong	Z	iP	05	59	04		Slight, distant
28	Bombay	NE N NE	e e e	06	00	04		Slight, distant
					08	09		
					10	03		
28	Shillong	Z	eP	06	05	22		Slight, distant
28	Shillong	Z	iP	06	06	43		Slight, distant compression
28	Shillong	Z	e	08	12	57		Slight, near
28	Dokaro	NE	eP	03	43	25		Slight, tremor
28	Chatra	Z	iP e	11	22	07		Slight
					22	42		
28	New Delhi	Z	iP	12	56	30		Slight, compression
28	Epc: $0^{\circ}$ , $123.9^{\circ}$ E. Northern Celebes Region							
	- H = 13h 41m 13.8s. - h about 101 kms (USCGS)							
	Shillong	Z	eP	16	48	41		Slight, distant
	Chatra	Z	iP	16	49	18		Slight, distant compression
	New Delhi	Z	iP	16	50	22		Slight, compression
	Dehra Dun	NE	e e	16	51	10		Feeble
					57	43		
28	Shillong	Z	iP	17	39	41		Slight, distant rarefaction



DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
January 1962								
28	Shillong	Z	eP	17	59	57		Slight, distant
28	Shillong	Z	eP iSg	20	35	19 35 54	310	Feeble
28	Shillong	Z	e	21	35	12		Slight, tremor
	New Delhi	Z	eP	21	33	38		Slight, rarefaction
23	New Delhi	Z	eP	23	37	15		Slight, compression
29	New Delhi	Z	eP	01	41	22		Tremor, compression
29	New Delhi	Z	eP	01	43	24		Slight, rarefaction
29	Shillong	Z	iPg iSg	02	38	11 38 19	50	Slight
29	New Delhi	Z	iP	03	35	15		Tremor, compression
29	Chatra	Z	iP	04	12	57		Slight, distant rarefaction
	Shillong	Z	eP	04	13	31		Slight, distant
	New Delhi	Z	eP	04	15	43		Slight, compression
29	Shillong	Z	eP	05	15	12		Slight, distant
29	Shillong	Z	e	06	27	59		Slight, tremor
29	Bokaro	NE	iP	07	15	02		Slight, tremor
29	New Delhi	Z	eP	08	59	12		Slight, compression
29	Shillong	Z	iP	11	54	29		Slight, distant rarefaction
29	Chatra	Z	iP	15	43	11		
29	Shillong	Z	e	17	25	51		Slight, tremor
29	Shillong	Z	eP	17	53	59		Slight, distant
30	New Delhi	Z	iP	08	53	41		Slight, rarefaction
	Shillong	Z	eP	08	53	44		Slight, distant
30	Shillong	Z	P iSg	09	57	22 58 06	300	Slight
30	Shillong	Z	eP	12	40	13		Slight, distant
30	Shillong	Z	eP	15	01	04		Slight, distant
30	Shillong	Z	iPg iSg	15	16	24 16 35	30	Slight
30	Epc: 20.7°N, 144.5°E. Mariana Islands Region							
	-H = 15h 22m 49.4s. -h about 187 km (USCGS)							

DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
January 1962								
30	Shillong	Z	eP	15	31	18		Slight, distant
	Contd.							
	Chatra	Z	iP	15	31	50		Slight, distant rarefaction
	New Delhi	Z	iP	15	32	50		Slight, rarefaction
	Bombay	NE	e	15	33	28		Slight
			e		42	15		
		E	e		43	08		
			e		44	15		
30	Epc: 79.4°N, 123.5°E. Laptáv Islands. - h about 63 km. - H = 17h 15m 33.8s (USCGS)							
	Chatra	Z	iP	17	24	49		Slight, distant rarefaction
	New Delhi	Z	iP	17	24	55		Slight, compression
	Shillong	Z	iP	17	25	03		Slight, distant rarefaction
30	New Delhi	Z	iP	17	54	36		Slight, rarefaction
			i		56	15		
	Chatra	Z	iP	17	56	14		Slight, distant compression
30	Shillong	Z	ePg	18	42	54	20	Slight
			iSg		42	57		
30	New Delhi	Z	iP	19	23	58		Tremor, compression
30	Shillong	Z	iPg	23	05	45	420	Slight, compression
			iSg		03	31		
30	Shillong	Z	ePg	23	12	23	200	Slight
			iSg		12	47		
	Chatra	Z	eP	23	13	26		Slight
31	Epc: 38°N, 69°E. Tadzhik. - H = 00h 05m 40s (Shillong) 38.5°N, 70.3°E. Tadzhik S.S.R. - h = 60 km - H = 00h 05m 57s (USCGS)							
	Dehra Dun	NE	eP	00	08	29	1150	Slight
		N	iS		10	27		
			SS		10	39		
			Lq		10	49		
			SSS		10	57		
			M		11	41		
	New Delhi	Z	iP	00	08	38	1220	Slight, compression
		ZE	S		10	43		
			SS		10	57		
	Sehore	E	eP	00	09	47	1870	Slight
			eS		12	54		

DATE	STATION	COMPT	PHASE	G M T			$\Delta$ km	REMARKS
				h	m	s		
January 1962								
31 Contd	Chatra	Z	iP	00	10	09	2000	Slight, rarefaction
			PP		10	24		
			PPP		10	33		
			S		13	28		
			Lq		13	33		
			SS		13	54		
			SSS		14	03		
			Lr		14	25		
M		15	29					
	Bokaro	NE	eP i	00	10	26 14 28		Slight
	Bombay	N	eP	00	10	26	2260	Slight
		NE	eS		14	10		
			SS		14	38		
		E	SSS		14	52		
		NE	e		15	17		
			e		16	40		
			e		19	42		
	Poona	Z	eP	00	10	30	2350	Slight
		E	iS		14	21		
			Lq		14	31		
			SS		14	49		
			SSS		15	03		
			Lr		15	27		
		M		17	16			
	Shillong	ZE	iP	00	10	51	2550	Slight, compression
		E	iS		14	58		
			M		19	27		
	Visakhapatnam	E	eP	00	11	09		Moderate
		NE	e		15	56		
	Kodaikanal	E	e	00	11	28		
			e		13	55		
			Lr		20	43		
			M		23	28		
	Madras	E	eP	00	11	35	3080	Slight
			PPP		12	34		
			eS		16	17		
			Lq		17	24		
			SS		17	37		
			Lr		18	39		
			M		20	58		
	Calcutta	E	i	00	15	04		Slight
			e		15	28		
			e		17	35		
			i		18	28		
			e		20	14		
31	Shillong	Z	ePg iSg	00	36	57 36 59	20	Slight
31	New Delhi	Z	iP	03	11	32		Slight, rarefaction

DATE	STATION	COMPT	PHASE	G h	M m	T s	Δ km	REMARKS
January 1962								
31	Shillong	Z	iPg iSg	09	03	25 06 27	20	Slight
31	Chatra	Z ZN	eP S	11	37	37 38 22	540	Slight
31	Shillong	Z	iP	12	23	35		Slight, distant rarefaction
31	New Delhi	Z	iP	16	53	40		Tremor, compression
31	Shillong	Z	P S	19	30	10 31 29	750	Slight
	Chatra	Z	iP eS	19	31	38 32 38	470	Compression
31	Shillong	Z	iP	20	52	09		Slight, distant compression
	Chatra	Z	iP	20	52	42		Slight, distant compression
31	Shillong	Z	e	21	14	36		Slight, tremor
31	Shillong	Z	e	21	43	32		Slight, tremor
31	Chatra	Z	iP	21	51	01		Slight, distant rarefaction

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*Earthquake Reports*  
(Non Instrumental)

The following is the list of Earthquakes that were reported by voluntary observers from different places during the month of January 1962

Place	Date in GMT	Time in GMT	Duration of shocks in sec.	Number of shocks	Intensity in R.F. scale	Remarks
		h. m.				
Shillong	5	00 12	10	1	IV	—
Kathmandu	11	03 02	5	1	IV	—
Nizamabad	20	16 40	2	1	IV	—

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Microseismic Tabulation

| Date                                | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec | Date                | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|-------------------------------------|------|-----|-------------------------|-----------------------|---------------------|------|-----|-------------------------|-----------------------|
| <i>Station Shillong Compt. E-W.</i> |      |     |                         |                       | <i>January 1962</i> |      |     |                         |                       |
| 01                                  | 00   | 2   | 0.2                     | 4.7                   | 12                  | 12   | 3   | 0.2                     | 5.2                   |
|                                     | 06   | 2   | 0.2                     | 4.7                   | Contd.              | 18   | 3   | 0.1                     | 5.2                   |
|                                     | 12   | 2   | 0.2                     | 4.6                   |                     |      |     |                         |                       |
|                                     | 18   | 2   | 0.2                     | 4.6                   | 13                  | 00   | 3   | 0.2                     | 5.0                   |
| 02                                  | 00   | ... | -                       | -                     |                     | 06   | 3   | 0.2                     | 4.6                   |
|                                     | 06   | 2   | 0.3                     | 5.3                   |                     | 12   | 3   | 0.2                     | 4.6                   |
|                                     | 12   | 3   | 0.3                     | 5.2                   |                     | 18   | 2   | 0.2                     | 5.3                   |
|                                     | 18   | 2   | 0.3                     | 5.2                   | 14                  | 00   | 3   | 0.2                     | 5.2                   |
| 03                                  | 00   | 3   | 0.3                     | 5.0                   |                     | 06   | 2   | 0.2                     | 5.1                   |
|                                     | 06   | 2   | 0.3                     | 5.1                   |                     | 12   | 3   | 0.2                     | 5.2                   |
|                                     | 12   | 2   | 0.3                     | 5.0                   |                     | 18   | 3   | 0.2                     | 5.0                   |
|                                     | 18   | 2   | 0.3                     | 4.3                   | 15                  | 00   | 2   | 0.2                     | 4.9                   |
| 04                                  | 00   | 2   | 0.3                     | 4.7                   |                     | 06   | 2   | 0.2                     | 5.1                   |
|                                     | 06   | 2   | 0.3                     | 4.7                   |                     | 12   | 2   | 0.2                     | 5.3                   |
|                                     | 12   | 2   | 0.3                     | 5.8                   |                     | 18   | 2   | 0.2                     | 5.1                   |
|                                     | 18   | 2   | 0.3                     | 6.0                   | 16                  | 00   | ... | -                       | -                     |
| 05                                  | 00   | 3   | 0.3                     | 5.9                   |                     | 06   | 3   | 0.2                     | 5.4                   |
|                                     | 06   | 3   | 0.3                     | 5.8                   |                     | 12   | ... | -                       | -                     |
|                                     | 12   | 3   | 0.3                     | 5.6                   |                     | 18   | 3   | 0.2                     | 5.5                   |
|                                     | 18   | 3   | 0.3                     | 5.4                   | 17                  | 00   | 2   | 0.2                     | 5.3                   |
| 06                                  | 00   | 3   | 0.3                     | 5.4                   |                     | 06   | 3   | 0.2                     | 5.2                   |
|                                     | 06   | 2   | 0.3                     | 5.7                   |                     | 12   | 3   | 0.2                     | 5.1                   |
|                                     | 12   | 2   | 0.3                     | 6.2                   |                     | 18   | 3   | 0.2                     | 5.1                   |
|                                     | 18   | 2   | 0.3                     | 5.9                   | 18                  | 00   | 3   | 0.2                     | 4.8                   |
| 07                                  | 00   | 2   | 0.3                     | 5.6                   |                     | 06   | 3   | 0.2                     | 5.1                   |
|                                     | 06   | 2   | 0.3                     | 6.2                   |                     | 12   | 3   | 0.2                     | 5.0                   |
|                                     | 12   | ... | -                       | -                     |                     | 18   | 3   | 0.2                     | 4.9                   |
|                                     | 18   | 2   | 0.3                     | 5.4                   | 19                  | 00   | 3   | 0.2                     | 4.9                   |
| 08                                  | 00   | 3   | 0.3                     | 5.4                   |                     | 06   | 2   | 0.1                     | 4.7                   |
|                                     | 06   | 3   | 0.2                     | 5.5                   |                     | 12   | 3   | 0.2                     | 4.6                   |
|                                     | 12   | 3   | 0.2                     | 5.3                   |                     | 18   | 1   | 0.2                     | 5.0                   |
|                                     | 18   | 3   | 0.2                     | 4.9                   | 20                  | 00   | 1   | 0.3                     | 5.0                   |
| 09                                  | 00   | 3   | 0.2                     | 4.8                   |                     | 06   | ... | -                       | -                     |
|                                     | 06   | 3   | 0.2                     | 5.0                   |                     | 12   | 1   | 0.3                     | 5.0                   |
|                                     | 12   | 3   | 0.2                     | 5.1                   |                     | 18   | 3   | 0.2                     | 5.3                   |
|                                     | 18   | 3   | 0.2                     | 5.0                   | 21                  | 00   | 1   | 0.2                     | 4.8                   |
| 10                                  | 00   | 3   | 0.2                     | 5.0                   |                     | 06   | 3   | 0.2                     | 4.9                   |
|                                     | 06   | 3   | 0.2                     | 4.9                   |                     | 12   | 3   | 0.2                     | 4.8                   |
|                                     | 12   | 3   | 0.2                     | 4.8                   |                     | 18   | 3   | 0.2                     | 5.0                   |
|                                     | 18   | 3   | 0.2                     | 5.0                   | 22                  | 00   | 3   | 0.2                     | 5.0                   |
| 11                                  | 00   | 3   | 0.2                     | 5.0                   |                     | 06   | 3   | 0.2                     | 4.9                   |
|                                     | 06   | ... | -                       | -                     |                     | 12   | 3   | 0.2                     | 4.5                   |
|                                     | 12   | 3   | 0.2                     | 5.2                   |                     | 18   | 1   | 0.2                     | 5.0                   |
|                                     | 18   | 2   | 0.2                     | 5.2                   | 23                  | 00   | 3   | 0.2                     | 5.0                   |
| 12                                  | 00   | 2   | 0.2                     | 5.4                   |                     | 06   | 3   | 0.2                     | 5.0                   |
|                                     | 06   | 2   | 0.2                     | 4.8                   |                     | 12   | 2   | 0.2                     | 5.0                   |
|                                     |      |     |                         |                       |                     | 18   | 2   | 0.2                     | 4.7                   |

Date Hour K Mean Amplitude in mm Mean Period in sec

| Station | Shillong | K   | Compt. | E-W |
|---------|----------|-----|--------|-----|
| 24      | 00       | 3   | 0.2    | 4.8 |
|         | 06       | 1   | 0.2    | 5.0 |
|         | 12       | 3   | 0.2    | 5.1 |
|         | 18       | 3   | 0.2    | 5.0 |
| 25      | 00       | 3   | 0.2    | 5.2 |
|         | 06       | 3   | 0.2    | 4.3 |
|         | 12       | 2   | 0.2    | 4.7 |
|         | 18       | 3   | 0.2    | 4.9 |
| 26      | 00       | 3   | 0.2    | 4.7 |
|         | 06       | 3   | 0.2    | 4.7 |
|         | 12       | 1   | 0.2    | 5.0 |
|         | 18       | 2   | 0.2    | 4.7 |
| 27      | 00       | 3   | 0.2    | 5.0 |
|         | 06       | 3   | 0.2    | 5.1 |
|         | 12       | 3   | 0.2    | 4.6 |
|         | 18       | 2   | 0.2    | 4.4 |
| 28      | 00       | 3   | 0.2    | 3.8 |
|         | 06       | ... | -      | -   |
|         | 12       | 3   | 0.2    | 4.2 |
|         | 18       | 3   | 0.2    | 4.2 |
| 29      | 00       | 3   | 0.2    | 4.3 |
|         | 06       | 3   | 0.2    | 5.2 |
|         | 12       | 3   | 0.2    | 5.6 |
|         | 18       | 3   | 0.2    | 5.1 |
| 30      | 00       | 1   | 0.2    | 5.2 |
|         | 06       | 3   | 0.2    | 5.6 |
|         | 12       | 1   | 0.2    | 5.2 |
|         | 18       | 1   | 0.2    | 5.2 |
| 31      | 00       | 3   | 0.2    | 5.1 |
|         | 06       | 3   | 0.2    | 5.2 |
|         | 12       | 3   | 0.2    | 5.1 |
|         | 18       | 3   | 0.2    | 5.2 |

Station Bombay (Colaba) Compt. E-W

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 01 | 00 | 1   | 1.1 | 3.1 |
|    | 03 | 1   | 1.1 | 3.3 |
|    | 06 | 1   | 1.0 | 3.4 |
|    | 09 | 1   | 0.8 | 3.4 |
|    | 12 | 1   | 0.7 | 3.0 |
|    | 18 | 3   | 0.9 | 3.7 |
|    |    |     | 0.3 | 2.7 |
| 02 | 00 | ... | -   | -   |
|    | 03 | 3   | 0.7 | 4.7 |
|    |    |     | 0.7 | 2.0 |
|    | 12 | 3   | 0.6 | 4.0 |
|    |    |     | 0.5 | 2.2 |
|    | 18 | 3   | 0.7 | 4.5 |
|    |    |     | 0.7 | 2.3 |
| 03 | 00 | 3   | 0.8 | 4.2 |
|    |    |     | 0.6 | 2.3 |

Date Hour K Mean Amplitude in mm Mean Period in sec

January 1962 Station Bombay (Colaba)

|        |    |     |     |     |
|--------|----|-----|-----|-----|
| 03     | 06 | 3   | 0.9 | 4.5 |
| Contd. |    |     | 0.6 | 1.8 |
|        | 12 | 3   | 0.6 | 4.9 |
|        |    |     | 0.6 | 2.0 |
|        | 18 | 3   | 0.7 | 4.6 |
|        |    |     | 0.6 | 1.8 |
| 04     | 00 | 2   | 0.8 | 4.7 |
|        | 06 | 3   | 0.7 | 4.6 |
|        |    |     | 0.5 | 2.0 |
|        | 12 | 2   | 1.0 | 4.7 |
|        | 18 | 2   | 1.0 | 4.8 |
| 05     | 00 | 2   | 0.9 | 4.4 |
|        | 06 | 2   | 1.0 | 5.2 |
|        | 12 | 2   | 0.8 | 5.0 |
|        | 18 | 2   | 0.8 | 5.2 |
| 06     | 00 | 2   | 0.7 | 5.5 |
|        | 06 | 3   | 0.7 | 5.5 |
|        |    |     | 0.5 | 2.5 |
|        | 12 | 3   | 0.7 | 5.6 |
|        |    |     | 0.6 | 2.6 |
|        | 18 | 2   | 0.7 | 5.6 |
|        |    |     | 0.6 | 2.5 |
| 07     | 00 | 3   | 0.6 | 5.3 |
|        |    |     | 0.5 | 2.7 |
|        | 06 | 3   | 0.8 | 5.6 |
|        |    |     | 0.6 | 2.4 |
|        | 12 | 3   | 0.6 | 5.6 |
|        |    |     | 0.5 | 2.5 |
|        | 18 | 3   | 0.6 | 5.4 |
|        |    |     | 0.5 | 3.0 |
| 08     | 00 | 3   | 0.5 | 5.4 |
|        |    |     | 0.5 | 3.0 |
|        | 06 | ... | -   | -   |
|        | 12 | 3   | 0.5 | 5.5 |
|        |    |     | 0.4 | 3.0 |
|        | 18 | 3   | 0.5 | 5.5 |
|        |    |     | 0.4 | 2.9 |
| 09     | 00 | 3   | 0.4 | 5.5 |
|        |    |     | 0.4 | 3.0 |
|        | 06 | ... | -   | -   |
|        | 12 | 3   | 0.4 | 4.3 |
|        |    |     | 0.3 | 2.6 |
|        | 18 | 3   | 0.4 | 4.4 |
|        |    |     | 0.3 | 3.0 |
| 10     | 00 | ... | -   | -   |
|        | 06 | ... | -   | -   |
|        | 12 | 3   | 0.4 | 4.5 |
|        |    |     | 0.3 | 1.8 |
|        | 18 | 3   | 0.4 | 4.3 |
|        |    |     | 0.3 | 2.5 |
| 11     | 00 | ... | -   | -   |
|        | 06 | ... | -   | -   |

| Date                            | Hour | K   | Mean Amplitude in mm | Mean Period in sec | Date                           | Hour | K   | Mean Amplitude in mm | Mean Period in sec |     |
|---------------------------------|------|-----|----------------------|--------------------|--------------------------------|------|-----|----------------------|--------------------|-----|
| <i>Station. Bombay (Colaba)</i> |      |     |                      |                    | <i>Compt. E-W January 1962</i> |      |     |                      |                    |     |
| 11                              | 12   | 3   | 0.4                  | 4.7                | 18                             | 12   | 3   | 0.7                  | 5.1                |     |
| Contd.                          |      |     | 0.3                  | 2.3                | Contd.                         |      |     | 0.4                  | 2.5                |     |
|                                 | 18   | ... | -                    | -                  |                                | 18   | 3   | 0.5                  | 4.5                |     |
|                                 |      |     |                      |                    |                                |      |     | 0.5                  | 2.6                |     |
| 12                              | 00   | 3   | 0.4                  | 5.2                |                                | 19   | 00  | 3                    | 0.6                | 4.4 |
|                                 |      |     | 0.3                  | 2.5                |                                |      |     | 0.5                  | 2.6                |     |
|                                 | 06   | ... | -                    | -                  |                                | 06   | 3   | 0.6                  | 4.3                |     |
|                                 | 12   | 3   | 0.4                  | 4.5                |                                |      |     | 0.5                  | 2.7                |     |
|                                 |      |     | 0.3                  | 2.0                |                                | 12   | 3   | 0.7                  | 4.2                |     |
|                                 | 18   | 3   | 0.4                  | 4.8                |                                |      |     | 0.6                  | 3.0                |     |
|                                 |      |     | 0.4                  | 2.2                |                                | 18   | 3   | 0.7                  | 4.3                |     |
| 13                              | 00   | 3   | 0.5                  | 5.0                |                                |      |     | 0.6                  | 3.0                |     |
|                                 |      |     | 0.5                  | 2.5                |                                | 20   | 00  | 3                    | 0.6                | 4.5 |
|                                 | 06   | ... | -                    | -                  |                                |      |     | 0.6                  | 3.0                |     |
|                                 | 12   | 3   | 0.5                  | 5.5                |                                | 06   | ... | -                    | -                  |     |
|                                 |      |     | 0.6                  | 2.9                |                                | 12   | ... | -                    | -                  |     |
|                                 | 18   | 3   | 0.4                  | 5.4                |                                | 18   | ... | -                    | -                  |     |
|                                 |      |     | 0.5                  | 2.9                |                                |      |     |                      |                    |     |
| 14                              | 00   | 3   | 0.5                  | 5.7                | 21                             | 00   | ... | -                    | -                  |     |
|                                 |      |     | 0.6                  | 2.9                |                                | 06   | 3   | 0.6                  | 5.0                |     |
|                                 | 06   | 3   | 0.6                  | 5.7                |                                |      |     | 0.6                  | 2.2                |     |
|                                 |      |     | 0.5                  | 2.8                |                                | 12   | 1   | 0.9                  | 2.7                |     |
|                                 | 12   | 3   | 0.5                  | 4.7                |                                | 15   | 1   | 0.7                  | 2.7                |     |
|                                 |      |     | 0.5                  | 2.7                |                                | 18   | 1   | 0.9                  | 2.8                |     |
|                                 | 18   | 3   | 0.4                  | 4.6                |                                | 21   | 1   | 0.9                  | 2.9                |     |
|                                 |      |     | 0.4                  | 2.5                |                                |      |     |                      |                    |     |
| 15                              | 00   | 3   | 0.5                  | 4.8                | 22                             | 00   | 1   | 1.0                  | 2.9                |     |
|                                 |      |     | 0.5                  | 2.7                |                                | 03   | 1   | 1.1                  | 3.0                |     |
|                                 | 03   | 1   | 0.7                  | 2.9                |                                | 06   | 1   | 1.3                  | 3.5                |     |
|                                 | 06   | 1   | 0.5                  | 3.0                |                                | 09   | 1   | 1.2                  | 3.6                |     |
|                                 | 09   | 1   | 0.6                  | 3.0                |                                | 12   | 1   | 0.8                  | 3.3                |     |
|                                 | 12   | 1   | 0.6                  | 3.0                |                                | 15   | 1   | 0.9                  | 3.1                |     |
|                                 | 15   | 1   | 0.6                  | 3.0                |                                | 21   | 1   | 1.1                  | 3.2                |     |
|                                 | 18   | 1   | 0.6                  | 2.7                | 23                             | 00   | 1   | 0.8                  | 3.1                |     |
|                                 | 21   | 1   | 0.6                  | 2.9                |                                | 03   | 1   | 0.8                  | 3.2                |     |
| 16                              | 00   | 3   | 0.5                  | 4.7                |                                | 06   | 1   | 0.6                  | 3.1                |     |
|                                 |      |     | 0.4                  | 4.7                |                                | 09   | 1   | 0.6                  | 3.0                |     |
|                                 | 06   | 3   | 0.5                  | 4.2                |                                | 12   | 1   | 0.6                  | 3.0                |     |
|                                 |      |     | 0.4                  | 2.5                |                                | 15   | 1   | 0.5                  | 3.5                |     |
|                                 | 12   | ... | -                    | -                  |                                | 18   | 1   | 0.6                  | 3.5                |     |
|                                 | 18   | 3   | 0.4                  | 4.8                | 24                             | 00   | 30  | 0.5                  | 3.5                |     |
|                                 |      |     | 0.4                  | 3.0                |                                |      |     | 0.3                  | 2.0                |     |
| 17                              | 00   | 3   | 0.5                  | 4.2                |                                | 03   | 3   | 0.5                  | 4.3                |     |
|                                 |      |     | 0.3                  | 2.3                |                                |      |     | 0.3                  | 2.5                |     |
|                                 | 06   | 3   | 0.5                  | 4.3                |                                | 12   | 3   | 0.5                  | 4.4                |     |
|                                 |      |     | 0.3                  | 2.3                |                                |      |     | 0.4                  | 2.7                |     |
|                                 | 12   | 3   | 0.7                  | 4.1                |                                | 18   | 3   | 0.4                  | 2.3                |     |
|                                 |      |     | 0.3                  | 2.8                |                                |      |     | 0.3                  | 1.5                |     |
|                                 | 18   | 3   | 0.7                  | 4.4                | 25                             | 00   | 3   | 0.5                  | 3.3                |     |
|                                 |      |     | 0.4                  | 2.6                |                                |      |     | 0.4                  | 2.5                |     |
| 18                              | 00   | 3   | 0.5                  | 4.8                |                                | 06   | 3   | 0.3                  | 3.5                |     |
|                                 |      |     | 0.4                  | 2.5                |                                |      |     | 0.3                  | 1.7                |     |
|                                 | 06   | 3   | 0.5                  | 4.0                |                                | 12   | 3   | 0.6                  | 4.3                |     |
|                                 |      |     | 0.5                  | 2.5                |                                |      |     | 0.4                  | 2.0                |     |
|                                 |      |     |                      |                    |                                | 18   | 3   | 0.6                  | 4.5                |     |
|                                 |      |     |                      |                    |                                |      |     | 0.4                  | 2.0                |     |

Date Hour K Mean Amplitude in mm Mean Period in sec

Date Hour K Mean Amplitude in mm Mean Period in sec

Station: Bombay (Colaba) Compt. E-W.

January 1962

Station: Madras

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 26 | 00 | 3   | 0.8 | 4.1 |
|    |    |     | 0.4 | 2.3 |
|    | 03 | 1   | 0.2 | 2.3 |
|    | 06 | 1   | 0.7 | 2.3 |
|    | 12 | 1   | 0.7 | 2.5 |
|    | 15 | 1   | 0.7 | 2.5 |
|    | 18 | 1   | 0.6 | 2.6 |
|    | 21 | 1   | 0.7 | 2.0 |
| 27 | 00 | 1   | 0.7 | 3.2 |
|    | 03 | ... | -   | -   |
|    | 06 | 1   | 0.8 | 3.2 |
|    | 09 | 1   | 0.3 | 3.3 |
|    | 12 | 1   | 0.8 | 3.5 |
|    | 15 | 1   | 0.7 | 3.5 |
|    | 18 | 1   | 0.7 | 3.7 |
|    | 21 | 1   | 0.2 | 3.5 |
| 28 | 00 | 1   | 0.9 | 2.9 |
|    | 03 | 1   | 1.0 | 3.0 |
|    | 06 | 1   | 0.7 | 3.0 |
|    | 09 | 1   | 0.6 | 3.1 |
|    | 12 | 1   | 0.6 | 3.2 |
|    | 13 | 3   | 0.5 | 4.1 |
|    |    |     | 0.3 | 2.2 |
| 29 | 00 | 3   | 0.5 | 3.9 |
|    |    |     | 0.3 | 2.0 |
|    | 03 | 3   | 0.5 | 4.4 |
|    |    |     | 0.3 | 2.2 |
|    | 12 | 3   | 0.6 | 4.8 |
|    |    |     | 0.3 | 2.0 |
|    | 18 | 3   | 0.5 | 4.7 |
|    |    |     | 0.3 | 2.0 |
| 30 | 00 | 3   | 0.5 | 4.7 |
|    |    |     | 0.3 | 2.0 |
|    | 03 | 3   | 0.4 | 4.9 |
|    |    |     | 0.3 | 2.7 |
|    | 12 | 3   | 0.5 | 5.0 |
|    |    |     | 0.4 | 2.7 |
|    | 18 | ... | -   | -   |
| 31 | 00 | 3   | 0.5 | 4.9 |
|    |    |     | 0.4 | 3.0 |
|    | 03 | 3   | 0.5 | 5.0 |
|    |    |     | 0.3 | 2.0 |
|    | 12 | 3   | 0.4 | 4.6 |
|    |    |     | 0.4 | 2.0 |
|    | 18 | 3   | 0.4 | 4.7 |
|    |    |     | 0.4 | 2.3 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 02 | 00 | 1   | 0.5 | 3.8 |
|    | 03 | 1   | 0.6 | 3.7 |
|    | 06 | 3   | 0.5 | 3.4 |
|    | 12 | 3   | 0.6 | 3.7 |
|    | 18 | 3   | 0.6 | 3.7 |
|    |    | 3   | 0.5 | 3.0 |
| 03 | 00 | 3   | 0.5 | 3.6 |
|    |    | 3   | 0.3 | 2.5 |
|    | 03 | 3   | 0.5 | 3.7 |
|    |    | 3   | 0.1 | 1.6 |
|    | 06 | 3   | 0.5 | 3.7 |
|    |    | 3   | 0.2 | 2.6 |
|    | 12 | 3   | 0.7 | 4.1 |
|    |    | 3   | 0.4 | 2.3 |
|    |    | 3   | 0.1 | 1.8 |
|    | 13 | 3   | 0.6 | 4.0 |
|    |    | 3   | 0.3 | 2.4 |
|    |    | 3   | 0.1 | 1.7 |
| 04 | 00 | 3   | 0.7 | 4.1 |
|    |    | 3   | 0.3 | 2.5 |
|    |    | 3   | 0.1 | 1.5 |
|    | 03 | 3   | 0.6 | 4.0 |
|    |    | 3   | 0.3 | 2.3 |
|    | 06 | 3   | 0.6 | 4.0 |
|    |    | 3   | 0.3 | 2.6 |
|    | 12 | 3   | 0.6 | 4.2 |
|    |    | 3   | 0.3 | 2.5 |
|    | 13 | 3   | 0.6 | 4.1 |
|    |    | 3   | 0.4 | 2.7 |
|    |    | 3   | 0.1 | 1.4 |
| 05 | 00 | 3   | 0.3 | 3.8 |
|    |    | 3   | 0.4 | 2.9 |
|    | 03 | 3   | 0.5 | 4.0 |
|    |    | 3   | 0.3 | 2.7 |
|    | 06 | 3   | 0.5 | 3.9 |
|    |    | 3   | 0.3 | 2.7 |
|    | 12 | 3   | 0.4 | 4.1 |
|    |    | 3   | 0.3 | 2.7 |
|    | 18 | 3   | 0.4 | 3.9 |
|    |    | 3   | 0.3 | 2.6 |
| 06 | 00 | 3   | 0.4 | 4.1 |
|    |    | 3   | 0.4 | 2.8 |
|    | 03 | ... | -   | -   |
|    | 06 | ... | -   | -   |
|    | 12 | 3   | 0.4 | 2.8 |
|    | 13 | 3   | 0.5 | 2.9 |
| 07 | 00 | 3   | 0.4 | 2.7 |
|    |    | 3   | 0.1 | 1.5 |
|    | 03 | 3   | 0.4 | 2.7 |
|    | 06 | 3   | 0.3 | 2.7 |
|    |    | 3   | 0.1 | 1.5 |
|    | 12 | 3   | 0.3 | 2.7 |
|    |    | 3   | 0.1 | 1.7 |
|    | 18 | 3   | 0.4 | 2.9 |

Station: Madras. Compt. E-W.

|    |    |   |     |     |
|----|----|---|-----|-----|
| 01 | 00 | 3 | 0.3 | 3.3 |
|    | 03 | 3 | 0.4 | 3.4 |
|    | 06 | 1 | 0.5 | 3.5 |
|    | 12 | 1 | 0.5 | 3.4 |
|    | 18 | 1 | 0.6 | 3.8 |



| Date Hour | K | Mean Amplitude in mm | Mean Period in sec |
|-----------|---|----------------------|--------------------|
|-----------|---|----------------------|--------------------|

| Date hour | k | Mean Amplitude in mm | Mean Period in sec |
|-----------|---|----------------------|--------------------|
|-----------|---|----------------------|--------------------|

Station. Madras Compt. E-W.

January 1962

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 08 | 00 | 3   | 0.3 | 2.8 |
|    | 03 | 3   | 0.3 | 2.8 |
|    | 06 | 3   | 0.3 | 2.8 |
|    | 12 | 3   | 0.3 | 2.7 |
|    | 18 | 3   | 0.3 | 2.7 |
| 09 | 00 | 3   | 0.2 | 2.7 |
|    | 03 | 3   | 0.3 | 2.7 |
|    |    | 3   | 0.1 | 1.3 |
|    | 06 | 3   | 0.3 | 2.7 |
|    |    | 3   | 0.1 | 1.4 |
|    | 12 | 3   | 0.3 | 3.0 |
|    |    | 3   | 0.1 | 1.5 |
|    | 18 | 3   | 0.3 | 3.2 |
|    |    | 3   | 0.1 | 1.3 |
| 10 | 00 | 3   | 0.2 | 2.8 |
|    |    | 3   | 0.1 | 1.0 |
|    | 03 | 3   | 0.3 | 3.0 |
|    |    | 3   | 0.1 | 1.1 |
|    | 06 | 3   | 0.2 | 2.8 |
|    |    | 3   | 0.1 | 1.5 |
|    | 12 | 3   | 0.3 | 3.1 |
|    |    | 3   | 0.2 | 2.5 |
|    |    | 3   | 0.1 | 1.2 |
|    | 18 | 3   | 0.3 | 3.6 |
|    |    | 3   | 0.2 | 2.3 |
| 11 | 00 | ... | -   | -   |
|    | 03 | 3   | 0.2 | 2.5 |
|    | 06 | 3   | 0.2 | 2.4 |
|    | 12 | 3   | 0.2 | 2.7 |
|    |    | 3   | 0.1 | 1.5 |
|    | 18 | 3   | 0.2 | 2.5 |
| 12 | 00 | 3   | 0.2 | 2.5 |
|    | 03 | 3   | 0.2 | 2.5 |
|    |    | 3   | 0.1 | 1.1 |
|    | 06 | 1   | 0.1 | 1.4 |
|    | 12 | 3   | 0.2 | 2.5 |
|    |    | 3   | 0.1 | 1.7 |
|    | 18 | 3   | 0.4 | 4.1 |
|    |    | 3   | 0.2 | 2.5 |
|    |    | 3   | 0.1 | 1.8 |
| 13 | 00 | 3   | 0.4 | 4.2 |
|    |    | 3   | 0.3 | 2.3 |
|    | 03 | 3   | 0.3 | 2.7 |
|    |    | 3   | 0.1 | 1.6 |
|    | 06 | 3   | 0.2 | 2.2 |
|    |    | 3   | 0.1 | 1.3 |
|    | 12 | 3   | 0.2 | 2.1 |
|    |    | 3   | 0.1 | 1.5 |
|    | 18 | 3   | 0.4 | 4.4 |
|    |    | 3   | 0.2 | 2.4 |
|    |    | 3   | 0.2 | 1.7 |
| 14 | 00 | 3   | 0.5 | 4.4 |
|    |    | 3   | 0.3 | 2.9 |
|    |    | 3   | 0.1 | 1.2 |

|        |    |   |     |     |
|--------|----|---|-----|-----|
| 14     | 03 | 3 | 0.5 | 4.3 |
| Contd. |    | 3 | 0.2 | 2.8 |
|        |    | 3 | 0.1 | 1.1 |
|        | 06 | 3 | 0.4 | 4.4 |
|        |    | 3 | 0.2 | 2.6 |
|        | 12 | 3 | 0.4 | 4.7 |
|        |    | 3 | 0.4 | 3.1 |
|        |    | 3 | 0.1 | 1.5 |
|        | 18 | 3 | 0.4 | 4.3 |
|        |    | 3 | 0.4 | 3.0 |
|        |    | 3 | 0.1 | 1.5 |
| 15     | 00 | 3 | 0.3 | 3.1 |
|        | 03 | 3 | 0.5 | 2.5 |
|        |    | 3 | 0.3 | 2.9 |
|        | 06 | 3 | 0.5 | 3.3 |
|        |    | 3 | 0.3 | 2.9 |
|        | 12 | 3 | 0.5 | 3.6 |
|        | 18 | 3 | 0.5 | 3.5 |
| 16     | 00 | 3 | 0.4 | 3.4 |
|        | 03 | 3 | 0.5 | 3.4 |
|        | 06 | 3 | 0.5 | 3.3 |
|        | 12 | 3 | 0.5 | 3.5 |
|        | 18 | 3 | 0.5 | 3.5 |
| 17     | 00 | 3 | 0.4 | 3.3 |
|        | 03 | 1 | 0.5 | 3.3 |
|        | 06 | 1 | 0.4 | 3.4 |
|        | 12 | 1 | 0.4 | 3.4 |
|        | 18 | 1 | 0.5 | 3.6 |
| 18     | 00 | 1 | 0.5 | 3.7 |
|        | 03 | 1 | 0.5 | 3.6 |
|        | 06 | 1 | 0.4 | 3.6 |
|        | 12 | 1 | 0.5 | 3.6 |
|        | 18 | 1 | 0.5 | 3.6 |
| 19     | 00 | 1 | 0.5 | 3.5 |
|        | 03 | 1 | 0.5 | 3.6 |
|        | 06 | 1 | 0.6 | 3.6 |
|        | 12 | 1 | 0.5 | 3.8 |
|        | 18 | 1 | 0.6 | 3.9 |
| 20     | 00 | 1 | 0.6 | 3.9 |
|        | 03 | 1 | 0.6 | 3.9 |
|        |    | 3 | 0.1 | 1.3 |
|        | 06 | 1 | 0.6 | 3.9 |
|        |    | 3 | 0.1 | 1.5 |
|        | 12 | 1 | 0.7 | 3.9 |
|        |    | 3 | 0.3 | 2.7 |
|        | 18 | 1 | 0.7 | 3.8 |
|        |    | 3 | 0.3 | 2.8 |
|        |    | 3 | 0.1 | 1.4 |
| 21     | 00 | 1 | 0.6 | 3.7 |
|        |    | 3 | 0.3 | 2.7 |
|        |    | 3 | 0.1 | 1.6 |
|        | 03 | 3 | 0.5 | 3.7 |

Date Hour K Mean Amplitude in mm Mean Period in sec

Date Hour K Mean Amplitude in mm Mean Period in sec

Station. Madras Compt. E-W.

January 1962

| Date   | Hour   | K | Mean Amplitude in mm | Mean Period in sec |
|--------|--------|---|----------------------|--------------------|
| 21     | 03     | 3 | 0.3                  | 2.3                |
| Contd. | Contd. | 3 | 0.1                  | 1.2                |
|        | 06     | 3 | 0.5                  | 3.7                |
|        |        | 3 | 0.3                  | 2.7                |
|        |        | 3 | 0.1                  | 1.6                |
|        | 12     | 3 | 0.4                  | 3.7                |
|        |        | 3 | 0.2                  | 1.8                |
|        | 18     | 3 | 0.5                  | 3.3                |
|        |        | 3 | 0.2                  | 2.9                |
|        |        | 3 | 0.2                  | 2.4                |
| 22     | 00     | 3 | 0.4                  | 3.8                |
|        |        | 3 | 0.3                  | 2.9                |
|        |        | 3 | 0.1                  | 1.6                |
|        | 03     | 3 | 0.4                  | 3.3                |
|        |        | 3 | 0.3                  | 2.3                |
|        | 06     | 3 | 0.4                  | 3.5                |
|        |        | 3 | 0.3                  | 2.7                |
|        | 12     | 3 | 0.3                  | 2.8                |
|        |        | 3 | 0.3                  | 2.7                |
|        |        | 3 | 0.2                  | 1.7                |
|        | 18     | 3 | 0.4                  | 3.3                |
|        |        | 3 | 0.4                  | 3.0                |
|        |        | 3 | 0.2                  | 2.4                |
| 23     | 00     | 3 | 0.4                  | 3.9                |
|        |        | 3 | 0.4                  | 2.2                |
|        | 03     | 3 | 0.5                  | 2.9                |
|        | 06     | 3 | 0.4                  | 2.7                |
|        | 12     | 3 | 0.5                  | 3.7                |
|        |        | 1 | 0.4                  | 2.8                |
|        | 18     | 1 | 0.5                  | 3.7                |
|        |        | 1 | 0.5                  | 2.9                |
| 24     | 00     | 1 | 0.5                  | 3.8                |
|        |        | 1 | 0.6                  | 2.9                |
|        | 03     | 1 | 0.6                  | 2.9                |
|        |        | 1 | 0.5                  | 3.6                |
|        | 06     | 1 | 0.5                  | 3.9                |
|        |        | 1 | 0.5                  | 3.6                |
|        | 12     | 1 | 0.6                  | 3.1                |
|        | 18     | 1 | 0.7                  | 3.0                |
| 25     | 00     | 1 | 0.7                  | 3.1                |
|        | 03     | 1 | 0.7                  | 3.1                |
|        | 06     | 1 | 0.8                  | 3.3                |
|        | 12     | 1 | 0.8                  | 3.4                |
|        |        | 1 | 0.7                  | 2.9                |
|        | 18     | 1 | 0.7                  | 3.9                |
|        |        | 1 | 0.7                  | 2.9                |
| 26     | 00     | 1 | 0.7                  | 3.0                |
|        |        | 1 | 0.7                  | 3.1                |
|        | 03     | 1 | 0.6                  | 3.3                |
|        |        | 1 | 0.5                  | 3.0                |
|        | 06     | 1 | 0.6                  | 3.1                |
|        | 12     | 1 | 0.5                  | 2.9                |
|        | 18     | 1 | 0.5                  | 2.9                |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 27 | 00 | 1 | 0.5 | 3.0 |
|    | 03 | 1 | 0.5 | 2.9 |
|    | 06 | 1 | 0.4 | 2.9 |
|    | 12 | 1 | 0.4 | 3.0 |
|    | 18 | 1 | 0.4 | 3.3 |
| 28 | 00 | 1 | 0.4 | 3.6 |
|    |    | 1 | 0.4 | 3.0 |
|    | 03 | 1 | 0.4 | 3.1 |
|    | 03 | 1 | 0.4 | 3.1 |
|    | 12 | 1 | 0.4 | 3.4 |
|    | 18 | 1 | 0.4 | 3.3 |
|    |    | 3 | 0.2 | 2.7 |
| 29 | 00 | 3 | 0.4 | 3.5 |
|    |    | 3 | 0.3 | 2.9 |
|    | 03 | 3 | 0.3 | 3.1 |
|    |    | 3 | 0.2 | 2.7 |
|    | 03 | 3 | 0.3 | 2.9 |
|    | 12 | 3 | 0.3 | 2.9 |
|    |    | 3 | 0.2 | 2.5 |
|    | 18 | 3 | 0.3 | 3.0 |
|    |    | 3 | 0.3 | 2.5 |
| 30 | 00 | 3 | 0.4 | 2.9 |
|    |    | 3 | 0.2 | 2.4 |
|    |    | 3 | 0.1 | 1.5 |
|    | 03 | 3 | 0.3 | 2.9 |
|    |    | 3 | 0.1 | 1.3 |
|    | 06 | 3 | 0.3 | 2.7 |
|    |    | 3 | 0.1 | 1.2 |
|    | 12 | 3 | 0.3 | 2.3 |
|    | 18 | 3 | 0.3 | 2.3 |
|    |    | 3 | 0.1 | 1.4 |
| 31 | 00 | 3 | 0.3 | 2.9 |
|    |    | 3 | 0.1 | 1.7 |
|    | 03 | 3 | 0.4 | 2.3 |
|    | 06 | 3 | 0.3 | 2.9 |
|    | 12 | 3 | 0.3 | 2.8 |
|    | 13 | 3 | 0.3 | 3.0 |
|    |    | 3 | 0.1 | 1.3 |

Station. Bokaro Component. E-W.

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 01 | 00 | 0,0 | -   | -   |
|    | 06 | 3   | 0.4 | 3.7 |
|    | 12 | 3   | 0.3 | 3.5 |
|    | 18 | 3   | 0.4 | 3.5 |
| 02 | 00 | ... | -   | -   |
|    | 06 | 3   | 0.4 | 4.0 |
|    | 12 | 3   | 0.4 | 4.0 |
|    | 18 | 3   | 0.4 | 4.2 |
| 03 | 00 | 3   | 0.4 | 4.2 |
|    | 06 | 3   | 0.4 | 4.0 |
|    | 12 | 3   | 0.4 | 4.4 |
|    | 18 | 3   | 0.4 | 4.2 |

| Date                               | Hour  | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|------------------------------------|-------|-----|-------------------------|-----------------------|
| <i>Station. Bokaro Compt. E-W.</i> |       |     |                         |                       |
| 04                                 | 00    | 0,0 | -                       | -                     |
|                                    | 06    | 0,0 | -                       | -                     |
|                                    | 12    | 3   | 0.5                     | 4.8                   |
|                                    | 18    | 3   | 0.5                     | 4.4                   |
| 05                                 | 00    | 3   | 0.5                     | 4.5                   |
|                                    | 06    | 3   | 0.4                     | 4.2                   |
|                                    | 12    | 3   | 0.4                     | 4.4                   |
|                                    | 18    | 3   | 0.4                     | 4.2                   |
| 06                                 | 00    | 3   | 0.4                     | 4.4                   |
|                                    | 06    | 3   | 0.4                     | 4.8                   |
|                                    | 12    | 3   | 0.5                     | 5.0                   |
|                                    | 18    | 3   | 0.4                     | 4.8                   |
| 07                                 | 00    | 3   | 0.4                     | 5.0                   |
|                                    | 06    | 3   | 0.4                     | 4.8                   |
|                                    | 12    | 3   | 0.4                     | 4.8                   |
|                                    | 18    | 3   | 0.4                     | 4.4                   |
| 08                                 | 00    | 3   | 0.4                     | 4.4                   |
|                                    | 06 to |     |                         |                       |
|                                    | 18    | 0,0 | -                       | -                     |
| 09                                 | 00    |     |                         |                       |
| to                                 | to    | 0,0 | -                       | -                     |
| 10                                 | 18    |     |                         |                       |
| 11                                 | 00    | 0,0 | -                       | -                     |
|                                    | 06    | ... | -                       | -                     |
|                                    | 12    | 3   | 0.4                     | 5.0                   |
|                                    | 18    | 3   | 0.4                     | 4.8                   |
| 12                                 | 00    | 3   | 0.4                     | 4.4                   |
|                                    | 06    | 3   | 0.4                     | 4.6                   |
|                                    | 12    | 3   | 0.4                     | 4.4                   |
|                                    | 18    | 3   | 0.4                     | 4.4                   |
| 13                                 | 00    |     |                         |                       |
| to                                 | to    | 0,0 | -                       | -                     |
| 13                                 | 18    |     |                         |                       |
| 19                                 | 00    | 0,0 | -                       | -                     |
|                                    | 06    | 0,0 | -                       | -                     |
|                                    | 12    | 3   | 0.2                     | 4.0                   |
|                                    | 18    | 0,0 | -                       | -                     |
| 20                                 | 00 to |     |                         |                       |
|                                    | 18    | 0,0 | -                       | -                     |
| 21                                 | 00    | 0,0 | -                       | -                     |
|                                    | 06    | 3   | 0.3                     | 4.0                   |
|                                    | 12    | 3   | 0.3                     | 4.0                   |
|                                    | 18    | 0,0 | -                       | -                     |
| 22                                 | 00    | 3   | 0.2                     | 4.2                   |
|                                    | 06    | 3   | 0.4                     | 4.4                   |
|                                    | 12    | 3   | 0.2                     | 4.0                   |
|                                    | 18    | 3   | 0.3                     | 4.2                   |

| Date                                      | Hour  | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|-------------------------------------------|-------|-----|-------------------------|-----------------------|
| <i>January 1962</i>                       |       |     |                         |                       |
| 23                                        | 00    | 0,0 | -                       | -                     |
|                                           | 06    | 3   | 0.4                     | 4.8                   |
|                                           | 12    | 3   | 0.5                     | 5.0                   |
|                                           | 18    | 3   | 0.4                     | 4.5                   |
| 24                                        | 00    | 3   | 0.4                     | 4.8                   |
|                                           | 06    | 3   | 0.3                     | 4.0                   |
|                                           | 12    | 3   | 0.4                     | 4.4                   |
|                                           | 18    | 3   | 0.5                     | 4.8                   |
| 25                                        | 00    | 3   | 0.4                     | 4.8                   |
|                                           | 06    | 3   | 0.4                     | 4.2                   |
|                                           | 12    | 3   | 0.4                     | 4.5                   |
|                                           | 18    | 3   | 0.5                     | 4.8                   |
| 26                                        | 00    | 3   | 0.4                     | 4.8                   |
|                                           | 06    | 3   | 0.4                     | 4.0                   |
|                                           | 12    | 3   | 0.4                     | 4.2                   |
|                                           | 18    | 3   | 0.4                     | 4.0                   |
| 27                                        | 00    | 3   | 0.3                     | 4.0                   |
|                                           | 06    | 3   | 0.3                     | 4.0                   |
|                                           | 12    | 3   | 0.4                     | 3.6                   |
|                                           | 18    | 3   | 0.4                     | 3.8                   |
| 28                                        | 00    | 3   | 0.4                     | 3.6                   |
|                                           | 06    | 3   | 0.4                     | 3.8                   |
|                                           | 12    | 3   | 0.4                     | 3.8                   |
|                                           | 18    | 3   | 0.4                     | 4.0                   |
| 29                                        | 00 to |     |                         |                       |
|                                           | 12    | 0,0 | -                       | -                     |
|                                           | 18    | 3   | 0.4                     | 4.0                   |
| 30                                        | 00    |     |                         |                       |
| to                                        | to    | 0,0 | -                       | -                     |
| 31                                        | 18    |     |                         |                       |
| <i>Station. Visakhapatnam Compt. E-W.</i> |       |     |                         |                       |
| 01                                        | 00    | 0,0 | -                       | -                     |
|                                           | 06    | 3   | 0.3                     | 4.0                   |
|                                           | 12    | 3   | 0.3                     | 3.5                   |
|                                           | 18    | 3   | 0.3                     | 3.5                   |
| 02                                        | 00    | ... | -                       | -                     |
|                                           | 06    | 3   | 0.4                     | 5.4                   |
|                                           | 12    | 3   | 0.4                     | 4.4                   |
|                                           | 18    | 3   | 0.2                     | 2.9                   |
| 03                                        | 00    | ... | -                       | -                     |
|                                           | 06    | 2   | 0.3                     | 4.4                   |
|                                           | 12    | 2   | 0.4                     | 4.4                   |
|                                           | 18    | 2   | 0.3                     | 3.9                   |
| 04                                        | 00    | ... | -                       | -                     |
|                                           | 06    | 2   | 0.4                     | 4.7                   |
|                                           | 12    | 2   | 0.4                     | 4.9                   |
|                                           | 18    | ... | -                       | -                     |

| Date                                      | Hour | k   | Mean Amplitude in mm | Mean Period in sec | Date                | Hour | K   | Mean Amplitude in mm | Mean Period in sec |
|-------------------------------------------|------|-----|----------------------|--------------------|---------------------|------|-----|----------------------|--------------------|
| <i>Station. Visakhapatnam Compt. E-W.</i> |      |     |                      |                    | <i>January 1962</i> |      |     |                      |                    |
| 05                                        | 00   | ... | -                    | -                  | 17                  | 12   | 2   | 0.3                  | 5.3                |
|                                           | 06   | 3   | 0.4                  | 5.0                | Contd.              | 18   | ... | -                    | -                  |
|                                           | 12   | 3   | 0.3                  | 5.2                |                     | 18   | 00  | ...                  | -                  |
|                                           | 18   | ... | -                    | -                  |                     | 06   | 3   | 0.3                  | 4.3                |
| 06                                        | 00   | ... | -                    | -                  |                     | 12   | 3   | 0.4                  | 4.7                |
|                                           | 06   | 2   | 0.4                  | 4.8                |                     | 18   | 3   | 0.3                  | 3.9                |
|                                           | 12   | 2   | 0.5                  | 5.6                | 19                  | 00   | ... | -                    | -                  |
|                                           | 18   | 2   | 0.2                  | 3.5                |                     | 06   | 1   | 0.3                  | 3.9                |
| 07                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 1   | 0.2                  | 4.2                |
|                                           | 06   | 2   | 0.5                  | 5.4                |                     | 18   | 1   | 0.1                  | 3.7                |
|                                           | 12   | 2   | 0.5                  | 5.4                | 20                  | 00   | ... | -                    | -                  |
|                                           | 18   | ... | -                    | -                  |                     | 06   | 1   | 0.3                  | 4.4                |
| 08                                        | 00   | ... | -                    | -                  |                     | 12   | 1   | 0.2                  | 4.4                |
|                                           | 06   | 2   | 0.4                  | 5.1                |                     | 18   | 3   | 0.2                  | 3.7                |
|                                           | 12   | ... | -                    | -                  | 21                  | 00   | 3   | 0.1                  | 3.5                |
|                                           | 18   | ... | -                    | -                  |                     | 06   | 3   | 0.3                  | 4.0                |
| 09                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 3   | 0.2                  | 5.0                |
|                                           | 06   | ... | -                    | -                  |                     | 18   | 3   | 0.1                  | 3.0                |
|                                           | 12   | ... | -                    | -                  | 22                  | 00   | 3   | 0.1                  | 3.2                |
|                                           | 18   | 0,0 | -                    | -                  |                     | 06   | 3   | 0.3                  | 4.7                |
| 10                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 3   | 0.3                  | 4.7                |
|                                           | 06   | ... | -                    | -                  |                     | 18   | 3   | 0.2                  | 3.5                |
|                                           | 12   | 3   | 0.3                  | 5.0                | 23                  | 00   | 3   | 0.2                  | 3.6                |
|                                           | 18   | 3   | 0.3                  | 4.2                |                     | 06   | 3   | 0.3                  | 4.3                |
| 11                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 3   | 0.3                  | 4.7                |
|                                           | 06   | ... | -                    | -                  |                     | 18   | 3   | 0.2                  | 3.2                |
|                                           | 12   | 3   | 0.2                  | 5.1                | 24                  | 00   | ... | -                    | -                  |
|                                           | 18   | 3   | 0.2                  | 3.4                |                     | 06   | 3   | 0.3                  | 3.6                |
| 12                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 3   | 0.3                  | 3.8                |
|                                           | 06   | 1   | 0.4                  | 5.1                |                     | 18   | 3   | 0.2                  | 2.9                |
|                                           | 12   | 1   | 0.3                  | 5.5                | 25                  | 00   | 3   | 0.2                  | 2.5                |
|                                           | 18   | 0,0 | -                    | -                  |                     | 06   | 2   | 0.2                  | 2.9                |
| 13                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 2   | 0.2                  | 3.3                |
|                                           | 06   | 3   | 0.4                  | 5.3                |                     | 18   | 2   | 0.3                  | 3.1                |
|                                           | 12   | 3   | 0.3                  | 4.6                | 26                  | 00   | 1   | 0.2                  | 2.8                |
|                                           | 18   | 3   | 0.3                  | 5.2                |                     | 06   | 2   | 0.3                  | 3.0                |
| 14                                        | 00   | 3   | 0.3                  | 5.1                |                     | 12   | 2   | 0.3                  | 3.2                |
|                                           | 06   | 1   | 0.4                  | 5.1                |                     | 18   | 2   | 0.2                  | 2.8                |
|                                           | 12   | 3   | 0.3                  | 5.1                | 27                  | 00   | 1   | 0.2                  | 3.0                |
|                                           | 18   | 3   | 0.3                  | 4.5                |                     | 06   | 1   | 0.2                  | 4.0                |
| 15                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 1   | 0.2                  | 3.2                |
|                                           | 06   | 3   | 0.3                  | 5.5                |                     | 18   | 1   | 0.2                  | 3.2                |
|                                           | 12   | 3   | 0.3                  | 5.9                | 28                  | 00   | 1   | 0.3                  | 2.9                |
|                                           | 18   | 3   | 0.2                  | 4.7                |                     | 06   | 1   | 0.3                  | 3.2                |
| 16                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 1   | 0.3                  | 3.3                |
|                                           | 06   | 3   | 0.3                  | 5.4                |                     | 18   | 1   | 0.3                  | 3.1                |
|                                           | 12   | ... | -                    | -                  | 29                  | 00   | 1   | 0.2                  | 2.7                |
|                                           | 18   | 3   | 0.2                  | 4.6                |                     | 06   | 3   | 0.3                  | 3.4                |
| 17                                        | 00   | 0,0 | -                    | -                  |                     | 12   | 2   | 0.3                  | 3.6                |
|                                           | 06   | 2   | 0.3                  | 4.9                |                     | 18   | 3   | 0.2                  | 3.3                |

| Date                                      | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec | Date                                     | Hour | K   | Mean Amplitude<br>in micron | Mean Period<br>in sec |
|-------------------------------------------|------|-----|-------------------------|-----------------------|------------------------------------------|------|-----|-----------------------------|-----------------------|
| <i>Station. Visakhapatnam Compt. E-W.</i> |      |     |                         |                       | <i>January 1962. Station. Port Blair</i> |      |     |                             |                       |
| 30                                        | 00   | 0,0 | -                       | -                     | 09                                       | 00   |     |                             |                       |
|                                           | 06   | 3   | 0.3                     | 4.3                   | to                                       | to   | 0.. | -                           | -                     |
|                                           | 12   | 3   | 0.3                     | 4.9                   | 15                                       | 18   |     |                             |                       |
|                                           | 18   | 0,0 | -                       | -                     | 16                                       | 00   |     |                             |                       |
| 31                                        | 00   | 0,0 | -                       | -                     | to                                       | to   | ... | -                           | -                     |
|                                           | 06   | 3   | 0.3                     | 4.4                   | 22                                       | 18   |     |                             |                       |
|                                           | 12   | 3   | 0.2                     | 5.0                   | 23                                       | 00   | ... | -                           | -                     |
|                                           | 18   | 0,0 | -                       | -                     | 06                                       | to   |     |                             |                       |
| <hr/>                                     |      |     |                         |                       | 18                                       | 2    |     | 0.4                         | 3.2                   |
| <i>Station. Port Blair. Compt. E-W.</i>   |      |     |                         |                       | 24                                       | 00   | 2   | 0.4                         | 3.2                   |
| 01                                        | 00   | 0,0 | -                       | -                     | 06                                       | to   |     |                             |                       |
|                                           | 03   | 3   | 0.4                     | 3.2                   | 18                                       | 0,0  |     |                             |                       |
|                                           | 12   | 3   | 0.4                     | 3.2                   | 25                                       | 00   |     |                             |                       |
|                                           | 18   | 3   | 0.4                     | 3.2                   | to                                       | to   | 0,0 | -                           | -                     |
| 02                                        | 00   | to  |                         |                       | 26                                       | 18   |     |                             |                       |
|                                           | 18   | 2   | 0.4                     | 3.2                   | 27                                       | 00   | 0,0 | -                           | -                     |
| 03                                        | 00   | 2   | 0.4                     | 3.2                   | 06                                       | ...  |     |                             |                       |
|                                           | 03   | 2   | 0.4                     | 3.3                   | 12                                       | 3    |     | 0.4                         | 3.2                   |
|                                           | 12   | 2   | 0.4                     | 3.2                   | 18                                       | 3    |     | 0.4                         | 3.2                   |
|                                           | 18   | 2   | 0.4                     | 3.2                   | 28                                       | 00   | 3   | 0.4                         | 3.2                   |
| 04                                        | 00   | 2   | 0.4                     | 3.2                   | 06                                       | to   |     |                             |                       |
|                                           | 06   | 2   | 0.4                     | 3.3                   | 18                                       | 0,0  |     |                             |                       |
|                                           | 12   | 2   | 0.4                     | 3.3                   | 29                                       | 00   |     |                             |                       |
|                                           | 18   | 2   | 0.4                     | 3.2                   | to                                       | to   | 0,0 | -                           | -                     |
| 05                                        | 00   | 2   | 0.4                     | 3.2                   | 18                                       |      |     |                             |                       |
|                                           | 06   | to  |                         |                       | 30                                       | 00   | 0,0 | -                           | -                     |
|                                           | 18   | 0,0 | -                       | -                     | 06                                       | to   |     |                             |                       |
| 06                                        | 00   |     |                         |                       | 18                                       | ...  |     |                             |                       |
| to                                        | to   | 0,0 | -                       | -                     | 31                                       | 00   |     |                             |                       |
| 07                                        | 18   |     |                         |                       | to                                       | to   | ... | -                           | -                     |
| 08                                        | 00   | 0,0 | -                       | -                     | 18                                       |      |     |                             |                       |
|                                           | 03   | to  |                         |                       |                                          |      |     |                             |                       |
|                                           | 18   | 0.. | -                       | -                     |                                          |      |     |                             |                       |





MAR 3 1965



# SEISMOLOGICAL BULLETIN

FEB 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

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PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

| Station                 | Latitude         | Longitude | Height<br>s.l.<br>(Metres) | Lithographic<br>foundation                        | Instrument               | Compt                               | Period<br>in                            |                              | Static<br>Magnifica-<br>tion | Damping<br>ratio | Paper speed<br>mm/min. |
|-------------------------|------------------|-----------|----------------------------|---------------------------------------------------|--------------------------|-------------------------------------|-----------------------------------------|------------------------------|------------------------------|------------------|------------------------|
|                         |                  |           |                            |                                                   |                          |                                     | T <sub>0</sub>                          | T <sub>g</sub>               |                              |                  |                        |
| Agra                    |                  |           |                            |                                                   | Columbia                 | E                                   | T <sub>0</sub> =15                      | T <sub>g</sub> =100          |                              |                  | 15                     |
|                         |                  |           |                            |                                                   | Long Period              | N                                   | T <sub>0</sub> =15                      | T <sub>g</sub> =85           |                              |                  | 15                     |
|                         |                  |           |                            |                                                   | - do -                   | Z                                   | T <sub>0</sub> =15                      | T <sub>g</sub> =70           |                              |                  | 15                     |
| Bombay                  | 18.54°N, 72.40°E |           | 6                          | Deccan Trap                                       | Milne-Shaw               | N                                   | 12                                      | 350                          |                              | 13:1             | 15                     |
|                         |                  |           |                            |                                                   | Milne-Shaw               | E                                   | 12                                      | 350                          |                              | 23:1             | 8                      |
|                         |                  |           |                            |                                                   | Sprengnether             | E                                   | T <sub>0</sub> =T <sub>g</sub> =7 secs  |                              |                              |                  | 30                     |
| Bokaro                  | 23.50°N, 85.48°E |           |                            | Rock                                              | Milne-Shaw               | N                                   | 12                                      | 250                          |                              | 20:1             | 15                     |
|                         |                  |           |                            |                                                   | Milne-Shaw               | E                                   | 12                                      | 250                          |                              | 20:1             | 15                     |
|                         |                  |           |                            |                                                   | Wood-Anderson            | E                                   | 0.8                                     | 950                          |                              | h=0.8            | 50                     |
|                         |                  |           |                            |                                                   | Wood-Anderson            | N                                   | 0.8                                     | 1000                         |                              | h=0.8            | 50                     |
| Calcutta                | 22.32°N, 88.22°E |           |                            | (1) 7 Milne-Shaw<br>(2) 6 Omori-Ewing<br>Alluvium | Milne-Shaw               | E                                   | 12                                      | 250                          |                              | 20:1             | 8                      |
|                         |                  |           |                            |                                                   | Wood-Anderson            | N                                   | 2                                       | 870                          |                              | Critical         | 30                     |
|                         |                  |           |                            |                                                   | Omori-Ewing              | N                                   | 16                                      | 32                           |                              | -                | 25.4                   |
|                         |                  |           |                            |                                                   | Omori-Ewing              | E                                   | 21                                      | 30                           |                              | -                | 25.4                   |
| Chatra                  | 26.50°N, 87.10°E |           | 151                        | Sand stone                                        | Milne-Shaw               | E                                   | 12                                      | 250                          |                              | 20:1             | 15                     |
|                         |                  |           |                            |                                                   | Wood-Anderson            | N                                   | 1                                       | 1000                         |                              | 30:1             | 50                     |
|                         |                  |           |                            |                                                   | Benioff                  | Z                                   | T <sub>0</sub> =0                       | T <sub>g</sub> =0.45<br>secs |                              | Critical         | 60                     |
|                         |                  |           |                            |                                                   | Wenner-<br>Accelerograph | ZNE                                 | -                                       | -                            |                              | -                | -                      |
| Colombo                 | 05.54°N, 79.52°E |           | 7                          | Beach Sand                                        | Milne-Shaw               | E                                   | 12                                      | 250                          |                              | 20:1             | -                      |
| Dehra Dun               | 30.19°N, 78.02°E |           | 582                        | Gravel                                            | Wood-Anderson            | N                                   | 0.8                                     | 950                          |                              | Critical         |                        |
|                         |                  |           |                            |                                                   | Wood-Anderson            | E                                   | 0.8                                     | 850                          |                              | Critical         | 50                     |
|                         |                  |           |                            |                                                   | Milne-Shaw               | N                                   | 12                                      | 250                          |                              | 20:1             | 8                      |
|                         |                  |           |                            |                                                   | Milne-Shaw               | E                                   | 12                                      | 250                          |                              | 20:1             | 8                      |
| Hyderabad               | 17.26°N, 78.27°E |           | 536                        | Granite                                           | Milne-Shaw               | E                                   | 12                                      | 250                          |                              | 20:1             | 8                      |
|                         |                  |           |                            |                                                   | Milne-Shaw               | N                                   | 12                                      | 250                          |                              | 20:1             | 8                      |
| Kodaikanal              | 10.14°N, 77.28°E |           | 2245                       | Rock                                              | Milne-Shaw               | E                                   | 10                                      | 250                          |                              | 20:1             | 8                      |
| Madras                  | 13.00°N, 80.11°E |           | 15                         | -                                                 | Sprengnether             | E                                   | T <sub>0</sub> =T <sub>g</sub> =72 secs |                              |                              | Critical         | 30                     |
| New Delhi               | 28.35°N, 77.12°E |           | 207                        | Massive Quartzite                                 |                          |                                     |                                         |                              |                              |                  |                        |
| Poona                   | 18.32°N, 73.51°E |           | 560                        | Deccan Trap                                       | Sprengnether             | Z                                   | T <sub>0</sub> =T <sub>g</sub> =1.5     |                              |                              | Critical         | 30                     |
|                         |                  |           |                            |                                                   | Wood-Anderson            | E                                   | 4                                       | 1000                         |                              |                  | 15                     |
|                         |                  |           |                            |                                                   | Milne-Shaw               | N                                   | 12                                      | 280                          |                              | 20:1             | 8                      |
| Port Blair              | 11.49°N, 92.43°E |           |                            |                                                   | Wood-Anderson            | N                                   | 2                                       | 1000                         |                              | 20:1             | 30                     |
|                         |                  |           |                            |                                                   | Wood-Anderson            | E                                   | 0.8                                     | 1000                         |                              | 55:1             | 30                     |
|                         |                  |           |                            |                                                   | Milne-Shaw               | N                                   | 12                                      | 350                          |                              | 20:1             | 8                      |
|                         |                  |           |                            |                                                   | Wood-Anderson            | N                                   | 0.8                                     | 980                          |                              | Critical         | 30                     |
| Shillong                | 25.34°N, 91.53°E |           | 1500                       | Quartzite                                         | Wood-Anderson            | N                                   | 0.8                                     | 1000                         |                              | h=0.8            | 30                     |
|                         |                  |           |                            | Sand Stone                                        | Wood-Anderson            | E                                   | 0.8                                     | 1000                         |                              | h=0.8            | 30                     |
|                         |                  |           |                            | (Shillong<br>Quartzite)                           | Milne-Shaw               | N                                   | 12                                      | 250                          |                              | 20:1             | 8                      |
|                         |                  |           |                            | Benioff                                           | Z                        | T <sub>0</sub> =1.0                 | T <sub>g</sub> =18                      |                              |                              | 50               |                        |
|                         |                  |           |                            | Sprengnether                                      | E                        | T <sub>0</sub> =T <sub>g</sub> =5.3 |                                         |                              | Critical                     | 30               |                        |
| Wenner<br>Accelerograph | ZNE              | -         | -                          |                                                   | -                        | -                                   |                                         |                              |                              |                  |                        |
| Tocklai                 | 28.45°N, 94.45°E |           |                            | Alluvium                                          | Wood-Anderson            | E                                   | 0.8                                     | 970                          |                              | h=0.8            | 50                     |
| Vizianagram             | 18.07°N, 83.27°E |           |                            |                                                   | Wood-Anderson            | E                                   | 0.8                                     | 1000                         |                              | h=0.8            | 30                     |
|                         |                  |           |                            |                                                   | Wood-Anderson            | N                                   | 2                                       | 1000                         |                              | 20:1             | 30                     |



List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude | Longitude              | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation | Instrument    | Compt | Period<br>in<br>secs | Static<br>Magnifi-<br>cation | Damping<br>ratio           | Paper<br>speed<br>mm/min |
|---------------|----------|------------------------|--------------------------------|----------------------------|---------------|-------|----------------------|------------------------------|----------------------------|--------------------------|
| Bombay        | 18.54°N, | 72.40°E                |                                | Deccan Trap                | Milne-Shaw    | N     | 12                   | 350                          | 21:1                       | 8                        |
|               |          |                        |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 21:1                       | 8                        |
|               |          |                        |                                |                            | Sprengnether  | E     | To=7.3               | 5000                         | 2.39:1                     | 30                       |
|               |          |                        |                                |                            |               |       | Tg=7.3               |                              |                            |                          |
|               |          |                        |                                | Benioff                    | Z             | -     | -                    | -                            | 50 for S.P.<br>30 for L.P. |                          |
| Bokaro        | 23.50°N, | 85.48°E                |                                | Rock                       | Sprengnether  | E     | To=Tg=5.5            | 5200                         | 2.33:1                     | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 930                          | Critical                   | 50                       |
|               |          |                        |                                |                            | Wood-Anderson | F     | 0.8                  | 830                          | Critical                   | 50                       |
|               |          |                        |                                |                            | Milne-Shaw    | E     | 12                   | 270                          | 20:1                       | 15                       |
|               |          |                        |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 15                       |
|               |          |                        |                                |                            |               |       |                      |                              |                            |                          |
| Calcutta      | 22.32°N, | 88.22°E (1) 7<br>(2) 6 |                                | Omori-Ewing<br>Alluvium    | Milne-Shaw    | E     | 12                   | 300                          | 20:1                       | 8                        |
|               |          |                        |                                |                            | Wood-Anderson | N     | 2                    | 1900                         | Critical                   | 30                       |
|               |          |                        |                                |                            | Omori-Ewing   | E     | 10                   | 30                           |                            | 25.4                     |
|               |          |                        |                                |                            | Omori-Ewing   | N     | 15                   | 32                           |                            | 25.4                     |
|               |          |                        |                                |                            |               |       |                      |                              |                            |                          |
| Chatra        | 25.50°N, | 87.10°E                | 151                            | Sand Stone                 | Milne-Shaw    | N     | 10                   | 250                          | 20:1                       | 15                       |
|               |          |                        |                                |                            | Milne-Shaw    | E     | 10                   | 250                          | 20:1                       | 15                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 940                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Benioff(S.P)  | Z     | To=0.72              | -                            | Es=23:1                    | 50                       |
|               |          |                        |                                |                            |               |       | Tg=0.45              |                              | Eg=Critical                |                          |
| Delhi         | 28.41°N, | 77.13°E                | 207                            | Quartzite<br>Sand Stone    | Sprengnether  | E     | To=Tg=7.5            | 5000                         | Critical                   | 30                       |
|               |          |                        |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                            | Benioff       | Z     | To=Tg=1.0            | -                            | -                          | 50                       |
|               |          |                        |                                |                            | Press Ewing   | Z     | To=30                | Tg=100                       | -                          | 15                       |
|               |          |                        |                                |                            | Press Ewing   | N     | To=30                | Tg=100                       | -                          | 15                       |
|               |          |                        |                                |                            | Press Ewing   | E     | To=30                | Tg=100                       | -                          | 15                       |
| Dehra Dun     | 30.19°N, | 78.02°E                | 582                            | Gravel                     | Wilson Lamson | Z     | To=Tg=1.5            | -                            | -                          | 50                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | E     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                            |               |       |                      |                              |                            |                          |
| Hyderabad     | 17.25°N, | 78.27°E                | 535                            | Granite                    | Milne-Shaw    | E     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
| Kodaikanal    | 10.14°N, | 77.29°E                | 2345                           | Rock                       | Milne-Shaw    | E     | 10                   | 250                          | 20:1                       | 8                        |
| Madras        | 13.00°N, | 80.11°E                | 15                             |                            | Sprengnether  | E     | To=Tg=7.5            | 5000                         | 23:1                       | 30                       |
| Poona         | 18.32°N, | 73.51°E                | 550                            | Deccan Trap                | Milne-Shaw    | N     | 12                   | 280                          | 20:1                       | 8                        |
|               |          |                        |                                |                            | Wood-Anderson | E     | 4.0                  | 1000                         | 20:1                       | 15                       |
|               |          |                        |                                |                            | Sprengnether  | Z     | 1.5                  | 3000                         | 2.1:1                      | 30                       |
| Port Blair    | 11.49°N, | 92.43°E                |                                |                            | Milne-Shaw    | F     | 12                   | 260                          | 20:1                       | 8                        |
|               |          |                        |                                |                            | Wood-Anderson | N     | 2.0                  | 950                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | E     | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Benioff       | Z     | To=1.9               | Tg=1.6                       | -                          | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | E     | 0.8                  | 840                          | Critical                   | 30                       |
| Shillong      | 25.34°N, | 91.53°E                |                                | Quartzite<br>Sand Stone    | Wood-Anderson | N     | 0.8                  | 900                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
| Tocklai       | 28.45°N, | 94.45°E                |                                | Alluvium                   | Benioff       | Z     | To=1.0               | Tg=1.0                       | -                          | 50                       |
|               |          |                        |                                |                            | Wood-Anderson | E     | 0.8                  | 900                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Sprengnether  | E     | To=5.5               | 3900                         | 2.4:1                      | 30                       |
| Visakhapatnam | 18.07°N, | 83.27°E                |                                |                            | Wood-Anderson | E     | Tg=5.5               | 970                          | h=0.8                      | 50                       |
|               |          |                        |                                |                            | Sprengnether  | E     | To=Tg=5.9            | 5000                         | 1.2:1                      | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | N     | To=2.0               | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                            | Wood-Anderson | E     | To=0.8               | 970                          | Critical                   | 30                       |



From the ISC collection scanned by SISMOS

| DATE | STATION | COMPT | PHASE | G | M | T | Δ  | REMARKS |
|------|---------|-------|-------|---|---|---|----|---------|
|      |         |       |       | h | m | s | km |         |

February 1962

|    |                                                                                               |    |      |    |    |    |       |                             |
|----|-----------------------------------------------------------------------------------------------|----|------|----|----|----|-------|-----------------------------|
| 01 | Epc: 30.7°S, 177.3°W. Kermadec Islands Region<br>- H = 00h 39m 54.8s, - h about 30 km (USCGS) |    |      |    |    |    |       |                             |
|    | Shillong                                                                                      | Z  | eP   | 00 | 53 | 58 | 11330 | Slight                      |
|    |                                                                                               | ZE | iSKS | 01 | 04 | 38 |       |                             |
|    | Madras                                                                                        | E  | e    | 00 | 57 | 46 |       | Slight                      |
|    |                                                                                               |    | SKS  |    | 05 | 01 |       |                             |
|    |                                                                                               |    | i    |    | 09 | 04 |       |                             |
|    | Bombay                                                                                        | E  | e    | 01 | 01 | 42 | 13260 | Slight                      |
|    |                                                                                               | NE | SKS  |    | 05 | 33 |       |                             |
|    |                                                                                               |    | e    |    | 06 | 41 |       |                             |
|    |                                                                                               |    | PPS  |    | 11 | 14 |       |                             |
|    |                                                                                               |    | e    |    | 13 | 29 |       |                             |
|    | Port Blair                                                                                    | E  | e    | 01 | 02 | 43 |       | Slight                      |
|    | Chatra                                                                                        | E  | SKS  | 01 | 05 | 05 |       | Slight                      |
| 01 | Chatra                                                                                        | Z  | iPg  | 07 | 54 | 35 | 110   | Feeble, compression         |
|    |                                                                                               |    | Sg   |    | 54 | 48 |       |                             |
| 01 | New Delhi                                                                                     | Z  | iP   | 08 | 15 | 23 |       | Slight, compression         |
| 01 | Shillong                                                                                      | Z  | iP   | 11 | 32 | 41 |       | Slight, distant rarefaction |
| 01 | Shillong                                                                                      | Z  | iP   | 11 | 38 | 25 |       | Slight, distant rarefaction |
| 01 | Shillong                                                                                      | Z  | eP   | 15 | 33 | 29 | 360   | Slight                      |
|    |                                                                                               |    | eSg  |    | 34 | 23 |       |                             |
| 01 | Chatra                                                                                        | Z  | eP   | 15 | 37 | 43 |       | Slight, distant             |
| 01 | Shillong                                                                                      | Z  | eP   | 16 | 11 | 53 |       | Slight, distant             |
| 01 | New Delhi                                                                                     | Z  | iP   | 17 | 17 | 21 | 510   | Slight, compression         |
|    |                                                                                               |    | p*   |    | 17 | 20 |       |                             |
|    |                                                                                               |    | S    |    | 18 | 17 |       |                             |
|    | Chatra                                                                                        | Z  | iP   | 17 | 18 | 01 | 620   | Feeble, rarefaction         |
|    |                                                                                               |    | iS   |    | 19 | 17 |       |                             |
| 01 | Visakhapatnam                                                                                 | E  | ePg  | 17 | 20 | 43 | 50    | Slight                      |
|    |                                                                                               | EN | eSg  |    | 20 | 48 |       |                             |
|    | Shillong                                                                                      | Z  | eP   | 17 | 20 | 51 |       | Slight, distant             |
|    |                                                                                               |    | i    |    | 22 | 06 |       |                             |
| 01 | Shillong                                                                                      | Z  | ePg  | 18 | 26 | 12 | 20    | Slight                      |
|    |                                                                                               |    | Sg   |    | 26 | 15 |       |                             |
| 01 | New Delhi                                                                                     | Z  | iP   | 21 | 40 | 53 |       | Slight, compression         |
| 02 | Chatra                                                                                        | Z  | eP   | 00 | 10 | 57 | 170   | Slight                      |
|    |                                                                                               |    | S    |    | 11 | 18 |       |                             |
| 02 | Chatra                                                                                        | Z  | eP   | 00 | 46 | 50 |       |                             |

| DATE          | STATION                                                                            | COMPT | PHASE     | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | REMARKS                        |
|---------------|------------------------------------------------------------------------------------|-------|-----------|--------|--------|-------------|----------------|--------------------------------|
| February 1962 |                                                                                    |       |           |        |        |             |                |                                |
| 02            | Shillong                                                                           | Z     | ePg<br>Sg | 03     | 48     | 53<br>49 23 | 220            | Slight                         |
| 02            | Bombay                                                                             | E     | e         | 03     | 59     | 54          |                |                                |
| 02            | New Delhi                                                                          | Z     | eP        | 04     | 00     | 13          |                | Slight, rarefaction            |
| 02            | Shillong                                                                           | Z     | iP        | 05     | 15     | 34          |                | Slight, distant<br>compression |
| 02            | New Delhi                                                                          | Z     | iP<br>iS  | 05     | 48     | 48<br>50 30 | 990            | Slight, compression            |
|               | Shillong                                                                           | Z     | iP        | 05     | 50     | 45          |                | Slight, distant<br>rarefaction |
| 02            | New Delhi                                                                          | Z     | iP        | 06     | 06     | 19          |                | Slight, rarefaction            |
| 02            | Epc: 49.9°N, 78.2°E. Kazakh S.S.R.<br>- H = 07h 59m 58.5, - h about 0 km (USCGS)   |       |           |        |        |             |                |                                |
|               | Dehra Dun                                                                          | NE    | eP        | 08     | 04     | 31          |                | Tremor                         |
|               | New Delhi                                                                          | Z     | iP        | 08     | 04     | 45          |                | Slight, compression            |
|               | Chatra                                                                             | ZN    | iP        | 08     | 05     | 18          |                | Feeble, distant<br>rarefaction |
|               | Shillong                                                                           | Z     | iP        | 08     | 05     | 38          |                | Slight, distant<br>compression |
| 02            | Poona                                                                              | Z     | iP        | 08     | 06     | 21          |                | Tremor, compression            |
| 02            | New Delhi                                                                          | Z     | iP        | 11     | 24     | 37          |                | Slight, compression            |
| 02            | Shillong                                                                           | Z     | eP        | 11     | 55     | 22          |                | Slight, distant                |
| 02            | New Delhi                                                                          | Z     | iP<br>iS  | 12     | 12     | 55<br>14 17 | 790            | Slight, rarefaction            |
|               | Dehra Dun                                                                          | NE    | eP<br>i   | 12     | 13     | 21<br>14 16 |                | Feeble                         |
|               | Shillong                                                                           | Z     | eP        | 12     | 15     | 36          |                | Slight, distant<br>rarefaction |
|               | Chatra                                                                             | Z     | eP        | 12     | 17     | 39          |                | Undefined motion               |
| 02            | Epc: 43.7°N, 148.5°E. Kurile Islands<br>- H 17h 20m 11.1s, - h about 49 km (USCGS) |       |           |        |        |             |                |                                |
|               | Shillong                                                                           | Z     | iP        | 17     | 28     | 57          |                | Slight, distant<br>compression |
|               | Chatra                                                                             | Z     | eP        | 17     | 29     | 17          |                | Feeble, distant                |
|               | New Delhi                                                                          | Z     | iP        | 17     | 30     | 02          |                | Slight, compression            |
|               | Dehra Dun                                                                          | NE    | e         | 17     | 37     | 45          |                | Feeble                         |

| DATE          | STATION                                                                                                                                                 | COMPT   | PHASE | G  | M  | T  | Δ    | Remarks                 |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|----|----|----|------|-------------------------|
|               |                                                                                                                                                         |         |       | h. | m. | s. | km   |                         |
| February 1962 |                                                                                                                                                         |         |       |    |    |    |      |                         |
| 03            | Epc: 1.8°S, 137°E. North New Guinea<br>- H = 00h 37m 52s (Shillong)<br>1.2°S, 137.8°E. North of New Guinea<br>- H=00h 37m 53.6s - h about 17 km (USCGS) |         |       |    |    |    |      |                         |
|               | Port Blair                                                                                                                                              | E       | iP    | 00 | 46 | 21 | 5430 | Slight                  |
|               |                                                                                                                                                         |         | eS    |    | 53 | 24 |      |                         |
|               |                                                                                                                                                         |         | M     |    | 59 | 10 |      |                         |
|               | Shillong                                                                                                                                                | ZNE     | iP    | 00 | 47 | 01 | 5720 | Moderate,               |
|               |                                                                                                                                                         | E       | PcP   |    | 48 | 14 |      | compression             |
|               |                                                                                                                                                         |         | PP    |    | 48 | 51 |      |                         |
|               |                                                                                                                                                         |         | ScP   |    | 52 | 11 |      |                         |
|               |                                                                                                                                                         | NE      | iS    |    | 54 | 21 |      |                         |
|               |                                                                                                                                                         | E       | PPS   |    | 54 | 37 |      |                         |
|               |                                                                                                                                                         |         | SS    |    | 57 | 49 |      |                         |
|               |                                                                                                                                                         |         | M     |    | -  | -  |      | Per.=14 sec, Gr.dis=7 μ |
|               | Calcutta                                                                                                                                                | E       | iP    | 00 | 47 | 15 | 5910 | Moderate                |
|               |                                                                                                                                                         |         | PP    |    | 49 | 15 |      |                         |
|               |                                                                                                                                                         |         | PPP   |    | 50 | 22 |      |                         |
|               |                                                                                                                                                         |         | iS    |    | 54 | 45 |      |                         |
|               |                                                                                                                                                         |         | ScS   |    | 57 | 07 |      |                         |
|               | Chatra                                                                                                                                                  | ZNE     | iP    | 00 | 47 | 35 | 6210 | Moderate,               |
|               |                                                                                                                                                         |         | PcP   |    | 48 | 27 |      | compression             |
|               |                                                                                                                                                         |         | PP    |    | 49 | 40 |      |                         |
|               |                                                                                                                                                         |         | PPP   |    | 50 | 59 |      |                         |
|               |                                                                                                                                                         |         | PcS   |    | 52 | 23 |      |                         |
|               |                                                                                                                                                         |         | S     |    | 55 | 22 |      |                         |
|               |                                                                                                                                                         |         | PPS   |    | 55 | 40 |      |                         |
|               |                                                                                                                                                         |         | ScS   |    | 57 | 10 |      |                         |
|               |                                                                                                                                                         |         | SS    |    | 58 | 53 |      |                         |
|               |                                                                                                                                                         |         | SSS   | 01 | 00 | 53 |      |                         |
|               |                                                                                                                                                         |         | Lq    |    | 01 | 08 |      |                         |
|               |                                                                                                                                                         |         | Lr    |    | 03 | 40 |      |                         |
|               |                                                                                                                                                         |         | M     |    | 08 | 09 |      |                         |
|               | Bokaro                                                                                                                                                  | NE      | iP    | 00 | 47 | 36 | 6290 | Slight                  |
|               | Visakhapatnam                                                                                                                                           | E       | iP    | 00 | 47 | 40 | 6330 | Moderate. Initial       |
|               |                                                                                                                                                         |         | PP    |    | 49 | 49 |      | ground movement         |
|               |                                                                                                                                                         |         | PPP   |    | 51 | 07 |      | towards West            |
|               |                                                                                                                                                         | NE      | iS    |    | 55 | 34 |      |                         |
|               |                                                                                                                                                         | E       | PS    |    | 55 | 44 |      |                         |
|               |                                                                                                                                                         |         | PPS   |    | 55 | 53 |      |                         |
|               | Madras                                                                                                                                                  | E       | iP    | 00 | 47 | 53 | 6530 | Moderate, Initial       |
|               |                                                                                                                                                         |         | e     |    | 48 | 16 |      | ground movement         |
|               |                                                                                                                                                         |         | PcP   |    | 48 | 37 |      | towards West            |
|               |                                                                                                                                                         |         | PP    |    | 50 | 07 |      |                         |
|               |                                                                                                                                                         |         | PPP   |    | 51 | 35 |      |                         |
|               |                                                                                                                                                         | PcS/ScP |       |    | 52 | 31 |      |                         |
|               |                                                                                                                                                         |         | iS    |    | 55 | 58 |      |                         |
|               |                                                                                                                                                         |         | PS    |    | 56 | 09 |      |                         |
|               |                                                                                                                                                         |         | PPS   |    | 56 | 18 |      |                         |
|               |                                                                                                                                                         |         | ScS   |    | 57 | 44 |      |                         |
|               |                                                                                                                                                         |         | SS    | 01 | 00 | 04 |      |                         |
|               |                                                                                                                                                         |         | SSS   |    | 02 | 17 |      |                         |
|               |                                                                                                                                                         |         | Lq    |    | 03 | 04 |      |                         |
|               |                                                                                                                                                         |         | Lr    |    | 06 | 19 |      |                         |

| DATE          | STATION   | COMPT | PHASE         | C  | M  | T  | Δ    | REMARKS                                                                                                              |                 |
|---------------|-----------|-------|---------------|----|----|----|------|----------------------------------------------------------------------------------------------------------------------|-----------------|
|               |           |       |               | h  | m  | s  | km   |                                                                                                                      |                 |
| February 1962 |           |       |               |    |    |    |      |                                                                                                                      |                 |
| 03            | Hyderabad | EN    | iP            | 00 | 48 | 11 | 6770 | Moderate, initial ground movement towards North and West<br><br>Per=16 secs, Gr. dis=6 μ<br>Per=15 secs, Gr. dis=6 μ |                 |
| Contd.        |           | E     | PP            |    | 48 | 50 |      |                                                                                                                      |                 |
|               |           |       | PPP           |    | 51 | 57 |      |                                                                                                                      |                 |
|               |           | EN    | iS            |    | 53 | 29 |      |                                                                                                                      |                 |
|               |           |       | ScS           |    | 57 | 35 |      |                                                                                                                      |                 |
|               |           |       | SS            | 01 | 00 | 43 |      |                                                                                                                      |                 |
|               |           |       | SSS           |    | 03 | 25 |      |                                                                                                                      |                 |
|               |           | E     | Lq            |    | 03 | 41 |      |                                                                                                                      |                 |
|               |           |       | Lr            |    | 06 | 28 |      |                                                                                                                      |                 |
|               |           | N     | M             |    | 11 | 35 |      |                                                                                                                      |                 |
|               | New Delhi | ZNE   | iP            | 00 | 48 | 34 | 7190 | Moderate, initial ground movement towards North, West and compression                                                |                 |
|               |           |       | PcP           |    | 48 | 54 |      |                                                                                                                      |                 |
|               |           | E     | PP            |    | 50 | 50 |      |                                                                                                                      |                 |
|               |           | ZNE   | iS            |    | 57 | 14 |      |                                                                                                                      |                 |
|               |           |       | PS            |    | 57 | 34 |      |                                                                                                                      |                 |
|               |           | NE    | PPS           |    | 57 | 53 |      |                                                                                                                      |                 |
|               |           | N     | ScS/SKS       |    | 58 | 45 |      |                                                                                                                      |                 |
|               |           |       | i             |    | 59 | 35 |      |                                                                                                                      |                 |
|               |           |       | i             | 01 | 00 | 19 |      |                                                                                                                      |                 |
|               |           |       | SS            |    | 01 | 38 |      |                                                                                                                      |                 |
|               |           |       | Lq            |    | 05 | 06 |      |                                                                                                                      |                 |
|               | Dehra Dun | NE    | eP            | 00 | 48 | 36 | 7190 | Slight                                                                                                               |                 |
|               |           | N     | PP            |    | 51 | 10 |      |                                                                                                                      |                 |
|               |           |       | PPP           |    | 52 | 35 |      |                                                                                                                      |                 |
|               |           |       | iS            |    | 57 | 16 |      |                                                                                                                      |                 |
|               |           |       | SS            | 01 | 01 | 16 |      |                                                                                                                      |                 |
|               |           |       | Lq            |    | 04 | 34 |      |                                                                                                                      |                 |
|               |           |       | Lr            |    | 07 | 31 |      |                                                                                                                      |                 |
|               |           |       | M             |    | 12 | 50 |      |                                                                                                                      |                 |
|               | Poona     | Z     | iP            | 00 | 48 | 39 | 7260 | Moderate, initial ground movement towards North, West and compression                                                |                 |
|               |           | N     | PcP           |    | 48 | 59 |      |                                                                                                                      |                 |
|               |           |       | PP            |    | 51 | 08 |      |                                                                                                                      |                 |
|               |           |       | PPP           |    | 52 | 37 |      |                                                                                                                      |                 |
|               |           |       | PcS           |    | 53 | 04 |      |                                                                                                                      |                 |
|               |           |       | iS            |    | 57 | 23 |      |                                                                                                                      |                 |
|               |           |       | PS            |    | 57 | 35 |      |                                                                                                                      |                 |
|               |           |       | PPS           |    | 57 | 46 |      |                                                                                                                      |                 |
|               |           |       | SS            | 01 | 01 | 23 |      |                                                                                                                      |                 |
|               |           |       | SSS           |    | 03 | 19 |      |                                                                                                                      |                 |
|               |           |       | Lq            |    | 04 | 17 |      |                                                                                                                      |                 |
|               |           |       | Lr            |    | 08 | 03 |      |                                                                                                                      |                 |
|               |           |       | M             |    | 13 | 41 |      |                                                                                                                      |                 |
|               | Bombay    | NE    | eP            | 00 | 48 | 46 | 7330 | Moderate                                                                                                             |                 |
|               |           | E     | PcP           |    | 49 | 17 |      |                                                                                                                      |                 |
|               |           |       | PP            |    | 51 | 09 |      |                                                                                                                      |                 |
|               |           |       | PPP           |    | 52 | 54 |      |                                                                                                                      |                 |
|               |           | NE    | eS            |    | 57 | 33 |      |                                                                                                                      |                 |
|               |           | E     | PS            |    | 57 | 54 |      |                                                                                                                      |                 |
|               |           |       | PPS           |    | 58 | 03 |      |                                                                                                                      |                 |
|               |           | N     | SKS           |    | 58 | 38 |      |                                                                                                                      |                 |
|               |           | E     | SKS           |    | 58 | 54 |      |                                                                                                                      |                 |
|               |           | NE    | <del>SS</del> | 01 | 02 | 00 |      |                                                                                                                      |                 |
|               |           | E     | SSS           |    | 04 | 56 |      |                                                                                                                      |                 |
| 03            | Shillong  | Z     | eP            | 11 | 13 | 20 |      |                                                                                                                      | Slight, distant |

| DATE          | STATION                                                                                       | COMPT | PHASE         | G<br>h | M<br>m | T<br>s               | $\Delta$<br>km | REMARKS                                         |
|---------------|-----------------------------------------------------------------------------------------------|-------|---------------|--------|--------|----------------------|----------------|-------------------------------------------------|
| February 1932 |                                                                                               |       |               |        |        |                      |                |                                                 |
| 03            | Bombay                                                                                        | E     | e             | 11     | 40     | 04                   |                | Slight                                          |
| 03            | Epc: 17.4°S, 66.9°E. Mascarene Islands Region<br>- H = 11h 36m 19.1s. - h about 25 km (USCGS) |       |               |        |        |                      |                |                                                 |
|               | Bombay                                                                                        | E     | e             | 11     | 45     | 56                   |                | Slight                                          |
|               |                                                                                               | NE    | e             |        | 49     | 06                   |                |                                                 |
|               | Shillong                                                                                      | Z     | iP            | 11     | 45     | 04                   |                | Slight, distant                                 |
|               | Dehra Dun                                                                                     | NE    | e             | 11     | 48     | 50                   |                | Feeble                                          |
|               | Kodaikanal                                                                                    | E     | i             | 11     | 49     | 08                   |                | Slight, distant                                 |
|               | Madras                                                                                        | E     | e             | 11     | 49     | 43                   |                | Slight                                          |
|               | Poona                                                                                         | NE    | M             | 11     | 53     | -                    |                | Slight                                          |
|               | Hyderabad                                                                                     | E     | M             | 11     | 53     | 51                   |                | Per=9 secs, Gr. dis=4 $\mu$                     |
|               |                                                                                               | N     | M             |        | 54     | 29                   |                | Per=10 secs, Gr. dis=3 $\mu$                    |
| 03            | Shillong                                                                                      | Z     | ePg<br>Sg     | 12     | 18     | 47<br>19 10          | 200            | Slight                                          |
| 03            | Shillong                                                                                      | Z     | eP<br>i       | 19     | 23     | 04<br>24 24          |                | Slight, distant                                 |
| 03            | Chatra                                                                                        | Z     | iP            | 20     | 02     | 00                   |                | Feeble, distant<br>rarefaction                  |
| 03            | Shillong                                                                                      | Z     | iP<br>S<br>Sg | 20     | 39     | 07<br>39 37<br>39 40 | 250            | Slight, rarefaction                             |
| 03            | Shillong                                                                                      | Z     | iP            | 21     | 57     | 37                   |                | Slight, distant<br>compression                  |
| 04            | Epc: 4.6°S, 119°E. Celebes. - H = 02h 54m 42.1s,<br>- h about 89 km (USCGS)                   |       |               |        |        |                      |                |                                                 |
|               | Shillong                                                                                      | Z     | iP            | 03     | 02     | 09                   | 4300           | Slight, compression                             |
|               |                                                                                               | E     | eS            |        | 08     | 07                   |                |                                                 |
|               | Visakhapatnam                                                                                 | E     | iP<br>i       | 03     | 02     | 26<br>11 27          |                | Slight, initial ground<br>movement towards West |
|               | Bokaro                                                                                        | E     | e             | 03     | 02     | 38                   |                | Slight, distant                                 |
|               | Poona                                                                                         | Z     | eP            | 03     | 03     | 29                   |                | Slight, compression                             |
|               | Bombay                                                                                        | NE    | eP<br>PP      | 03     | 03     | 39<br>05 40          | 5690           | Slight                                          |
|               |                                                                                               | E     | PPP           |        | 06     | 37                   |                |                                                 |
|               |                                                                                               | NE    | eS            |        | 10     | 57                   |                |                                                 |
|               |                                                                                               |       | PPS           |        | 11     | 10                   |                |                                                 |
|               |                                                                                               | E     | ScS           |        | 13     | 17                   |                |                                                 |
| 04            | Shillong                                                                                      | Z     | eP<br>i       | 03     | 53     | 43<br>55 01          |                | Slight                                          |

| DATE          | STATION                                       | COMPT   | PHASE     | G<br>h | M<br>m   | T<br>s   | $\Delta$<br>km | REMARKS                      |
|---------------|-----------------------------------------------|---------|-----------|--------|----------|----------|----------------|------------------------------|
| February 1962 |                                               |         |           |        |          |          |                |                              |
| 04            | Tocklai                                       | E       | iPg       | 04     | 38       | 42       |                | Local, tremor                |
|               | Shillong                                      | Z       | ePg<br>Sg | 04     | 38<br>39 | 43<br>09 | 180            | Slight                       |
| 04            | New Delhi                                     | Z       | iP<br>iS  | 04     | 48       | 19<br>50 | 980            | Slight, rarefaction          |
| 04            | New Delhi                                     | Z       | iP        | 05     | 37       | 29       |                | Tremor, compression          |
| 04            | Felt: Poona                                   |         |           |        |          |          |                |                              |
|               | Poona                                         | Z       | iP        | 06     | 34       | 48       |                | tremor                       |
|               | Bombay                                        | NE<br>E | e<br>e    | 06     | 35       | 08<br>16 |                | Very near and feeble, tremor |
| 04            | New Delhi                                     | Z       | iP<br>iS  | 11     | 28       | 42<br>30 | 960            | Slight, rarefaction          |
|               | Shillong                                      | Z       | iP        | 11     | 30       | 37       |                | Slight, distant compression  |
| 04            | Shillong                                      | Z       | ePg<br>Sg | 12     | 23       | 30<br>23 | 180            | Slight                       |
| 04            | Dehra Dun                                     | NE      | e         | 12     | 29       | 48       |                | Tremor                       |
| 04            | New Delhi                                     | Z       | iP<br>i   | 13     | 16       | 48<br>18 |                | Slight, rarefaction          |
| 04            | Chatra                                        | Z       | eP<br>S   | 13     | 58       | 19<br>59 | 930            | Feeble                       |
| 04            | Shillong                                      | Z       | ePg<br>Sg | 14     | 58       | 40<br>58 | 120            | Slight                       |
| 04            | Shillong                                      | Z       | iP        | 15     | 27       | 21       |                | Slight, distant compression  |
| 04            | Chatra                                        | Z       | eP        | 18     | 07       | 16       |                | Feeble, distant              |
| 04            | Felt: Poona                                   |         |           |        |          |          |                |                              |
|               | Poona                                         | Z       | iP        | 18     | 27       | 47       |                | Tremor, compression          |
|               | Bombay                                        | NE      | eP        | 18     | 28       | 02       |                | Very near and feeble, tremor |
| 04            | New Delhi                                     | Z       | iP<br>i   | 19     | 27       | 03<br>37 |                | Slight, rarefaction          |
|               | Poona                                         | Z       | eP        | 19     | 27       | 41       |                | Tremor, rarefaction          |
| 04            | Shillong                                      | Z       | iP        | 20     | 59       | 53       |                | Slight, distant rarefaction  |
| 04            | Epc: 0.5°S, 20.2°W. South Atlantic Ocean.     |         |           |        |          |          |                |                              |
|               | - H = 21h 29m 33.2s. - h about 17 kms (USCGS) |         |           |        |          |          |                |                              |



| DATE          | STATION        | COMPT | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                              |
|---------------|----------------|-------|-------|--------|--------|--------|----------------|--------------------------------------|
| February 1962 |                |       |       |        |        |        |                |                                      |
| 04            | Bombay         | E     | e     | 21     | 44     | 09     |                | Slight                               |
| Contd.        |                |       | PS    |        | 53     | 22     |                |                                      |
|               |                | NE    | PPS   |        | 53     | 58     |                |                                      |
|               |                | E     | eS    |        | 55     | 10     |                |                                      |
|               | Chatra         | Z     | e     | 21     | 47     | 00     |                | Feeble, distant,<br>nature uncertain |
|               | Madras         | E     | e     | 21     | 47     | 13     |                | Slight, distant                      |
|               |                |       | e     |        | 54     | 03     |                |                                      |
|               |                |       | e     |        | 57     | 18     |                |                                      |
|               |                |       | e     | 22     | 19     | 05     |                |                                      |
|               | Shillong       | Z     | eP    | 21     | 47     | 19     |                | Slight, distant                      |
|               | Dehra Dun      | NE    | e     | 21     | 47     | 24     |                | Feeble                               |
|               |                |       | e     |        | 55     | 55     |                |                                      |
|               |                |       | e     |        |        |        |                |                                      |
|               | Hyderabad      | E     | M     | 22     | 25     | 55     |                | Per=14 sec, Gr. dis= 4 $\mu$         |
|               |                | N     | M     |        | 26     | 30     |                | Per=15 sec, Gr. dis=4 $\mu$          |
| 04            | Shillong       | Z     | iP    | 21     | 53     | 59     |                | Slight, distant<br>rarefaction       |
| 05            | Bombay         | NE    | eP    | 03     | 05     | 48     |                | Slight                               |
|               |                |       | e     |        | 13     | 53     |                |                                      |
| 05            | Felt: Goalpara |       |       |        |        |        |                |                                      |
|               | Shillong       | Z     | ePg   | 03     | 51     | 00     | 130            | Slight                               |
|               |                |       | Sg    |        | 51     | 15     |                |                                      |
| 05            | New Delhi      | Z     | eP    | 06     | 01     | 25     |                | Slight, compression                  |
| 05            | New Delhi      | Z     | iP    | 08     | 42     | 38     |                | Tremor, compression                  |
| 05            | New Delhi      | Z     | eP    | 09     | 12     | 10     |                | Slight, compression                  |
| 05            | New Delhi      | Z     | iP    | 10     | 55     | 02     |                | Tremor, rarefaction                  |
| 05            | Chatra         | Z     | eP    | 13     | 45     | 02     |                | Very feeble,                         |
| 05            | Chatra         | Z     | eP    | 14     | 57     | 28     |                | Very feeble,                         |
| 05            | Shillong       | Z     | eP    | 15     | 31     | 51     | 210            | Slight                               |
|               |                |       | Sg    |        | 32     | 20     |                |                                      |
|               | Chatra         | Z     | eP    | 15     | 32     | 00     |                | Feeble                               |
| 05            | Shillong       | Z     | eP    | 17     | 13     | 07     |                | Slight, distant                      |
| 05            | New Delhi      | Z     | iP    | 18     | 54     | 11     |                | Slight, compression                  |
| 05            | Shillong       | Z     | iP    | 19     | 34     | 12     |                | Slight, distant<br>compression       |
|               | Chatra         | Z     | iP    | 19     | 34     | 50     |                | Feeble, distant<br>compression       |
|               | New Delhi      | Z     | iP    | 19     | 36     | 00     |                | Slight, rarefaction                  |

| DATE          | STATION                                                                                                 | COMPT    | PHASE        | G M T<br>h m s             | Δ<br>km | REMARKS                                                            |
|---------------|---------------------------------------------------------------------------------------------------------|----------|--------------|----------------------------|---------|--------------------------------------------------------------------|
| February 1932 |                                                                                                         |          |              |                            |         |                                                                    |
| 05            | Shillong                                                                                                | Z        | iP           | 20 54 44                   |         | Slight, distant<br>compression                                     |
|               | Chatra                                                                                                  | Z        | eP           | 20 55 37                   |         | Feeble, distant                                                    |
| 05            | Shillong                                                                                                | Z        | eP           | 20 56 05                   |         | Slight, distant                                                    |
| 05            | Epc: 35.9°N. 138.8°E. Central Honshu, Japan<br>- H = 22h 55m 49.0s. - h about 151 kms.<br>Felt: (USCGS) |          |              |                            |         |                                                                    |
|               | Tocklai                                                                                                 | E        | eP           | 23 03 05                   |         | Slight, distant                                                    |
|               | Shillong                                                                                                | ZE<br>NE | iP<br>eS     | 23 03 26<br>09 31          | 4420    | Slight, compression                                                |
|               | Chatra                                                                                                  | ZNE      | iP           | 23 03 55                   |         | Slight, distant<br>compression                                     |
|               | Bokaro                                                                                                  | E        | iP<br>eS     | 23 04 13<br>10 54          | 4870    | Slight, distant                                                    |
|               | Dehra Dun                                                                                               | NE       | eP<br>iS     | 23 04 42<br>11 44          | 5410    | Feeble                                                             |
|               | New Delhi                                                                                               | Z        | iP           | 23 04 50                   |         | Slight, compression                                                |
|               | Madras                                                                                                  | E        | eP<br>eS     | 23 05 29<br>13 18          | 6240    | Slight,<br>probably deep                                           |
|               | Poona                                                                                                   | Z        | iP           | 23 05 42                   |         | Slight, initial ground<br>movement towards West<br>and compression |
| 06            | Shillong                                                                                                | Z        | eP           | 02 02 34                   |         | Slight, near                                                       |
|               | New Delhi                                                                                               | Z        | eP           | 02 04 13                   |         | Slight, compression                                                |
| 06            | Shillong                                                                                                | Z        | iP           | 03 37 54                   |         | Slight, near<br>compression                                        |
| 06            | Shillong                                                                                                | Z        | iP           | 03 40 13                   |         | Slight, distant<br>compression                                     |
| 06            | Chatra                                                                                                  | Z        | eP           | 06 14 29                   |         | Feeble, distant, begin-<br>ning merged with local<br>microseisms   |
| 06            | Shillong                                                                                                | Z        | eP           | 07 13 43                   |         | Slight, distant                                                    |
| 06            | Bokaro                                                                                                  | NE       | iP           | 07 21 53                   |         | Slight, tremor                                                     |
| 06            | Bokaro                                                                                                  | NE       | iP           | 07 44 54                   |         | Slight, tremor                                                     |
| 06            | Shillong                                                                                                | Z        | iP           | 07 53 33                   |         | Slight, distant<br>compression                                     |
| 06            | New Delhi                                                                                               | Z        | eP<br>i<br>i | 08 42 01<br>42 05<br>42 07 |         | Slight, compression                                                |

| DATE          | STATION   | COMPT | PHASE     | G<br>h | M<br>m   | T<br>s   | Δ<br>km | REMARKS                                                              |
|---------------|-----------|-------|-----------|--------|----------|----------|---------|----------------------------------------------------------------------|
| February 1962 |           |       |           |        |          |          |         |                                                                      |
| 06            | Shillong  | Z     | iP        | 08     | 51       | 34       |         | Slight, distant<br>compression                                       |
| 06            | New Delhi | Z     | eP<br>i   | 11     | 50<br>50 | 41<br>54 |         | Slight, compression                                                  |
| 06            | Shillong  | Z     | eP        | 15     | 44       | 45       |         | Slight, near                                                         |
| 06            | Chatra    | Z     | iP<br>i   | 19     | 06<br>06 | 02<br>03 |         | Compression, nature<br>uncertain, probably a<br>very near land-slide |
| 06            | Shillong  | Z     | eP        | 20     | 10       | 43       |         | Slight, distant                                                      |
|               | Chatra    | Z     | iP        | 20     | 11       | 11       |         | Feeble, distant<br>rarefaction                                       |
| 06            | Shillong  | Z     | iP        | 20     | 47       | 19       |         | Slight, distant<br>compression                                       |
| 06            | Shillong  | Z     | iP        | 21     | 06       | 16       |         | Slight, distant                                                      |
| 06            | Shillong  | Z     | eP        | 22     | 20       | 19       |         | Slight, near                                                         |
| 07            | Shillong  | Z     | eP        | 00     | 25       | 36       |         | Slight, near                                                         |
| 07            | Shillong  | Z     | iP        | 01     | 21       | 21       |         | Slight, distant<br>compression                                       |
| 07            | Shillong  | Z     | ePg<br>Sg | 02     | 16<br>16 | 38<br>46 | 70      | Slight                                                               |
| 07            | Shillong  | Z     | eP        | 03     | 25       | 33       |         | Slight, distant                                                      |
| 07            | Shillong  | Z     | eP<br>Sg  | 06     | 44<br>44 | 14<br>59 | 310     | Slight                                                               |
| 07            | New Delhi | Z     | iP        | 07     | 55       | 31       |         | Slight, compression                                                  |
| 07            | Shillong  | Z     | iP        | 08     | 45       | 20       |         | Slight, distant<br>rarefaction                                       |
| 07            | Shillong  | Z     | ePg<br>Sg | 11     | 04<br>04 | 34<br>41 | 60      | Slight                                                               |
| 07            | Chatra    | ZNE   | iPg<br>Sg | 14     | 05<br>05 | 03<br>11 | 70      | Feeble,<br>rarefaction                                               |
|               | Shillong  | Z     | eP        | 14     | 06       | 04       |         | Slight, near                                                         |
| 07            | Shillong  | Z     | ePg<br>Sg | 16     | 16<br>16 | 20<br>33 | 110     | Slight                                                               |
| 07            | New Delhi | Z     | eP        | 16     | 51       | 02       |         | Slight, compression                                                  |
|               | Shillong  | Z     | iP        | 16     | 52       | 20       |         | Slight, distant<br>rarefaction                                       |
| 07            | New Delhi | Z     | iP        | 19     | 05       | 24       |         | Slight, compression                                                  |

| DATE          | STATION                                                                           | COMPT             | PHASE                                | G  | M        | T                                                           | Δ    | REMARKS                                                      |
|---------------|-----------------------------------------------------------------------------------|-------------------|--------------------------------------|----|----------|-------------------------------------------------------------|------|--------------------------------------------------------------|
|               |                                                                                   |                   |                                      | h  | m        | s                                                           | km   |                                                              |
| February 1962 |                                                                                   |                   |                                      |    |          |                                                             |      |                                                              |
| 07            | Shillong                                                                          | Z                 | eP<br>S <sub>g</sub>                 | 21 | 18       | 37<br>19 07                                                 | 220  | Slight                                                       |
| 07            | New Delhi                                                                         | Z                 | eP                                   | 22 | 24       | 18                                                          |      | Slight, rarefaction                                          |
| 08            | Shillong                                                                          | Z                 | iP                                   | 00 | 25       | 26                                                          |      | Slight, distant compression                                  |
| 08            | Shillong                                                                          | Z                 | iP                                   | 01 | 33       | 54                                                          |      | Slight, distant rarefaction                                  |
| 08            | New Delhi                                                                         | Z                 | iP<br>i                              | 04 | 26<br>27 | 27<br>24                                                    |      | Slight, rarefaction                                          |
| 08            | Epc: 3.2°S, 141.3°E. New Guinea. - h about 87 kms.<br>- H = 11h 49m 13.9s (USCGS) |                   |                                      |    |          |                                                             |      |                                                              |
|               | Shillong                                                                          | ZE<br>E           | iP<br>iS<br>i                        | 11 | 53       | 44<br>12 00 33<br>08 52                                     | 6230 | Slight, initial ground movement towards East                 |
|               | Chatra                                                                            | Z                 | eP                                   | 11 | 59       | 18                                                          |      | Feeble, distant                                              |
|               | Bokaro                                                                            | NE                | eP<br>e<br>PPP<br>S<br>PS<br>SS<br>M | 11 | 59       | 18<br>59 43<br>12 03 00<br>07 36<br>07 51<br>11 35<br>22 58 | 6780 | Slight                                                       |
|               | Visakhapatnam                                                                     | E                 | iP<br>iS<br>PS<br>PPS                | 11 | 59       | 22<br>12 07 41<br>07 56<br>03 07                            | 6800 | Moderate, initial ground movement towards East               |
|               | Madras                                                                            | E                 | iP<br>PcP<br>iS                      | 11 | 59       | 32<br>12 00 05<br>08 03                                     | 7020 | Moderate, initial ground movement towards East               |
|               | Hyderabad                                                                         | E<br>EN<br>E<br>N | P<br>iS<br>M<br>M                    | 11 | 59       | 53<br>12 03 32<br>25 20<br>25 25                            | 7160 | Slight<br>Per=18 sec, Gr.dis=5 μ<br>Per=18 sec, Gr.dis=3 μ   |
|               | New Delhi                                                                         | ZNE<br>NE         | iP<br>iS                             | 12 | 00       | 14<br>09 20                                                 | 7690 | Slight, initial ground movement towards East and compression |
|               | Poona                                                                             | E<br>N            | iP<br>PPP/PcS<br>iS<br>PPS<br>M      | 12 | 00       | 15<br>04 30<br>03 28<br>10 00<br>27 30                      | 7930 | Moderate                                                     |
|               | Dehra Dun                                                                         | NE                | e<br>iS                              | 12 | 00       | 18<br>09 19                                                 |      | Slight                                                       |
|               | Bombay                                                                            | NE<br>E           | eP<br>PP                             | 12 | 00       | 25<br>03 01                                                 | 7890 | Slight                                                       |

13

| DATE          | STATION                                                                       | COMPT              | PHASE                     | G<br>h | M<br>m | T<br>s                                 | $\Delta$<br>km | REMARKS                                                      |
|---------------|-------------------------------------------------------------------------------|--------------------|---------------------------|--------|--------|----------------------------------------|----------------|--------------------------------------------------------------|
| February 1962 |                                                                               |                    |                           |        |        |                                        |                |                                                              |
| 08            | Bombay                                                                        | E                  | PPP                       | 12     | 04     | 45                                     |                |                                                              |
| Contd.        | Contd.                                                                        | NE                 | eS                        |        | 09     | 41                                     |                |                                                              |
|               |                                                                               |                    | PPS                       |        | 10     | 25                                     |                |                                                              |
|               |                                                                               | E                  | e                         |        | 12     | 17                                     |                |                                                              |
|               |                                                                               |                    | SS                        |        | 14     | 09                                     |                |                                                              |
|               |                                                                               |                    | SSS                       |        | 17     | 31                                     |                |                                                              |
| 08            | Shillong                                                                      | Z                  | eP<br>Sg                  | 13     | 11     | 11<br>11 38                            | 200            | Slight                                                       |
| 08            | Shillong                                                                      | Z                  | iP                        | 16     | 55     | 00                                     |                | Slight, distant<br>compression                               |
| 08            | Chatra                                                                        | ZN                 | iP<br>S                   | 18     | 20     | 26<br>21 02                            | 320            | Feeble,<br>rarefaction                                       |
|               | Shillong                                                                      | Z                  | iP                        | 18     | 21     | 18                                     |                | Slight, distant<br>compression                               |
| 08            | Shillong                                                                      | Z                  | iP                        | 18     | 28     | 44                                     |                | Slight, near<br>rarefaction                                  |
| 08            | Epc: 0.7°N, 98.6°E. Sumatra. - h about 43 kms.<br>- H = 19h 40m 27.7s (USCGS) |                    |                           |        |        |                                        |                |                                                              |
|               | Madras                                                                        | E                  | iP<br>PP<br>PPP<br>iS     | 19     | 45     | 22<br>45 48<br>45 59<br>49 27          | 2520           | Moderate, initial<br>ground movement<br>towards West         |
|               | Visakhapatnam                                                                 | E                  | iP<br>iS                  | 19     | 45     | 27<br>49 36                            | 2570           | Moderate, initial ground<br>movement towards East            |
|               | Tocklai                                                                       | E                  | iP                        | 19     | 45     | 52                                     |                | Slight, distant. Initial<br>ground movement towards<br>West. |
|               | Shillong                                                                      | ZE<br>E            | iP<br>iS                  | 19     | 45     | 58<br>50 20                            | 2780           | Slight, compression                                          |
|               | Bokaro                                                                        | NE                 | iP<br>PP<br>S<br>SS<br>M  | 19     | 46     | 03<br>46 46<br>50 32<br>51 45<br>54 50 | 2890           | Slight                                                       |
|               | Chatra                                                                        | ZNE                | iP                        | 19     | 46     | 20                                     |                | Feeble, distant<br>compression                               |
|               | Poona                                                                         | E<br>N             | iP<br>iS<br>SS<br>Lr<br>M | 19     | 46     | 37<br>51 33<br>53 05<br>54 17<br>56 37 | 3300           | Slight                                                       |
|               | Bombay                                                                        | E<br>NE<br>E<br>NE | eP<br>eS<br>e<br>e<br>SS  | 19     | 46     | 46<br>51 51<br>52 43<br>53 18<br>53 53 | 3450           | Slight                                                       |

| DATE          | STATION          | COMPT     | PHASE     | G<br>h | M<br>m | T<br>s   | Δ<br>km | REMARKS                                                             |
|---------------|------------------|-----------|-----------|--------|--------|----------|---------|---------------------------------------------------------------------|
| February 1962 |                  |           |           |        |        |          |         |                                                                     |
| 08            | Bombay<br>Contd. | E         | SSS<br>Lr | 19     | 54     | 25<br>46 |         |                                                                     |
|               | New Delhi        | ZNE<br>NE | iP<br>eS  | 19     | 47     | 15<br>38 | 3740    | Slight, initial ground movement towards North, West and compression |
|               | Dehra Dun        | NE        | eP<br>iS  | 19     | 47     | 33<br>56 | 3740    | Feeble                                                              |
| 08            | New Delhi        | Z         | iP        | 20     | 15     | 30       |         | Slight, rarefaction                                                 |
| 08            | Shillong         | Z         | iP        | 22     | 59     | 40       |         | Slight, distant compression                                         |
|               | New Delhi        | Z         | iP        | 23     | 01     | 09       |         | Tremor, rarefaction                                                 |
| 09            | Shillong         | Z         | eP<br>Sg  | 00     | 17     | 37<br>01 | 190     | Slight                                                              |
| 09            | Shillong         | Z         | eP        | 08     | 10     | 14       |         | Slight, near                                                        |
| 09            | Shillong         | Z         | iP        | 17     | 38     | 13       |         | Slight, near, compression                                           |
| 09            | Shillong         | Z         | iP        | 18     | 20     | 33       |         | Slight, distant rarefaction                                         |
| 09            | Shillong         | Z         | iP        | 18     | 25     | 43       |         | Slight, distant compression                                         |
| 09            | Chatra           | Z         | iP        | 21     | 00     | 22       |         | Feeble, distant compression                                         |
| 09            | Shillong         | Z         | iP<br>e   | 21     | 53     | 43<br>31 |         | Slight, distant compression                                         |
| 09            | Visakhapatnam    | E         | iP<br>eS  | 21     | 59     | 19<br>21 | 1190    | Slight, initial ground movement towards East                        |
| 09            | Shillong         | Z         | iP        | 22     | 37     | 13       |         | Slight, distant compression                                         |
| 10            | Shillong         | Z         | eP        | 02     | 50     | 37       |         | Slight, near                                                        |
| 10            | Shillong         | Z         | ePg<br>Sg | 03     | 33     | 45<br>01 | 130     | Slight                                                              |
| 10            | Chatra           | ZN<br>N   | eP<br>S   | 04     | 27     | 57<br>23 | 860     | Feeble                                                              |
| 10            | Shillong         | Z         | eP<br>Sg  | 04     | 29     | 03<br>37 | 240     | Slight                                                              |
| 10            | New Delhi        | Z         | eP        | 04     | 38     | 59       |         | Tremor, compression                                                 |
| 10            | New Delhi        | Z         | eP        | 03     | 28     | 40       |         | Slight, rarefaction                                                 |
| 10            | Shillong         | Z         | iP        | 10     | 00     | 35       |         | Slight, distant compression                                         |
| 10            | Shillong         | Z         | eP        | 10     | 25     | 03       |         | Slight, near                                                        |

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| DATE          | STATION                                                                                                           | COMPT     | PHASE                                | G  | M  | T                                                           | Δ    | REMARKS                                              |
|---------------|-------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------|----|----|-------------------------------------------------------------|------|------------------------------------------------------|
|               |                                                                                                                   |           |                                      | h  | m  | s                                                           | km   |                                                      |
| February 1962 |                                                                                                                   |           |                                      |    |    |                                                             |      |                                                      |
| 10            | Shillong                                                                                                          | Z         | iP                                   | 13 | 17 | 17                                                          |      | Slight, distant compression                          |
| 10            | Chatra                                                                                                            | Z         | eP<br>eS                             | 14 | 01 | 53<br>02 20                                                 | 230  | Feeble                                               |
|               | Shillong                                                                                                          | Z         | eP                                   | 14 | 02 | 48                                                          |      | Slight, near                                         |
| 10            | Shillong                                                                                                          | Z         | ePg<br>Sg                            | 17 | 29 | 44<br>30 04                                                 | 160  | Slight, rarefaction                                  |
| 10            | Shillong                                                                                                          | Z         | ePg<br>Sg                            | 19 | 09 | 14<br>09 27                                                 | 110  | Slight                                               |
| 10            | Shillong                                                                                                          | Z         | iP                                   | 19 | 51 | 08                                                          |      | Slight, distant compression                          |
| 10            | Shillong                                                                                                          | Z         | iP                                   | 20 | 05 | 57                                                          |      | Slight, distant compression                          |
| 10            | Shillong                                                                                                          | Z         | iP                                   | 20 | 06 | 45                                                          |      | Slight, distant compression                          |
| 10            | Shillong                                                                                                          | Z         | eP                                   | 20 | 21 | 10                                                          |      | Slight, distant                                      |
| 10            | Shillong                                                                                                          | Z         | eP                                   | 21 | 07 | 13                                                          |      | Slight, near                                         |
| 11            | Shillong                                                                                                          | Z         | eP                                   | 00 | 48 | 40                                                          |      | Slight, near                                         |
| 11            | Epc: 29.6°N, 139.0°E. South of Honshu (Japan)<br>- H = 02h 42m 36.1s. - h about 400 kms (JSCGS)<br>Mag: 6¼ (Pas). |           |                                      |    |    |                                                             |      |                                                      |
|               | Shillong                                                                                                          | ZE<br>E   | iP<br>pP<br>PP<br>eS<br>sS<br>i<br>e | 02 | 49 | 50<br>51 40<br>51 30<br>55 41<br>58 08<br>59 38<br>03 02 08 | 4720 | Initial ground movement towards East and rarefaction |
|               | Chatra                                                                                                            | ZNE       | iP                                   | 02 | 50 | 12                                                          |      | Distant, compression                                 |
|               | Bokaro                                                                                                            | NE        | eP                                   | 02 | 50 | 38                                                          |      | Distant                                              |
|               | Dehra Dun                                                                                                         | NE        | eP<br>iS                             | 02 | 51 | 12<br>58 05                                                 | 5240 |                                                      |
|               | New Delhi                                                                                                         | ZNE<br>NE | eP<br>iS                             | 02 | 51 | 18<br>58 22                                                 | 5450 | Slight, initial ground motion towards North, East    |
|               | Madras                                                                                                            | E         | eP<br>e<br>e<br>e                    | 02 | 51 | 47<br>53 54<br>03 00 46<br>01 47                            |      |                                                      |
|               | Poona                                                                                                             | Z<br>N    | iP<br>i<br>Lr                        | 02 | 52 | 03<br>03 01 11<br>13 15                                     |      |                                                      |

13

| DATE          | STATION                                                                                      | COMPT | PHASE     | G M T<br>h m s    | $\Delta$<br>km | REMARKS                    |
|---------------|----------------------------------------------------------------------------------------------|-------|-----------|-------------------|----------------|----------------------------|
| February 1962 |                                                                                              |       |           |                   |                |                            |
| 11            | Bombay                                                                                       | NE    | eP        | 02 52 08          | 6710           |                            |
| Contd.        |                                                                                              |       | pP        | 53 37             |                |                            |
|               |                                                                                              | E     | e         | 55 57             |                |                            |
|               |                                                                                              | NE    | eS        | 59 54             |                |                            |
|               |                                                                                              | E     | e         | 03 01 14          |                |                            |
|               |                                                                                              | NE    | sS        | 02 27             |                |                            |
| 11            | Shillong                                                                                     | Z     | ePg<br>Sg | 04 31 59<br>32 12 | 110            | Slight                     |
| 11            | Tocklai                                                                                      | E     | ePg<br>Sg | 07 08 12<br>09 18 | 50             |                            |
| 11            | Shillong                                                                                     | Z     | eP        | 08 34 53          |                | Slight, distant            |
| 11            | Shillong                                                                                     | Z     | eP        | 09 02 00          |                | Slight, near               |
| 11            | Shillong                                                                                     | Z     | iPg<br>Sg | 10 09 48<br>10 06 | 160            | Slight, rarefaction        |
| 11            | Epc: 0.9°S, 67.2°E. Maldive Islands Region.<br>- H = 11h 06m 44.3s. - h about 25 kms (USCGS) |       |           |                   |                |                            |
|               | Madras                                                                                       | E     | eP        | 11 11 02          |                | Slight                     |
|               |                                                                                              |       | e         | 14 55             |                |                            |
|               |                                                                                              |       | e         | 16 23             |                |                            |
|               |                                                                                              |       | e         | 17 12             |                |                            |
|               |                                                                                              |       | e         | 18 53             |                |                            |
|               | Poona                                                                                        | N     | iP        | 11 11 22          | 2320           | Slight, initial            |
|               |                                                                                              |       | PP        | 11 43             |                | ground movement            |
|               |                                                                                              |       | PPP       | 11 57             |                | towards North,             |
|               |                                                                                              |       | iS        | 15 10             |                | East and                   |
|               |                                                                                              |       | Lq        | 15 18             |                | compression                |
|               |                                                                                              |       | Lr        | 13 26             |                |                            |
|               |                                                                                              |       | M         | 18 08             |                |                            |
|               | Bombay                                                                                       | NE    | eP        | 11 11 22          | 2380           | Slight                     |
|               |                                                                                              |       | e         | 11 37             |                |                            |
|               |                                                                                              | E     | eS        | 15 16             |                |                            |
|               |                                                                                              | NE    | Lq        | 15 30             |                |                            |
|               |                                                                                              | E     | SS        | 15 56             |                |                            |
|               | Hyderabad                                                                                    | NE    | iP        | 11 11 28          | 2500           | Slight, Initial ground     |
|               |                                                                                              | N     | PP        | 12 53             |                | movement towards South     |
|               |                                                                                              |       | S         | 15 31             |                | and West                   |
|               |                                                                                              |       | SS        | 16 22             |                |                            |
|               |                                                                                              | E     | M         | 18 11             |                | Per=13 sec, Gr.dis=4 $\mu$ |
|               |                                                                                              | N     | M         | 18 12             |                | Per=16 sec, Gr.dis=8 $\mu$ |
|               | Visakhapatnam                                                                                | E     | iP        | 11 12 06          | 2800           | Moderate, initial          |
|               |                                                                                              |       | PP        | 12 54             |                | ground movement            |
|               |                                                                                              |       | PPP       | 13 05             |                | towards East.              |
|               |                                                                                              | NE    | eS        | 16 29             |                |                            |
|               | Shillong                                                                                     | Z     | iP        | 11 13 40          |                | Slight, distant            |
|               |                                                                                              |       |           |                   |                | rarefaction                |
|               | Kodaikanal                                                                                   | E     | e         | 11 13 56          |                | Slight                     |



| DATE | STATION | COMPT | PHASE | G | M | T | Δ  | REMARKS |
|------|---------|-------|-------|---|---|---|----|---------|
|      |         |       |       | h | m | s | km |         |

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11 Epc: 4.5°S, 153.5°E. New Ireland Region. -h about 100 kms.  
 - H = 18h 55m 32s (USCGS). Mag: 6 (Berk).

|               |    |     |    |    |    |      |                                                       |
|---------------|----|-----|----|----|----|------|-------------------------------------------------------|
| Port Blair    | E  | iP  | 19 | 05 | 51 | 6750 | Initial ground move-<br>ment towards West.            |
|               |    | iS  |    | 14 | 07 |      |                                                       |
| Tocklai       | E  | iP  | 19 | 06 | 06 |      |                                                       |
| Shillong      | ZE | iP  | 19 | 06 | 14 | 7260 | Compression                                           |
|               | E  | PcP |    | 06 | 48 |      |                                                       |
|               |    | S   |    | 14 | 58 |      |                                                       |
| Calcutta      | E  | iP  | 18 | 06 | 31 | 7490 |                                                       |
|               |    | PP  |    | 09 | 01 |      |                                                       |
|               |    | PcS |    | 11 | 08 |      |                                                       |
|               |    | iS  |    | 15 | 28 |      |                                                       |
|               |    | i   |    | 16 | 13 |      |                                                       |
|               |    | Lq  |    | 23 | 32 |      |                                                       |
| Chatra        | Z  | iP  | 19 | 06 | 43 | 7770 | Compression                                           |
|               | NE | eS  |    | 15 | 52 |      |                                                       |
| Bokaro        | NE | eP  | 19 | 06 | 45 |      | Distant                                               |
| Visakhapatnam | E  | eP  | 19 | 06 | 55 | 7960 |                                                       |
|               | NE | eS  |    | 16 | 14 |      |                                                       |
|               | E  | PS  |    | 16 | 38 |      |                                                       |
|               |    | PPS |    | 16 | 50 |      |                                                       |
| Madras        | E  | iP  | 19 | 07 | 05 | 8200 | Initial ground<br>motion towards<br>West              |
|               |    | e   |    | 07 | 28 |      |                                                       |
|               |    | PP  |    | 09 | 52 |      |                                                       |
|               |    | iS  |    | 16 | 36 |      |                                                       |
|               |    | PS  |    | 17 | 04 |      |                                                       |
|               |    | ScS |    | 17 | 11 |      |                                                       |
|               |    | PPS |    | 17 | 29 |      |                                                       |
|               |    | e   |    | 18 | 41 |      |                                                       |
|               |    | SS  |    | 21 | 25 |      |                                                       |
|               |    | SSS |    | 24 | 38 |      |                                                       |
|               |    | Lq  |    | 26 | 30 |      |                                                       |
|               |    | Lr  |    | 29 | 57 |      |                                                       |
|               |    | M   |    | 36 | 12 |      |                                                       |
| New Delhi     | ZE | iP  | 19 | 07 | 33 | 8690 | Initial ground<br>motion towards<br>West, compression |
|               | E  | PcP |    | 07 | 53 |      |                                                       |
|               |    | i   |    | 08 | 08 |      |                                                       |
|               | NE | iS  |    | 17 | 28 |      |                                                       |
|               |    | PS  |    | 18 | 03 |      |                                                       |
|               |    | PPS |    | 18 | 42 |      |                                                       |
|               | E  | i   |    | 19 | 17 |      |                                                       |
|               |    | SS  |    | 22 | 18 |      |                                                       |
|               | N  | SSS |    | 26 | 54 |      |                                                       |
|               |    | Lq  |    | 29 | 25 |      |                                                       |
| Poona         | Z  | iP  | 19 | 07 | 40 | 8960 |                                                       |
|               | N  | PcP |    | 07 | 50 |      |                                                       |
|               |    | PPP |    | 12 | 32 |      |                                                       |
|               |    | iS  |    | 17 | 47 |      |                                                       |
|               |    | ScS |    | 17 | 54 |      |                                                       |
|               |    | PS  |    | 18 | 25 |      |                                                       |

| DATE          | STATION   | COMPT | PHASE     | G M T<br>h m s    | Δ<br>km | REMARKS                             |
|---------------|-----------|-------|-----------|-------------------|---------|-------------------------------------|
| February 1962 |           |       |           |                   |         |                                     |
| 11            | Poona     | N     | PPS       | 19 18 39          |         |                                     |
| Contd.        | Contd.    |       | SS        | 22 54             |         |                                     |
|               |           |       | Lr        | 32 34             |         |                                     |
|               |           |       | M         | 39 06             |         |                                     |
|               | Dehra Dun | NE    | eP        | 19 07 41          | 8970    |                                     |
|               |           | N     | PP        | 10 46             |         |                                     |
|               |           |       | iS        | 17 48             |         |                                     |
|               |           |       | SS        | 23 03             |         |                                     |
|               |           |       | M         | 38 45             |         |                                     |
|               | Bombay    | NE    | eP        | 19 07 45          | 9810    |                                     |
|               |           | E     | e         | 08 09             |         |                                     |
|               |           |       | e         | 08 30             |         |                                     |
|               |           |       | PP        | 11 21             |         |                                     |
|               |           |       | PPP       | 12 49             |         |                                     |
|               |           |       | SKS       | 17 55             |         |                                     |
|               |           | NE    | eS        | 18 29             |         |                                     |
|               |           |       | PS        | 19 45             |         |                                     |
|               |           | E     | PPS       | 20 09             |         |                                     |
|               |           | NE    | SS        | 24 05             |         |                                     |
|               | Hyderabad | E     | e         | 19 21 48          |         |                                     |
| 11            | Shillong  | Z     | iP        | 19 59 25          |         | Slight, distant<br>compression      |
| 11            | Shillong  | Z     | iP        | 20 16 05          |         | Slight, distant<br>compression      |
| 11            | Shillong  | Z     | eP        | 22 52 00          |         | Slight, distant                     |
| 11            | Chatra    | Z     | iP        | 23 59 54          |         | Very feeble, distant<br>Rarefaction |
| 12            | Shillong  | Z     | iP        | 05 06 57          |         | Slight, distant<br>compression      |
| 12            | Shillong  | Z     | iP        | 06 52 40          |         | Slight, distant<br>compression      |
| 12            | Shillong  | Z     | iP        | 13 55 24          |         | Slight, distant<br>compression      |
| 12            | Shillong  | Z     | iP        | 17 33 16          |         | Slight, near, compression           |
| 12            | Shillong  | Z     | eP        | 17 48 00          |         | Slight, near                        |
| 12            | Shillong  | Z     | ePg<br>Sg | 18 32 18<br>32 32 | 120     | Slight                              |
| 12            | Shillong  | Z     | eP        | 20 53 23          |         | Slight, near                        |
| 12            | Shillong  | Z     | ePg<br>Sg | 20 59 31<br>59 33 | 20      | Slight                              |
| 12            | Shillong  | Z     | iP        | 22 13 59          |         | Slight, distant<br>rarefaction      |
|               | Chatra    | Z     | iP        | 22 14 33          |         | Feeble, distant<br>rarefaction      |

| DATE          | STATION                                                                                      | COMPT   | PHASE         | G  | M  | T                    | Δ   | REMARKS                     |
|---------------|----------------------------------------------------------------------------------------------|---------|---------------|----|----|----------------------|-----|-----------------------------|
|               |                                                                                              |         |               | h  | m  | s                    | km  |                             |
| February 1962 |                                                                                              |         |               |    |    |                      |     |                             |
| 12            | Epc: 26.4°N, 140.9°E. Bonin Islands Region<br>- H = 23h 24m 55.2s. - h about 168 kms (USCGS) |         |               |    |    |                      |     |                             |
|               | Shillong                                                                                     | Z       | iP            | 23 | 32 | 15                   |     | Slight, distant compression |
|               | Chatra                                                                                       | Z       | iP            | 23 | 33 | 34                   |     | Feeble, distant compression |
|               | New Delhi                                                                                    | Z       | iP            | 23 | 34 | 21                   |     | Slight, compression         |
|               | Poona                                                                                        | Z       | iP            | 23 | 35 | 02                   |     | Tremor, compression         |
| 13            | New Delhi                                                                                    | Z       | eP<br>i       | 00 | 43 | 04<br>43 07          |     | Slight, compression         |
| 13            | New Delhi                                                                                    | Z       | iP            | 00 | 58 | 23                   |     | Tremor, rarefaction         |
|               | Shillong                                                                                     | Z       | iP            | 00 | 59 | 10                   |     | Slight, distant rarefaction |
| 13            | Shillong                                                                                     | Z       | iP            | 02 | 13 | 42                   |     | Slight, distant compression |
|               | Poona                                                                                        | Z       | iP            | 02 | 33 | 35                   |     | Tremor, compression         |
| 13            | Shillong                                                                                     | Z       | eP<br>Sg      | 03 | 05 | 00<br>06 02          | 410 | Slight                      |
| 13            | Shillong                                                                                     | Z       | eP<br>Sg      | 03 | 51 | 32<br>52 05          | 240 | Slight                      |
| 13            | Epc: 25°N, 92.2°E. Assam-Pakistan Border<br>- H = 03h 28m 02s (Shillong)                     |         |               |    |    |                      |     |                             |
|               | Shillong                                                                                     | ZE      | ePg<br>Sg     | 06 | 28 | 21<br>28 37          | 130 | Slight                      |
|               | Tocklai                                                                                      | E       | eP<br>iS      | 06 | 28 | 49<br>29 21          | 280 | Weak                        |
|               | Chatra                                                                                       | Z       | iP<br>eS      | 06 | 29 | 23<br>30 21          | 540 | Feeble, compression         |
|               | New Delhi                                                                                    | Z       | iP            | 06 | 31 | 30                   |     | Tremor, rarefaction         |
| 13            | Shillong                                                                                     | ZE      | ePg<br>Sg     | 06 | 56 | 43<br>57 06          | 140 | Slight                      |
|               | Tocklai                                                                                      | E       | eP<br>eS      | 06 | 57 | 16<br>57 47          | 280 | Slight                      |
| 13            | Chatra                                                                                       | Z<br>NZ | eP<br>eS      | 06 | 57 | 45<br>58 48          | 600 | Feeble                      |
| 13            | Epc: 33°N, 96°E. Chinghal Province, China<br>- H = 07h 42m 20s (Shillong)                    |         |               |    |    |                      |     |                             |
|               | Shillong                                                                                     | Z<br>E  | eP<br>iS<br>M | 07 | 44 | 33<br>46 12<br>47 07 | 970 | Slight                      |

| DATE          | STATION                                                                                              | COMPT        | PHASE              | G<br>h | M<br>m | T<br>s                        | Δ<br>km | REMARKS                     |
|---------------|------------------------------------------------------------------------------------------------------|--------------|--------------------|--------|--------|-------------------------------|---------|-----------------------------|
| February 1962 |                                                                                                      |              |                    |        |        |                               |         |                             |
| 13            | Chatra                                                                                               | Z            | eP                 | 07     | 44     | 48                            | 1130    | Feeble                      |
| Contd.        |                                                                                                      | ZN           | eS                 |        | 46     | 44                            |         |                             |
|               | Tocklai                                                                                              | E            | eS<br>i            | 07     | 45     | 02<br>46 11                   |         | Slight                      |
|               | Bokaro                                                                                               | E<br>NE<br>E | eP<br>eS<br>e<br>i | 07     | 45     | 26<br>47 54<br>49 24<br>50 07 | 1460    | Slight                      |
|               | Poona                                                                                                | Z<br>E       | eP<br>eS           | 07     | 47     | 50<br>52 08                   | 2720    | Slight                      |
|               | Dehra Dun                                                                                            | NE           | eS<br>e            | 07     | 49     | 01<br>50 54                   |         | Feeble                      |
|               | Visakhapatnam                                                                                        | E            | eS<br>e            | 07     | 50     | 40<br>52 07                   |         | Slight, tremor              |
|               | Bombay                                                                                               | NE           | eS<br>e            | 07     | 52     | 18<br>55 31                   |         | Slight                      |
|               | Hyderabad                                                                                            | NE           | e                  | 07     | 54     | 23                            |         | -                           |
| 13            | Shillong                                                                                             | Z            | iP<br>Sg           | 17     | 22     | 44<br>23 16                   | 230     | Slight                      |
| 13            | Shillong                                                                                             | Z            | ePg<br>Sg          | 17     | 28     | 05<br>28 21                   | 140     | Slight                      |
| 13            | Chatra                                                                                               | Z            | iP<br>eS           | 17     | 35     | 58<br>37 19                   | 780     | Feeble, compression         |
| 13            | Shillong                                                                                             | Z            | eP<br>Sg           | 17     | 36     | 03<br>36 35                   | 230     | Slight                      |
| 13            | New Delhi                                                                                            | Z            | iP                 | 20     | 28     | 23                            |         | Slight, rarefaction         |
| 13            | New Delhi                                                                                            | Z            | eP                 | 20     | 30     | 02                            |         | Slight, rarefaction         |
| 13            | Epc: 42.7°N, 145.3°E. Near Coast of Hokkaido, Japan<br>- H = 20h 33m 42.6s. -h about 105 kms (USCGS) |              |                    |        |        |                               |         |                             |
|               | Shillong                                                                                             | Z            | iP                 | 20     | 42     | 04                            |         | Slight, distant compression |
|               | Chatra                                                                                               | Z            | iP                 | 20     | 42     | 27                            |         | Feeble, distant rarefaction |
|               | New Delhi                                                                                            | Z            | iP                 | 20     | 43     | 12                            |         | Slight, compression         |
| 13            | Felt: Shillong                                                                                       |              |                    |        |        |                               |         |                             |
|               | Shillong                                                                                             | Z<br>E       | ePg<br>Sg          | 23     | 35     | 10<br>35 27                   | 140     | Slight                      |
|               | Chatra                                                                                               | Z            | eP<br>eS           | 23     | 36     | 00<br>37 17                   | 740     | Feeble                      |

| DATE          | STATION                                                                                                                                                              | COMPT                                                    | PHASE                                                                                                                                                 | G M T<br>h m s                                                                                                                                                                            | Δ<br>km | REMARKS                                                                                    |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------|
| February 1962 |                                                                                                                                                                      |                                                          |                                                                                                                                                       |                                                                                                                                                                                           |         |                                                                                            |
| 14            | Shillong                                                                                                                                                             | Z                                                        | iP                                                                                                                                                    | 02 55 01                                                                                                                                                                                  |         | Slight, distant compression                                                                |
| 14            | Chatra                                                                                                                                                               | Z                                                        | eP<br>e                                                                                                                                               | 04 15 10<br>15 37                                                                                                                                                                         |         | Feeble, uncertain nature                                                                   |
| 14            | Epc: 38.1°S, 73.1°W. Near Coast of Chile<br>- H = 06h 36m 01.3s. - h about 44 kms (USCGS)<br>Moderate property damage in Central Chile.<br>Mag: 7¼ (Pas), 7½ (Berk). |                                                          |                                                                                                                                                       |                                                                                                                                                                                           |         |                                                                                            |
|               | Kodaikanal                                                                                                                                                           | E                                                        | ePKP<br>e<br>i<br>i<br>i                                                                                                                              | 06 55 30<br>58 49<br>07 05 40<br>08 59<br>17 05                                                                                                                                           |         |                                                                                            |
|               | Bombay                                                                                                                                                               | NE<br>E<br>NE<br>E<br>NE<br>E<br>NE<br>E<br>NE<br>E<br>N | ePKP<br>e<br>i<br>PP<br>i<br>i<br>PS<br>i<br>PPS<br>i<br>eSS<br>SSP<br>e<br>SSS<br>Lr<br>M<br>M                                                       | 06 55 34<br>56 07<br>57 47<br>59 02<br>07 06 23<br>09 02<br>09 17<br>10 32<br>11 25<br>15 32<br>17 23<br>18 00<br>20 21<br>24 08<br>44 39<br>58 23<br>58 26                               | 16270   | Per=21 sec, Gr.dis=62 μ<br>Per=19 sec, Gr.dis=34 μ                                         |
|               | Poona                                                                                                                                                                | Z<br>N                                                   | iPKP1<br>PP<br>PKS1<br>PKS2<br>PKKP1<br>SKKS1<br>SKKKS<br>PKKS1<br>SKSP<br>PS<br>SKKS1<br>PPS<br>SKKS<br>iSS<br>SSP<br>SSS<br>SSP(2)<br>Lq<br>Lr<br>M | 06 55 36<br>59 00<br>59 06<br>59 43<br>07 03 30<br>05 47<br>06 24<br>08 03<br>09 07<br>09 48<br>10 54<br>11 42<br>13 15<br>18 01<br>18 34<br>23 26<br>30 23<br>37 07<br>44 09<br>08 04 36 | 16300   | Initial ground movement towards North, East and compression<br><br>Per=17 sec, Gr.dis=31 μ |
|               | Madras                                                                                                                                                               | E                                                        | ePKP1<br>PKP2<br>PP<br>PKS                                                                                                                            | 06 55 37<br>55 43<br>59 09<br>59 16                                                                                                                                                       | 16370   |                                                                                            |



22

| DATE          | STATION       | COMPT   | PHASE | G M T |       |    | $\Delta$<br>km | REMARKS                                        |
|---------------|---------------|---------|-------|-------|-------|----|----------------|------------------------------------------------|
|               |               |         |       | h     | m     | s  |                |                                                |
| February 1962 |               |         |       |       |       |    |                |                                                |
| 14            | Madras        | E       | SKS   | 07    | 02    | 42 |                |                                                |
| Contd.        | Contd.        |         | SKKS  |       | 06    | 03 |                |                                                |
|               |               |         | SKSP  |       | 09    | 14 |                |                                                |
|               |               |         | PPS   |       | 11    | 54 |                |                                                |
|               |               |         | SS    |       | 18    | 10 |                |                                                |
|               |               |         | SSS   |       | 23    | 41 |                |                                                |
|               | Hyderabad     | E       | iPKP  | 06    | 55    | 44 | 16520          |                                                |
|               |               |         | iPP   |       | 59    | 18 |                |                                                |
|               |               |         | SKS2  | 07    | 02    | 20 |                |                                                |
|               |               |         | SKKS1 |       | 05    | 59 |                |                                                |
|               |               |         | SKSP  |       | 09    | 29 |                |                                                |
|               |               |         | PPS   |       | 12    | 05 |                |                                                |
|               |               |         | SS    |       | 18    | 20 |                |                                                |
|               |               |         | SSS   |       | 24    | 11 |                |                                                |
|               |               |         | M     |       | 55    | 22 |                | Per=21 sec, Gr. dis=101 $\mu$                  |
|               | New Delhi     | ZNE     | ePKP  | 06    | 55    | 52 | 17070          | Compression                                    |
|               |               |         | iPP   |       | 59    | 48 |                |                                                |
|               | Dehra Dun     | NE<br>N | ePKP  | 06    | 55    | 55 | 17110          | Initial ground movement towards East           |
|               |               |         | PP    |       | 59    | 55 |                |                                                |
|               |               |         | PPS   | 07    | 13    | 16 |                |                                                |
|               |               |         | iSS   |       | 19    | 31 |                |                                                |
|               |               |         | SSS   |       | 24    | 46 |                |                                                |
|               |               |         | Lq    |       | 40    | 16 |                |                                                |
|               |               |         | Lr    |       | 47    | 46 |                |                                                |
|               |               |         | M     | 08    | 00    | 45 |                | Per=18 secs, Gr. dis=41 $\mu$                  |
|               | Visakhapatnam | NE      | iPKP  | 06    | 55    | 58 | 17220          | Initial ground movement towards South and West |
|               |               |         | iPP   |       | 59    | 58 |                |                                                |
|               | Port Blair    | E       | iPKP  | 06    | 56    | 00 |                |                                                |
|               |               |         | e     | 07    | 18    | 00 |                |                                                |
|               | Bokaro        | E       | ePKP  | 06    | 56    | 02 |                | Phases overlapping                             |
|               |               |         | i     | 07    | 05    | 03 |                |                                                |
|               |               |         | i     |       | 06    | 55 |                |                                                |
|               |               |         | i     |       | 07    | 15 |                |                                                |
|               | Chatra        | ZNE     | ePKP1 | 06    | 56    | 03 | 18000          |                                                |
|               |               |         | PKP2  |       | 56    | 49 |                |                                                |
|               |               |         | PKS1  |       | 59    | 33 |                |                                                |
|               |               | NE      | PP    | 07    | 00    | 33 |                |                                                |
|               |               |         | SKS2  |       | 03    | 10 |                |                                                |
|               |               |         | PPP   |       | 04    | 35 |                |                                                |
|               |               |         | SKKS  |       | 07    | 23 |                |                                                |
|               |               |         | SKSP  |       | 10    | 53 |                |                                                |
|               |               |         | SS    |       | 20    | 39 |                |                                                |
|               |               | E       | SSS   |       | 26    | 53 |                |                                                |
|               |               | N       | M     | 08    | 20/21 |    |                | Per=20 sec, Gr. dis=66 $\mu$                   |
|               |               | E       | M     |       | 22/23 |    |                | Per=22 secs, Gr. dis=118 $\mu$                 |
|               | Shillong      | ZNE     | ePKP  | 06    | 56    | 04 | 18340          | Compression                                    |
|               |               |         | PP    | 07    | 00    | 44 |                |                                                |
|               |               |         | SKS   |       | 03    | 14 |                |                                                |
|               |               |         | PKKS  |       | 07    | 39 |                |                                                |
|               |               |         | SKSP  |       | 11    | 29 |                |                                                |
|               |               |         | PPS   |       | 15    | 34 |                |                                                |
|               |               |         | iSS   |       | 21    | 23 |                |                                                |
|               |               |         | SS(2) |       | 26    | 08 |                |                                                |

| DATE          | STATION                                                                                  | COMPT | PHASE  | G  | M  | T  | Δ    | REMARKS                        |
|---------------|------------------------------------------------------------------------------------------|-------|--------|----|----|----|------|--------------------------------|
|               |                                                                                          |       |        | h  | m  | s  | km   |                                |
| February 1962 |                                                                                          |       |        |    |    |    |      |                                |
| 14            | Shillong                                                                                 | ZNE   | SSS    | 07 | 27 | 53 |      |                                |
| Contd.        | Contd.                                                                                   |       | SSS(3) |    | 34 | 23 |      |                                |
|               |                                                                                          |       | Lq     |    | 45 | 34 |      |                                |
|               |                                                                                          |       | Lr     |    | 54 | 06 |      |                                |
|               |                                                                                          |       | M      | 08 | 08 | 00 |      | Per=23 sécs, Gr. dis=70 μ      |
| 14            | Epc: 38.2°S, 73.7°W. Near Coast of Chile<br>- H=07h 08m 21.1s. - h about 40 kms (USCGS)  |       |        |    |    |    |      |                                |
|               | Poona                                                                                    | Z     | iPKP   | 07 | 27 | 54 |      | Compression                    |
|               | New Delhi                                                                                | Z     | iPKP   | 07 | 28 | 15 |      | Slight, rarefaction            |
| 14            | Chatra                                                                                   | Z     | iP     | 08 | 28 | 41 | 190  | Feeble,<br>rarefaction         |
|               |                                                                                          |       | eS     |    | 29 | 04 |      |                                |
| 14            | Epc: 38.2°S, 74.1°W. Near Coast of Chile<br>- H = 08h 29m 00.1s. - h about 40 km (USCGS) |       |        |    |    |    |      |                                |
|               | Poona                                                                                    | Z     | iPKP   | 08 | 48 | 34 |      | Slight, compression            |
|               | New Delhi                                                                                | Z     | iPKP   | 08 | 49 | 08 |      | Slight, rarefaction            |
| 14            | Shillong                                                                                 | Z     | iP     | 11 | 50 | 44 |      | Slight, distant<br>compression |
|               | New Delhi                                                                                | Z     | iP     | 11 | 51 | 29 |      | Slight, rarefaction            |
| 14            | Shillong                                                                                 | Z     | iP     | 11 | 56 | 28 |      | Slight, distant<br>compression |
| 14            | Shillong                                                                                 | Z     | ePg    | 21 | 10 | 05 | 150  | Slight                         |
|               |                                                                                          |       | Sg     |    | 10 | 24 |      |                                |
| 14            | Shillong                                                                                 | Z     | iP     | 23 | 31 | 55 |      | Slight, distant<br>compression |
| 15            | Shillong                                                                                 | Z     | iP     | 00 | 52 | 33 |      | Slight, distant<br>compression |
|               |                                                                                          |       | Sg     |    | 53 | 12 |      |                                |
| 15            | Shillong                                                                                 | Z     | eP     | 01 | 10 | 16 |      | Slight, distant                |
| 15            | New Delhi                                                                                | Z     | eP     | 06 | 10 | 37 |      | Slight, rarefaction            |
| 15            | Epc: 28°N, 89°E. Sikkim-Tibet Border<br>- H = 08h 05m 45s (Shillong)<br>Felt at Gangtok. |       |        |    |    |    |      |                                |
|               | Chatra                                                                                   | ZNE   | iP     | 08 | 06 | 34 | 220  | Slight,<br>rarefaction         |
|               |                                                                                          |       | S      |    | 07 | 00 |      |                                |
|               | Shillong                                                                                 | ZE    | iP     | 08 | 06 | 47 | 450  | Slight,<br>compression         |
|               |                                                                                          |       | e      |    | 07 | 21 |      |                                |
|               |                                                                                          |       | S      |    | 07 | 36 |      |                                |
|               | Calcutta <sup>a</sup>                                                                    | N     | eP     | 08 | 07 | 13 | 640  | Slight                         |
|               |                                                                                          |       | iS     |    | 08 | 21 |      |                                |
|               | New Delhi                                                                                | Z     | eP     | 08 | 08 | 33 | 1090 | Slight,<br>rarefaction         |
|               |                                                                                          | ZE    | iS     |    | 10 | 25 |      |                                |

| DATE          | STATION                                       | COMPT | PHASE | G M T |    |    | Δ<br>km | REMARKS                        |
|---------------|-----------------------------------------------|-------|-------|-------|----|----|---------|--------------------------------|
|               |                                               |       |       | h     | m  | s  |         |                                |
| February 1962 |                                               |       |       |       |    |    |         |                                |
| 15            | Visakhapatnam                                 | NE    | eP    | 08    | 08 | 42 | 1280    | Slight, distant                |
| Contd.        |                                               |       | iS    |       | 10 | 52 |         |                                |
|               |                                               |       | SS    |       | 11 | 06 |         |                                |
|               | Poona                                         | Z     | eP    | 08    | 09 | 49 | 1910    | Slight                         |
|               |                                               | E     | iS    |       | 12 | 00 |         |                                |
|               |                                               |       | SS    |       | 12 | 20 |         |                                |
|               |                                               |       | Lr    |       | 13 | 52 |         |                                |
|               | Dehra Dun                                     | NE    | eS    | 08    | 10 | 18 |         | Tremor, slight                 |
|               | Sehore                                        | N     | eS    | 08    | 10 | 47 | 1330    | Slight                         |
|               |                                               |       | e     |       | 10 | 54 |         |                                |
|               |                                               |       | SS    |       | 11 | 01 |         |                                |
|               |                                               |       | e     |       | 11 | 58 |         |                                |
|               |                                               |       | i     |       | 12 | 02 |         |                                |
|               |                                               |       | i     |       | 12 | 18 |         |                                |
|               | Bombay                                        | E     | eS    | 08    | 13 | 22 |         | Slight                         |
|               |                                               |       | e     |       | 13 | 36 |         |                                |
|               |                                               | NE    | e     |       | 14 | 46 |         |                                |
| 15            | Shillong                                      | Z     | eP    | 10    | 09 | 13 |         | Slight, distant                |
| 15            | Epc: 4.4°S, 153.8°E. New Ireland Region       |       |       |       |    |    |         |                                |
|               | - H = 15h 25m 29.5s - h about 109 kms (USCGS) |       |       |       |    |    |         |                                |
|               | Felt: Rabaul and Namatanai.                   |       |       |       |    |    |         |                                |
|               | Shillong                                      | Z     | iP    | 15    | 36 | 12 |         | Slight, distant<br>compression |
|               | Chatra                                        | Z     | eP    | 15    | 36 | 43 |         | Feeble, distant                |
|               | Madras                                        | E     | eP    | 15    | 37 | 07 | 8150    | Slight                         |
|               |                                               |       | eS    |       | 46 | 36 |         |                                |
|               | New Delhi                                     | Z     | eP    | 15    | 37 | 32 |         | Slight, compression            |
|               | Bombay                                        | E     | eP    | 15    | 37 | 41 | 9170    | Slight                         |
|               |                                               | NE    | eS    |       | 47 | 58 |         |                                |
|               | Poona                                         | Z     | i     | 15    | 37 | 42 |         | Feeble, compression            |
| 15            | Shillong                                      | Z     | iP    | 16    | 52 | 21 |         | Slight, distant<br>compression |
| 15            | Shillong                                      | Z     | iP    | 17    | 20 | 18 |         | Slight, distant<br>compression |
|               | Chatra                                        | Z     | eP    | 17    | 20 | 46 |         | Slight, distant                |
| 15            | Shillong                                      | Z     | eP    | 20    | 48 | 45 |         | Slight, distant                |
|               | New Delhi                                     | Z     | iP    | 20    | 48 | 53 |         | Slight, compression            |
| 15            | Chatra                                        | Z     | eP    | 21    | 48 | 54 |         | Feeble, distant                |
| 15            | Shillong                                      | Z     | iP    | 22    | 52 | 43 |         | Slight, near<br>rarefaction    |



| DATE          | STATION                                                                             | COMPT | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                       |
|---------------|-------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|-------------------------------|
| February 1962 |                                                                                     |       |       |        |        |        |                |                               |
| 15            | Bombay                                                                              | E     | e     | 22     | 57     | 00     |                | Slight, near                  |
|               |                                                                                     | NE    | e     |        | 57     | 30     |                |                               |
|               |                                                                                     |       | e     |        | 58     | 47     |                |                               |
| 15            | Chatra                                                                              | Z     | eP    | 23     | 00     | 19     |                | Very feeble, nature uncertain |
|               | New Delhi                                                                           | Z     | eP    | 23     | 00     | 50     |                | Slight, compression           |
| 15            | Shillong                                                                            | Z     | iP    | 23     | 47     | 58     |                | Slight, near                  |
|               |                                                                                     |       | i     |        | 53     | 02     |                |                               |
| 15            | Chatra                                                                              | Z     | iP    | 23     | 48     | 28     |                | Feeble, distant rarefaction   |
|               | New Delhi                                                                           | Z     | iP    | 23     | 49     | 25     |                | Slight, compression           |
| 16            | Shillong                                                                            | Z     | eP    | 03     | 15     | 06     |                | Slight, distant               |
| 16            | Shillong                                                                            | Z     | eP    | 09     | 43     | 28     | 220            | Slight                        |
|               |                                                                                     |       | Sg    |        | 43     | 58     |                |                               |
|               | Tocklai                                                                             | E     | eP    | 09     | 43     | 46     | 90             | Slight                        |
|               |                                                                                     |       | eSg   |        | 43     | 51     |                |                               |
|               |                                                                                     |       | S     |        | 43     | 58     |                |                               |
| 16            | New Delhi                                                                           | Z     | iP    | 12     | 22     | 10     |                | Slight, compression           |
|               |                                                                                     |       | i     |        | 22     | 37     |                |                               |
| 16            | New Delhi                                                                           | Z     | iP    | 15     | 40     | 34     |                | Tremor, compression           |
|               | Shillong                                                                            | Z     | eP    | 15     | 44     | 54     |                | Slight, distant               |
| 16            | Epc: 49.4°N, 156°E. Kurile Islands. - h about 24 kms<br>- H = 15h 54m 32.3s (USCGS) |       |       |        |        |        |                |                               |
|               | Shillong                                                                            | Z     | iP    | 16     | 04     | 02     |                | Slight, distant compression   |
|               | Chatra                                                                              | Z     | iP    | 16     | 04     | 19     |                | Feeble, distant rarefaction   |
|               | Poona                                                                               | Z     | iP    | 16     | 05     | 53     |                | Feeble, compression           |
|               |                                                                                     | ZNE   | M     |        | 31     | -      |                |                               |
|               | Bombay                                                                              | NE    | eP    | 16     | 06     | 07     | 8110           | Slight                        |
|               |                                                                                     |       | eS    |        | 15     | 34     |                |                               |
| 16            | Shillong                                                                            | Z     | iP    | 16     | 18     | 46     |                | Slight, near compression      |
| 16            | Dehra Dun                                                                           | NE    | e     | 16     | 26     | 42     |                | Feeble                        |
| 16            | Shillong                                                                            | Z     | iP    | 16     | 56     | 34     |                | Slight, distant rarefaction   |
| 16            | Shillong                                                                            | Z     | iP    | 19     | 21     | 12     |                | Slight, distant rarefaction   |
| 16            | Shillong                                                                            | Z     | eP    | 23     | 17     | 21     | 170            | Slight                        |
|               |                                                                                     |       | Sg    |        | 17     | 44     |                |                               |

| DATE          | STATION                                      | COMPT  | PHASE     | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                     |
|---------------|----------------------------------------------|--------|-----------|--------|--------|--------|----------------|-----------------------------|
| February 1962 |                                              |        |           |        |        |        |                |                             |
| 16            | Chatra                                       | Z      | iP        | 23     | 18     | 03     | 460            | Feeble, rarefaction         |
|               | Contd.                                       |        | eS        |        | 18     | 52     |                |                             |
| 17            | Shillong                                     | Z      | iP        | 04     | 02     | 03     |                | Slight, near rarefaction    |
| 17            | Shillong                                     | Z      | iP        | 04     | 31     | 28     |                | Slight, near rarefaction    |
| 17            | Shillong                                     | Z      | iP        | 08     | 09     | 30     |                | Slight, distant rarefaction |
| 17            | Shillong                                     | Z      | ePg<br>Sg | 10     | 05     | 57     | 130            | Slight                      |
|               |                                              |        |           |        | 06     | 12     |                |                             |
| 17            | Shillong                                     | Z      | iP        | 11     | 15     | 30     |                | Slight, distant compression |
| 17            | Poona                                        | Z      | iP        | 18     | 35     | 42     |                | Tremor, compression         |
|               | Shillong                                     | Z      | eP        | 18     | 36     | 04     |                | Slight, distant             |
| 17            | Chatra                                       | Z      | iP        | 18     | 46     | 30     |                | Feeble, distant compression |
| 17            | Shillong                                     | Z      | ePg<br>Sg | 21     | 04     | 49     | 90             | Slight                      |
|               |                                              |        |           |        | 05     | 00     |                |                             |
| 17            | Chatra                                       | ZN     | iP<br>S   | 22     | 05     | 17     | 280            | Feeble, rarefaction         |
|               |                                              |        |           |        | 05     | 49     |                |                             |
|               | Shillong                                     | Z      | eP        | 22     | 05     | 56     |                | Slight, near                |
| 17            | Shillong                                     | Z      | iP        | 22     | 11     | 20     |                | Slight, distant compression |
| 17            | Poona                                        | Z      | iP        | 22     | 13     | 13     |                | Tremor, rarefaction         |
| 17            | Shillong                                     | Z      | iP        | 22     | 40     | 04     |                | Slight, distant compression |
| 18            | Poona                                        | Z      | iP        | 01     | 39     | 53     |                | Tremor, rarefaction         |
| 18            | Shillong                                     | Z      | iP        | 03     | 22     | 53     |                | Slight, near                |
| 18            | Visakhapatnam                                | E      | eP<br>e   | 10     | 44     | 44     |                | Very slight                 |
|               |                                              |        |           |        | 48     | 15     |                |                             |
| 18            | New Delhi                                    | Z      | iP        | 10     | 51     | 53     |                | Slight, compression         |
| 18            | Epc: 8.1°N, 74.6°W. Northern Columbia.       |        |           |        |        |        |                |                             |
|               | - H = 17h 25m 17.3s. - h about 70 km (USCGS) |        |           |        |        |        |                |                             |
|               | Felt: Bogota and Medellin.                   |        |           |        |        |        |                |                             |
|               | New Delhi                                    | Z      | iPKP<br>i | 17     | 44     | 31     |                | Slight, compression         |
|               |                                              |        |           |        | 44     | 48     |                |                             |
|               | Chatra                                       | Z      | ePKP      | 17     | 44     | 36     |                | Feeble, distant             |
|               | Poona                                        | Z<br>N | iPKP<br>e | 17     | 44     | 41     | 15450          | Slight                      |
|               |                                              |        |           |        | 45     | 10     |                |                             |

| DATE          | STATION   | COMPT. | PHASE | G<br>h | M<br>m | T<br>s | Δ<br>km | REMARKS                        |
|---------------|-----------|--------|-------|--------|--------|--------|---------|--------------------------------|
| February 1962 |           |        |       |        |        |        |         |                                |
| 18            | Poona     | N      | PKS   | 17     | 48     | 15     |         |                                |
| Contd.        | Contd.    |        | e     |        | 48     | 30     |         |                                |
|               |           |        | e     |        | 49     | 13     |         |                                |
|               | Dehra Dun | NE     | e     | 17     | 44     | 42     |         | Feeble                         |
|               |           |        | i     |        | 48     | 00     |         |                                |
|               | Bokaro    | NE     | ePKP  | 17     | 44     | 43     |         | Slight, distant                |
|               |           |        | e     |        | 46     | 47     |         |                                |
|               |           | E      | i     |        | 48     | 25     |         |                                |
|               | Shillong  | Z      | iPKP  | 17     | 44     | 45     |         | Slight,                        |
|               |           | E      | e     |        | 48     | 41     |         | rarefaction                    |
|               | Bombay    | NE     | e     | 17     | 44     | 50     |         | Slight, distant                |
|               |           |        | ePKS  |        | 48     | 15     |         |                                |
|               |           | E      | e     |        | 53     | 27     |         |                                |
|               |           |        | e     | 18     | 00     | 15     |         |                                |
|               |           |        | e     |        | 06     | 29     |         |                                |
|               | Madras    | E      | ePKP  | 17     | 44     | 58     | 16270   | Slight                         |
|               |           |        | e     |        | 46     | 56     |         |                                |
|               |           |        | ePP   |        | 48     | 26     |         |                                |
| 18            | Shillong  | Z      | eP    | 22     | 38     | 31     |         | Slight, distant                |
| 18            | Shillong  | Z      | iP    | 22     | 58     | 17     |         | Slight, distant<br>compression |
|               | Chatra    | Z      | iP    | 22     | 58     | 53     |         | Feeble, distant<br>rarefaction |
|               | New Delhi | Z      | iP    | 23     | 00     | 06     |         | Tremor, rarefaction            |
| 18            | New Delhi | Z      | iP    | 23     | 28     | 07     |         | Slight, compression            |
|               |           |        | i     |        | 28     | 11     |         |                                |
|               | Shillong  | Z      | iP    | 23     | 28     | 23     |         | Slight, distant<br>rarefaction |
| 18            | New Delhi | Z      | iP    | 23     | 45     | 05     |         | Slight, compression            |
|               |           |        | i     |        | 45     | 09     |         |                                |
|               | Shillong  | Z      | iP    | 23     | 45     | 12     |         | Slight, distant<br>compression |
| 18            | Shillong  | Z      | eP    | 23     | 58     | 08     |         | Slight, near                   |
| 19            | Shillong  | Z      | ePg   | 02     | 07     | 44     | 140     | Slight                         |
|               |           |        | Sg    |        | 08     | 01     |         |                                |
| 19            | Shillong  | Z      | eP    | 03     | 36     | 32     |         | Slight, near                   |
| 19            | Shillong  | Z      | iP    | 05     | 08     | 20     |         | Slight, distant<br>compression |
| 19            | Shillong  | Z      | eP    | 10     | 21     | 36     |         | Slight, local                  |
| 19            | Shillong  | Z      | eP    | 10     | 26     | 18     | 240     | Slight                         |
|               |           |        | Sg    |        | 26     | 53     |         |                                |

| DATE          | STATION                                                                                                                                                   | COMPT | PHASE | G<br>h | M<br>m | T<br>s | Δ<br>km | REMARKS                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|---------|-----------------------------------------------------|
| February 1962 |                                                                                                                                                           |       |       |        |        |        |         |                                                     |
| 19            | Chatra                                                                                                                                                    | Z     | eP    | 10     | 27     | 18     |         | Feeble, near                                        |
| Contd.        |                                                                                                                                                           |       |       |        |        |        |         |                                                     |
| 19            | Epc: 22°N, 93°E. Burma-Assam Border<br>- H = 11h 11m 12s (Shillong)                                                                                       |       |       |        |        |        |         |                                                     |
|               | Shillong                                                                                                                                                  | Z     | eP    | 11     | 12     | 11     | 310     | Slight                                              |
|               |                                                                                                                                                           | ZE    | Sg    |        | 12     | 56     |         |                                                     |
|               | Tocklai                                                                                                                                                   | E     | eP    | 11     | 12     | 23     | 510     | Slight                                              |
|               |                                                                                                                                                           |       | Lq    |        | 13     | 07     |         |                                                     |
|               |                                                                                                                                                           |       | S     |        | 13     | 18     |         |                                                     |
|               |                                                                                                                                                           |       | M     |        | 14     | 46     |         |                                                     |
|               | Bokaro                                                                                                                                                    | E     | iP    | 11     | 13     | 00     | 770     | Slight, Initial ground                              |
|               |                                                                                                                                                           |       | eS    |        | 14     | 20     |         | movement towards East                               |
|               | Chatra                                                                                                                                                    | ZNE   | iP    | 11     | 13     | 02     | 800     | Feeble, rarefaction                                 |
|               |                                                                                                                                                           |       | PP    |        | 13     | 08     |         |                                                     |
|               |                                                                                                                                                           |       | PPP   |        | 13     | 16     |         |                                                     |
|               |                                                                                                                                                           |       | P*    |        | 13     | 18     |         |                                                     |
|               |                                                                                                                                                           |       | Pg    |        | 13     | 37     |         |                                                     |
|               |                                                                                                                                                           |       | Lq    |        | 14     | 15     |         |                                                     |
|               |                                                                                                                                                           |       | S     |        | 14     | 25     |         |                                                     |
|               |                                                                                                                                                           |       | Lr/SS |        | 14     | 37     |         |                                                     |
|               |                                                                                                                                                           |       | SSS   |        | 14     | 47     |         |                                                     |
|               |                                                                                                                                                           |       | Sg, M |        | 15     | 11     |         |                                                     |
|               | Calcutta                                                                                                                                                  | E     | i     | 11     | 14     | 49     |         | Slight                                              |
| 19            | New Delhi                                                                                                                                                 | Z     | iP    | 11     | 15     | 01     |         | Slight, compression                                 |
| 19            | New Delhi                                                                                                                                                 | Z     | iP    | 11     | 17     | 48     |         | Slight, compression                                 |
| 19            | Tocklai                                                                                                                                                   | E     | iPg   | 12     | 13     | 11     |         | Feeble, tremor                                      |
| 19            | Tocklai                                                                                                                                                   | E     | iPg   | 17     | 23     | 47     |         | Feeble, tremor                                      |
| 19            | Shillong                                                                                                                                                  | Z     | iP    | 17     | 51     | 11     |         | Slight, distant<br>compression                      |
| 19            | Shillong                                                                                                                                                  | Z     | ePg   | 18     | 10     | 19     | 10      | Slight                                              |
|               |                                                                                                                                                           |       | Sg    |        | 10     | 20     |         |                                                     |
| 20            | Epc: 6°N, 93°E. Nicobar Islands Region<br>- H = 09h 15m 50s (Shillong)<br>6.8°N, 92.5°E. Nicobar Islands. - h about 29 km.<br>- H = 09h 15m 55.1s (USCGS) |       |       |        |        |        |         |                                                     |
|               | Port Blair                                                                                                                                                | N     | iP    | 09     | 17     | 13     | 530     | Slight                                              |
|               |                                                                                                                                                           |       | iS    |        | 18     | 09     |         |                                                     |
|               | Madras                                                                                                                                                    | E     | iP    | 09     | 19     | 07     | 1420    | Moderate, Initial<br>ground motion<br>towards East. |
|               |                                                                                                                                                           |       | PP    |        | 19     | 17     |         |                                                     |
|               |                                                                                                                                                           |       | PPP   |        | 19     | 24     |         |                                                     |
|               |                                                                                                                                                           |       | i     |        | 19     | 41     |         |                                                     |
|               |                                                                                                                                                           |       | Lq    |        | 21     | 24     |         |                                                     |
|               |                                                                                                                                                           |       | iS    |        | 21     | 32     |         |                                                     |
|               |                                                                                                                                                           |       | SS    |        | 21     | 45     |         |                                                     |
|               |                                                                                                                                                           |       | SSS   |        | 21     | 57     |         |                                                     |
|               |                                                                                                                                                           |       | Lr    |        | 22     | 03     |         |                                                     |
|               |                                                                                                                                                           |       | M     |        | 23     | 02     |         |                                                     |

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| DATE          | STATION       | COMPT        | PHASE | G  | M  | T  | $\Delta$ | REMARKS                       |
|---------------|---------------|--------------|-------|----|----|----|----------|-------------------------------|
|               |               |              |       | h  | m  | s  | km       |                               |
| February 1962 |               |              |       |    |    |    |          |                               |
| 20<br>Contd.  | Visakhapatnam | NE           | iP    | 09 | 19 | 19 | 1550     | Moderate, Initial             |
|               |               |              | PP    |    | 19 | 29 |          | ground movement               |
|               |               |              | PPP   |    | 19 | 33 |          | towards South,                |
|               |               |              | iS    |    | 21 | 53 |          | East.                         |
|               | Kodaikanal    | E            | eP    | 09 | 19 | 38 | 1910     | Slight, distant               |
|               |               |              | eS    |    | 22 | 52 |          |                               |
|               | Bokaro        | NE           | iP    | 09 | 20 | 10 | 2130     | Slight, Initial               |
|               |               |              | PP    |    | 20 | 27 |          | ground movement               |
|               |               |              | PPP   |    | 20 | 38 |          | South and East.               |
|               |               |              | S     |    | 23 | 41 |          |                               |
|               |               |              | Lq    |    | 23 | 47 |          |                               |
|               |               |              | SS    |    | 24 | 07 |          |                               |
|               |               |              | Lr    |    | 24 | 47 |          |                               |
|               |               |              | M     |    | 26 | 15 |          |                               |
|               | Shillong      | Z<br>NE<br>E | iP    | 09 | 20 | 15 | 2120     | Moderate,                     |
|               |               |              | S     |    | 23 | 45 |          | compression                   |
|               |               |              | Lq    |    | 23 | 49 |          |                               |
|               |               |              | SS    |    | 24 | 07 |          |                               |
|               |               |              | Lr    |    | 24 | 43 |          |                               |
|               |               |              | M     |    | -  | -  |          | Per=20 secs, Gr. dis=12 $\mu$ |
|               | Tocklai       | E            | eP    | 09 | 20 | 24 | 2230     | Moderate                      |
|               |               |              | PP    |    | 20 | 43 |          |                               |
|               |               |              | PPP   |    | 20 | 53 |          |                               |
|               |               |              | iS    |    | 24 | 05 |          |                               |
|               |               |              | Lq    |    | 24 | 15 |          |                               |
|               |               |              | SS    |    | 24 | 34 |          |                               |
|               |               |              | SSS   |    | 24 | 48 |          |                               |
|               |               |              | Lr    |    | 25 | 10 |          |                               |
|               |               |              | M     |    | 28 | 30 |          |                               |
|               | Chatra        | ZNE          | iP    | 09 | 20 | 38 | 2310     | Slight,                       |
|               |               |              | PP    |    | 20 | 56 |          | rarefaction                   |
|               |               |              | PPP   |    | 21 | 13 |          |                               |
|               |               |              | S     |    | 24 | 27 |          |                               |
|               |               |              | PcP   |    | 24 | 35 |          |                               |
|               |               |              | Lq    |    | 24 | 42 |          |                               |
|               |               |              | SS    |    | 25 | 08 |          |                               |
|               |               |              | SSS   |    | 25 | 15 |          |                               |
|               |               |              | Lr    |    | 25 | 45 |          |                               |
|               |               |              | M     |    | 27 | 38 |          |                               |
|               | Poona         | Z<br>N       | iP    | 09 | 20 | 47 | 2410     | Moderate, Initial             |
|               |               |              | PP    |    | 21 | 18 |          | ground movement               |
|               |               |              | PPP   |    | 21 | 18 |          | towards North,                |
|               |               |              | iS    |    | 24 | 43 |          | East and                      |
|               |               |              | Lq    |    | 25 | 01 |          | rarefaction                   |
|               |               |              | SS    |    | 25 | 21 |          |                               |
|               |               |              | SSS   |    | 25 | 38 |          |                               |
|               |               |              | Lr    |    | 26 | 06 |          |                               |
|               |               |              | M     |    | 27 | 49 |          |                               |
|               | Sehore        | NE<br>E      | eP    | 09 | 20 | 55 | 2520     | Slight                        |
|               |               |              | PP    |    | 21 | 19 |          |                               |
|               |               |              | PPP   |    | 21 | 42 |          |                               |
|               |               |              | S     |    | 25 | 00 |          |                               |
|               |               |              | Lq    |    | 25 | 02 |          |                               |

| DATE                                                             | STATION   | COMPT | PHASE   | G  | M  | T  | Δ    | REMARKS                 |
|------------------------------------------------------------------|-----------|-------|---------|----|----|----|------|-------------------------|
|                                                                  |           |       |         | h  | m  | s  | km   |                         |
| February 1962                                                    |           |       |         |    |    |    |      |                         |
| 20                                                               | Hyderabad | NE    | i       | 09 | 20 | 57 |      | Slight                  |
| Contd.                                                           |           |       | i       |    | 23 | 06 |      |                         |
|                                                                  |           | E     | i       |    | 24 | 15 |      |                         |
|                                                                  |           | N     | i       |    | 24 | 18 |      |                         |
|                                                                  | Bombay    | NE    | eP      | 09 | 21 | 00 | 2550 | Slight                  |
|                                                                  |           | E     | PP      |    | 21 | 21 |      |                         |
|                                                                  |           | NE    | PPP     |    | 21 | 42 |      |                         |
|                                                                  |           |       | e       |    | 22 | 00 |      |                         |
|                                                                  |           | E     | e       |    | 24 | 02 |      |                         |
|                                                                  |           | NE    | eS      |    | 25 | 06 |      |                         |
|                                                                  |           | E     | Lq      |    | 25 | 47 |      |                         |
|                                                                  |           |       | SS      |    | 25 | 58 |      |                         |
|                                                                  |           | NE    | SSS     |    | 26 | 12 |      |                         |
|                                                                  |           |       | Lr      |    | 26 | 44 |      |                         |
|                                                                  |           | N     | M       |    | 31 | 34 |      | Per=15 sec, Gr.dis=5 μ  |
|                                                                  |           | E     | M       |    | 31 | 50 |      | Per:15 sec, Gr.dis=4 μ  |
|                                                                  | New Delhi | ZNE   | iP      | 09 | 21 | 31 | 2920 | Slight, Initial         |
|                                                                  |           | NE    | i       |    | 21 | 47 |      | ground movement         |
|                                                                  |           | ZNE   | PP      |    | 22 | 17 |      | towards North,          |
|                                                                  |           | E     | i       |    | 24 | 04 |      | East and                |
|                                                                  |           | NE    | iS      |    | 26 | 02 |      | rarefaction             |
|                                                                  |           | ZNE   | i       |    | 26 | 15 |      |                         |
|                                                                  |           |       | i       |    | 26 | 40 |      |                         |
|                                                                  |           |       | SSS     |    | 27 | 36 |      |                         |
|                                                                  |           | NE    | PcS/ScP |    | 28 | 20 |      |                         |
|                                                                  |           | ZNE   | M       |    | -  | -  |      | Per=20secs, Amp=11.5 mm |
| 20                                                               | Shillong  | Z     | iP      | 09 | 34 | 45 |      | Slight, distant         |
|                                                                  |           |       |         |    |    |    |      | compression             |
| 20                                                               | Shillong  | Z     | iP      | 10 | 19 | 54 |      | Slight, distant         |
|                                                                  |           |       |         |    |    |    |      | compression             |
| 20                                                               | New Delhi | Z     | iP      | 10 | 34 | 47 |      | Slight, rarefaction     |
| 20                                                               | Shillong  | Z     | ePg     | 11 | 47 | 38 | 120  | Slight                  |
|                                                                  |           |       | Sg      |    | 47 | 52 |      |                         |
| 20                                                               | New Delhi | Z     | iP      | 14 | 31 | 20 |      | Slight, rarefaction     |
|                                                                  |           |       | i       |    | 31 | 57 |      |                         |
| 20                                                               | Shillong  | Z     | eP      | 16 | 12 | 10 |      | Slight, near            |
|                                                                  | Chatra    | Z     | eP      | 16 | 12 | 33 |      | Very feeble             |
| 20 Ep:45°N, 144°E. Hokkaido, Japan. - H = 16h 05m 40s (Shillong) |           |       |         |    |    |    |      |                         |
| 43°N, 144.9°E. Near Coast of Hokkaido, Japan (Felt)              |           |       |         |    |    |    |      |                         |
| - H = 16h 05m 44.6s. - h about 55 kms (USCGS)                    |           |       |         |    |    |    |      |                         |
|                                                                  | Tocklai   | E     | eP      | 16 | 13 | 29 |      | Slight, distant         |
|                                                                  |           |       | i       |    | 14 | 07 |      |                         |
|                                                                  |           |       | i       |    | 14 | 35 |      |                         |
|                                                                  | Shillong  | Z     | iP      | 16 | 14 | 10 | 5150 | Moderate,               |
|                                                                  |           | E     | PcP     |    | 15 | 44 |      | compression             |
|                                                                  |           |       | S       |    | 20 | 58 |      |                         |
|                                                                  |           |       | PS      |    | 21 | 01 |      |                         |
|                                                                  |           |       | FPS     |    | 21 | 12 |      |                         |

| DATE          | STATION       | COMPT                                   | PHASE                                                              | G<br>h                                                   | M<br>m                                                   | T<br>s   | Δ<br>km                                                                           | REMARKS                                                                                                      |
|---------------|---------------|-----------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|----------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| February 1962 |               |                                         |                                                                    |                                                          |                                                          |          |                                                                                   |                                                                                                              |
| 20<br>Contd.  | Chatra        | ZNE                                     | iP<br>S                                                            | 16<br>21                                                 | 14<br>30                                                 | 29<br>30 | 5400                                                                              | Feeble,<br>compression                                                                                       |
|               | Bokaro        | NE                                      | iP<br>e<br>i<br>e                                                  | 16<br>16<br>20<br>22                                     | 14<br>49<br>00<br>28                                     | 50       |                                                                                   | Slight, distant                                                                                              |
|               | Dehra Dun     | NE<br>N                                 | eP<br>PP<br>iS<br>SS<br>SSS/Lq<br>M                                | 16<br>17<br>22<br>26<br>27<br>34                         | 15<br>16<br>35<br>25<br>31<br>55                         | 04       | 5920                                                                              | Slight                                                                                                       |
|               | New Delhi     | ZNE<br>E<br>ZNE<br>E<br>ZNE<br>E<br>ZNE | iP<br>i<br>i<br>PcP<br>PcS/ScP<br>iS<br>PS<br>PPS<br>i<br>ScS<br>M | 16<br>15<br>15<br>16<br>20<br>22<br>23<br>23<br>25<br>-  | 15<br>25<br>29<br>04<br>13<br>53<br>02<br>11<br>48<br>19 | 14       | 6080                                                                              | Moderate, Initial<br>ground movement<br>towards South, West<br>and compression.<br><br>Per=33 sec, Amp=10 mm |
|               | Port Blair    | N                                       | eP                                                                 | 16                                                       | 15                                                       | 14       |                                                                                   | Slight                                                                                                       |
|               | Visakhapatnam | NE                                      | iP<br>PP<br>PPP<br>eS<br>PS<br>PPS                                 | 16<br>17<br>19<br>23<br>22<br>23                         | 15<br>34<br>41<br>05<br>30<br>41<br>53                   | 6370     | Moderate, distant<br>Initial ground<br>movement towards<br>North and East         |                                                                                                              |
|               | Sehore        | E                                       | eP                                                                 | 16                                                       | 15                                                       | 42       |                                                                                   | Slight, distant                                                                                              |
|               | Madras        | E                                       | iP<br>PcP<br>PP<br>PPP<br>eS<br>PS<br>PPS<br>SKS<br>SS<br>e        | 16<br>16<br>18<br>20<br>24<br>25<br>25<br>25<br>28<br>31 | 13<br>34<br>25<br>00<br>45<br>02<br>11<br>53<br>51<br>35 | 7200     | Moderate, initial<br>ground motion<br>towards West.                               |                                                                                                              |
|               | Poona         | ZNE<br>N                                | iP<br>PcP<br>iS<br>PS<br>PPS<br>SKS1<br>SS<br>Lq<br>M              | 16<br>20<br>24<br>25<br>25<br>26<br>28<br>32<br>40       | 16<br>52<br>45<br>03<br>15<br>04<br>53<br>11<br>12       | 7040     | Moderate, initial<br>ground movement<br>towards South,<br>West and<br>compression |                                                                                                              |

| DATE          | STATION                                                                                                                                                                                                 | COMPT | PHASE | G  | M  | T  | $\Delta$ | REMARKS                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----|----|----|----------|-------------------------------------------------|
|               |                                                                                                                                                                                                         |       |       | h  | m  | s  | km       |                                                 |
| February 1962 |                                                                                                                                                                                                         |       |       |    |    |    |          |                                                 |
| 20            | Bombay                                                                                                                                                                                                  | NE    | eP    | 16 | 16 | 16 | 7050     | Slight                                          |
| Cont.         |                                                                                                                                                                                                         |       | PP    |    | 18 | 39 |          |                                                 |
|               |                                                                                                                                                                                                         | E     | PPP   |    | 20 | 13 |          |                                                 |
|               |                                                                                                                                                                                                         | N     | eS    |    | 24 | 49 |          |                                                 |
|               |                                                                                                                                                                                                         | E     | eS    |    | 25 | 04 |          |                                                 |
|               |                                                                                                                                                                                                         | NE    | PS    |    | 25 | 13 |          |                                                 |
|               |                                                                                                                                                                                                         | E     | PPS   |    | 25 | 37 |          |                                                 |
|               |                                                                                                                                                                                                         |       | ScS   |    | 26 | 05 |          |                                                 |
|               |                                                                                                                                                                                                         |       | SKS   |    | 26 | 28 |          |                                                 |
|               |                                                                                                                                                                                                         | NE    | SS    |    | 29 | 13 |          |                                                 |
|               |                                                                                                                                                                                                         | E     | e     |    | 31 | 13 |          |                                                 |
|               |                                                                                                                                                                                                         |       | SSS   |    | 32 | 26 |          |                                                 |
| 20            | Shillong                                                                                                                                                                                                | Z     | iP    | 16 | 33 | 34 |          | Slight, distant rarefaction                     |
| 20            | Epc: 4°S, 104.2°E. Sumatra. - H = 17h 05m 38.9s<br>- h about 25 kms (USCGS)                                                                                                                             |       |       |    |    |    |          |                                                 |
|               | Shillong                                                                                                                                                                                                | Z     | iP    | 17 | 12 | 03 |          | Slight, distant rarefaction                     |
|               | Chatra                                                                                                                                                                                                  | Z     | iP    | 17 | 12 | 31 |          | Feeble, distant rarefaction                     |
|               | New Delhi                                                                                                                                                                                               | Z     | iP    | 17 | 13 | 26 |          | Slight, compression                             |
| 20            | Shillong                                                                                                                                                                                                | Z     | iP    | 17 | 18 | 16 |          | Slight, distant compression                     |
| 20            | Shillong                                                                                                                                                                                                | Z     | iP    | 19 | 17 | 52 |          | Slight, distant compression                     |
|               | New Delhi                                                                                                                                                                                               | Z     | iP    | 19 | 18 | 50 |          | Slight, rarefaction                             |
| 20            | New Delhi                                                                                                                                                                                               | Z     | iP    | 20 | 10 | 29 |          | Tremor, compression                             |
| 20            | Shillong                                                                                                                                                                                                | Z     | eP    | 20 | 23 | 24 |          | Slight, distant                                 |
|               | Chatra                                                                                                                                                                                                  | Z     | iP    | 20 | 23 | 37 |          | Feeble, distant rarefaction                     |
| 20            | Epc: 26°N, 96°E. North Burma. - H = 22h 02m 40s<br>North Burma rocked moderately. (Shillong)<br>26.1°N, 96.8°E. Northern Burma. - H = 22h 02m 38.2s.<br>- h about 25 km (USCGS). Mag: 5½ - 6 (Shillong) |       |       |    |    |    |          |                                                 |
|               | Tocklai                                                                                                                                                                                                 | E     | iP    | 22 | 03 | 22 |          | Near, initial ground motion towards East.       |
|               | Shillong                                                                                                                                                                                                | ZE    | iP    | 22 | 03 | 48 | 470      | Initial ground movement towards North and East. |
|               |                                                                                                                                                                                                         | NE    | S     |    | 04 | 38 |          |                                                 |
|               | Bokaro                                                                                                                                                                                                  | NE    | iP    | 22 | 05 | 05 | 1150     | Initial ground movement towards North and East. |
|               |                                                                                                                                                                                                         |       | PPP   |    | 06 | 26 |          |                                                 |
|               |                                                                                                                                                                                                         |       | Lq    |    | 06 | 53 |          |                                                 |
|               |                                                                                                                                                                                                         |       | S     |    | 06 | 53 |          |                                                 |
|               |                                                                                                                                                                                                         |       | SSS   |    | 07 | 28 |          |                                                 |
|               |                                                                                                                                                                                                         |       | M     |    | 08 | 21 |          | { Per=11 secs<br>Gr. dis=141 $\mu$              |
|               |                                                                                                                                                                                                         |       | Mn    |    | 10 | 42 |          |                                                 |



| DATE          | STATION       | COMPT | PHASE  | G  | M  | T  | $\Delta$ | REMARKS                     |
|---------------|---------------|-------|--------|----|----|----|----------|-----------------------------|
|               |               |       |        | h  | m  | s  | km       |                             |
| February 1962 |               |       |        |    |    |    |          |                             |
| 20            | Port Blair    | N     | iP     | 22 | 06 | 06 | 1670     |                             |
| Contd.        |               |       | iS     |    | 08 | 55 |          |                             |
|               |               |       | M      |    | 10 | 44 |          |                             |
|               | Visakhapatnam | NE    | iP     | 22 | 06 | 15 | 1840     | Initial ground              |
|               |               |       | PP     |    | 06 | 28 |          | movement towards            |
|               |               |       | PPP    |    | 06 | 33 |          | North and East              |
|               |               |       | iS     |    | 09 | 19 |          |                             |
|               |               |       | SS     |    | 09 | 43 |          |                             |
|               |               |       | SSS    |    | 09 | 55 |          |                             |
|               |               |       | M      |    | 11 | 27 |          |                             |
|               | Dehra Dun     | Z     | eP     | 22 | 06 | 37 | 1810     |                             |
|               |               | N     | PP     |    | 07 | 02 |          |                             |
|               |               |       | iS     |    | 09 | 38 |          |                             |
|               |               |       | SS     |    | 09 | 54 |          |                             |
|               |               |       | SSS    |    | 10 | 05 |          |                             |
|               |               |       | Lr     |    | 10 | 38 |          |                             |
|               |               |       | M      |    | 11 | 32 |          | Per= 9 secs                 |
|               | New Delhi     | ZNE   | iP     | 22 | 06 | 40 | 1810     | Moderate. Initial           |
|               |               | ZE    | i      |    | 06 | 49 |          | ground motion               |
|               |               |       | PP     |    | 06 | 58 |          | towards South,              |
|               |               |       | PPP    |    | 07 | 05 |          | East and                    |
|               |               | ZNE   | i      |    | 07 | 14 |          | rarefaction                 |
|               |               |       | iS/Lq  |    | 09 | 41 |          |                             |
|               |               |       | SS     |    | 10 | 03 |          |                             |
|               |               | ZE    | SSS/Lr |    | 10 | 28 |          |                             |
|               |               | ZNE   | M(PE)  |    | 12 | 03 |          | Per=14 sec, Amp=85 mm       |
|               |               |       | M(WA)  |    | -  | -  |          | Amp= 0.37 mm                |
|               | Sehore        | E     | eP     | 22 | 06 | 50 | 2010     |                             |
|               |               | NE    | e      |    | 06 | 58 |          |                             |
|               |               | E     | e      |    | 10 | 01 |          |                             |
|               |               |       | iS     |    | 10 | 10 |          |                             |
|               |               |       | SS     |    | 10 | 34 |          |                             |
|               | Hyderabad     | NE    | iP     | 22 | 06 | 57 | 2110     | Initial ground move-        |
|               |               | E     | S      |    | 10 | 36 |          | ment South and West         |
|               |               | N     | M      |    | 12 | 57 |          | Per=10 sec, Gr.dis=26 $\mu$ |
|               |               | E     | M      |    | 13 | 12 |          | Per=14 sec, Gr.dis=29 $\mu$ |
|               | Madras        | E     | iP     | 22 | 07 | 15 | 2330     | Initial ground move-        |
|               |               |       | PP     |    | 07 | 41 |          | ment towards East.          |
|               |               |       | PPP    |    | 07 | 51 |          |                             |
|               |               |       | iS     |    | 11 | 05 |          |                             |
|               |               |       | i      |    | 11 | 08 |          |                             |
|               |               |       | Lq     |    | 11 | 17 |          |                             |
|               |               |       | PcP    |    | 11 | 27 |          |                             |
|               |               |       | SS     |    | 11 | 41 |          |                             |
|               |               |       | SSS    |    | 11 | 53 |          |                             |
|               |               |       | Lr     |    | 12 | 19 |          |                             |
|               |               |       | M      |    | 13 | 59 |          |                             |
|               | Poona         | Z     | iP     | 22 | 07 | 39 | 2490     |                             |
|               |               | N     | PP     |    | 08 | 05 |          |                             |
|               |               |       | PPP    |    | 08 | 15 |          |                             |
|               |               |       | iS     |    | 11 | 42 |          |                             |
|               |               |       | Lq     |    | 12 | 02 |          |                             |
|               |               |       | SS     |    | 12 | 20 |          |                             |

| DATE          | STATION    | COMPT | PHASE | G  | M  | T  | Δ    | REMARKS                     |
|---------------|------------|-------|-------|----|----|----|------|-----------------------------|
|               |            |       |       | h  | m  | s  | km   |                             |
| February 1962 |            |       |       |    |    |    |      |                             |
| 20            | Poona      | N     | SSS   | 22 | 12 | 40 |      |                             |
| Contd.        | Contd.     |       | Lr    |    | 13 | 06 |      |                             |
|               |            |       | M     |    | 15 | 00 |      |                             |
|               |            |       | Mn    | 18 | 22 | to |      | Per= 9 sec, Gr. dis=29 μ    |
|               |            |       |       | 18 | 42 |    |      |                             |
|               | Bombay     | NE    | iP    | 22 | 07 | 47 | 2570 |                             |
|               |            |       | PP    |    | 08 | 17 |      |                             |
|               |            |       | PPP   |    | 08 | 34 |      |                             |
|               |            | E     | i     |    | 08 | 57 |      |                             |
|               |            | NE    | iS    |    | 11 | 55 |      |                             |
|               |            |       | SS    |    | 12 | 39 |      |                             |
|               |            |       | SSS   |    | 12 | 53 |      |                             |
|               |            | E     | M     |    | 17 | 27 |      | Per= 7 sec, Gr. dis=22 μ    |
|               |            | N     | M     |    | 18 | 53 |      | Per: 8 sec, Gr. dis=26 μ    |
|               | Kodaikanal | E     | iP    | 22 | 07 | 55 | 2600 |                             |
|               |            |       | eS    |    | 12 | 09 |      |                             |
| 21            | Shillong   | Z     | ePg   | 02 | 01 | 14 | 150  | Slight                      |
|               |            |       | Sg    |    | 01 | 32 |      |                             |
| 21            | New Delhi  | Z     | iP    | 03 | 02 | 52 |      | Slight, rarefaction         |
|               |            |       | i     |    | 03 | 00 |      |                             |
| 21            | New Delhi  | Z     | iP    | 03 | 59 | 56 |      | Tremor, rarefaction         |
| 21            | Shillong   | Z     | iP    | 07 | 17 | 43 |      | Slight, distant rarefaction |
|               | Tocklai    | E     | eP    | 07 | 17 | 52 |      | Slight, distant             |
| 21            | Shillong   | Z     | eP    | 10 | 58 | 47 |      | Slight, near                |
| 21            | Shillong   | Z     | eP    | 11 | 24 | 09 |      | Slight, near                |
| 21            | Shillong   | Z     | iP    | 11 | 38 | 18 |      | Slight, distant compression |
| 21            | Shillong   | Z     | iP    | 13 | 25 | 26 |      | Slight, distant rarefaction |
| 21            | Tocklai    | E     | eP    | 14 | 25 | 00 |      | -                           |
| 21            | Calcutta   | E     | iP    | 16 | 14 | 53 |      | Slight                      |
|               |            |       | e     |    | 16 | 53 |      |                             |
|               |            |       | i     |    | 22 | 16 |      |                             |
|               |            |       | e     |    | 24 | 54 |      |                             |
| 21            | Shillong   | Z     | eP    | 17 | 41 | 13 |      | Slight, distant             |
|               | New Delhi  | Z     | iP    | 17 | 41 | 26 |      | Tremor, rarefaction         |
| 21            | Shillong   | Z     | eP    | 20 | 03 | 45 |      | Slight, near                |
| 21            | Shillong   | Z     | iP    | 21 | 24 | 32 |      | Slight, near rarefaction    |
| 21            | Calcutta   | E     | iP    | 22 | 04 | 37 | 830  | Moderate                    |
|               |            |       | iS    |    | 06 | 04 |      |                             |

| DATE          | STATION   | COMPT | PHASE | G  | M  | T  | Δ   | REMARKS                        |
|---------------|-----------|-------|-------|----|----|----|-----|--------------------------------|
|               |           |       |       | h  | m  | s  | km  |                                |
| February 1962 |           |       |       |    |    |    |     |                                |
| 21            | Chatra    | ZNE   | iP    | 22 | 04 | 47 | 940 | Slight, compression            |
| Contd         |           | NE    | PP    |    | 04 | 55 |     |                                |
|               |           |       | PPP   |    | 05 | 03 |     |                                |
|               |           |       | P*    |    | 05 | 11 |     |                                |
|               |           |       | Pg    |    | 05 | 33 |     |                                |
|               |           |       | Lq    |    | 06 | 13 |     |                                |
|               |           |       | S     |    | 06 | 25 |     |                                |
|               |           |       | SS    |    | 06 | 35 |     |                                |
|               |           |       | Lr    |    | 06 | 41 |     |                                |
|               |           |       | SSS   |    | 06 | 46 |     |                                |
|               |           |       | S*    |    | 06 | 56 |     |                                |
|               |           |       | Sg/M  |    | 07 | 19 |     |                                |
| 21            | Shillong  | Z     | iP    | 23 | 10 | 47 |     | Slight, distant<br>compression |
| 21            | Shillong  | Z     | eP    | 23 | 36 | 40 |     | Slight, near                   |
| 22            | Shillong  | Z     | eP    | 00 | 06 | 35 |     | Slight, near                   |
| 22            | Shillong  | Z     | ePg   | 04 | 17 | 43 | 50  | Slight                         |
|               |           |       | Sg    |    | 17 | 49 |     |                                |
| 22            | Shillong  | Z     | eP    | 07 | 14 | 04 |     | Slight, distant                |
| 22            | Bokaro    | NE    | iP    | 08 | 11 | 00 |     | Slight, tremor                 |
| 22            | Shillong  | Z     | iP    | 10 | 44 | 34 |     | Slight, distant<br>rarefaction |
| 22            | Shillong  | Z     | ePg   | 11 | 44 | 03 | 200 | Slight                         |
|               |           |       | Sg    |    | 44 | 23 |     |                                |
| 22            | Chatra    | Z     | eP    | 13 | 26 | 25 |     | Feeble, distant                |
| 22            | New Delhi | Z     | iP    | 13 | 30 | 56 |     | Tremor, compression            |
|               | Shillong  | Z     | eP    | 13 | 32 | 20 |     | Slight, distant                |
| 22            | Shillong  | Z     | ePg   | 14 | 24 | 09 | 30  | Slight                         |
|               |           |       | Sg    |    | 24 | 13 |     |                                |
| 22            | Shillong  | Z     | ePg   | 15 | 57 | 19 | 60  | Slight                         |
|               |           |       | Sg    |    | 57 | 23 |     |                                |
| 22            | Shillong  | Z     | iP    | 16 | 27 | 19 |     | Slight, distant<br>rarefaction |
| 22            | Shillong  | Z     | iP    | 16 | 44 | 52 |     | Slight, distant<br>compression |
|               | New Delhi | Z     | iP    | 16 | 45 | 31 |     | Slight, compression            |
| 22            | Shillong  | Z     | eP    | 18 | 17 | 56 |     | Slight, near                   |
| 22            | Chatra    | Z     | eP    | 20 | 08 | 58 |     | Feeble, near                   |
| 22            | Shillong  | Z     | iP    | 22 | 04 | 50 |     | Slight, distant<br>rarefaction |

| DATE          | STATION                                                                                                                                                                           | COMPT | PHASE | G  | M  | T  | Δ    | REMARKS                     |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----|----|----|------|-----------------------------|
|               |                                                                                                                                                                                   |       |       | h  | m  | s  | km   |                             |
| February 1962 |                                                                                                                                                                                   |       |       |    |    |    |      |                             |
| 23            | Shillong                                                                                                                                                                          | Z     | eP    | 00 | 45 | 35 |      | Slight, near                |
| 23            | New Delhi                                                                                                                                                                         | Z     | iP    | 05 | 19 | 47 |      | Tremor, compression         |
| 23            | New Delhi                                                                                                                                                                         | Z     | iP    | 07 | 46 | 04 |      | Tremor, compression         |
| 23            | New Delhi                                                                                                                                                                         | Z     | iP    | 11 | 52 | 34 |      | Slight, rarefaction         |
|               | Poona                                                                                                                                                                             | Z     | eP    | 11 | 52 | 39 |      | Feeble                      |
| 23            | Chatra                                                                                                                                                                            | Z     | eP    | 13 | 31 | 50 |      | Feeble, distant             |
| 23            | Chatra                                                                                                                                                                            | Z     | iP    | 16 | 45 | 27 |      | Feeble, distant rarefaction |
| 23            | New Delhi                                                                                                                                                                         | Z     | eP    | 17 | 43 | 48 |      | Slight, rarefaction         |
| 23            | Epc: 4°S, 152.6°E. New Ireland. - h about 25 kms (USCGS)<br>- H = 18h 05m 27.1s.                                                                                                  |       |       |    |    |    |      |                             |
|               | Shillong                                                                                                                                                                          | E     | eP    | 18 | 16 | 09 |      | Slight, distant             |
|               | Chatra                                                                                                                                                                            | Z     | eP    | 18 | 16 | 37 |      | Feeble, distant             |
|               | New Delhi                                                                                                                                                                         | Z     | iP    | 18 | 17 | 33 |      | Slight, rarefaction         |
|               | Bombay                                                                                                                                                                            | E     | e     | 18 | 24 | 30 |      | Slight                      |
|               |                                                                                                                                                                                   |       | eS    |    | 27 | 50 |      |                             |
|               |                                                                                                                                                                                   | N     | e     |    | 28 | 18 |      |                             |
|               | Madras                                                                                                                                                                            | E     | eS    | 18 | 26 | 28 |      |                             |
| 23            | Shillong                                                                                                                                                                          | E     | eP    | 19 | 29 | 41 |      | Slight, near                |
|               | Chatra                                                                                                                                                                            | Z     | eP    | 19 | 30 | 37 |      | Feeble, distant             |
|               |                                                                                                                                                                                   |       | i     |    | 30 | 48 |      | Phases uncertain            |
|               |                                                                                                                                                                                   |       | i     |    | 30 | 53 |      |                             |
|               |                                                                                                                                                                                   |       | i     |    | 31 | 42 |      |                             |
| 23            | Chatra                                                                                                                                                                            | Z     | iP    | 19 | 36 | 39 |      | Feeble, distant compression |
|               | New Delhi                                                                                                                                                                         | Z     | iP    | 19 | 37 | 48 |      | Slight, rarefaction         |
| 23            | Chatra                                                                                                                                                                            | Z     | iP    | 20 | 07 | 53 |      | Feeble, distant compression |
| 23            | Epc: 0.5°N, 156°E. Solomon Islands Region<br>- H = 20h 21m 22s (Shillong)<br>3.8°S, 152°E, New Britain. - H = 20h 21m 28.6s.<br>- h about 25 kms. Felt= Rabaul; Namatanai (USCGS) |       |       |    |    |    |      |                             |
|               | Shillong                                                                                                                                                                          | E     | iP    | 20 | 32 | 11 | 7370 | Slight, Initial ground      |
|               |                                                                                                                                                                                   | NE    | iS    |    | 41 | 00 |      | movement towards East       |
|               |                                                                                                                                                                                   | E     | SS    |    | 45 | 04 |      |                             |
|               | Calcutta                                                                                                                                                                          | E     | eP    | 20 | 32 | 25 | 7710 | Slight                      |
|               |                                                                                                                                                                                   |       | iS    |    | 41 | 32 |      |                             |
|               | Chatra                                                                                                                                                                            | Z     | iP    | 20 | 32 | 39 | 7850 | Slight,                     |
|               |                                                                                                                                                                                   | NE    | S     |    | 41 | 52 |      | compression                 |

| DATE          | STATION       | COMPT | PHASE | G<br>h | M<br>m    | T<br>s    | Δ<br>km | REMARKS                        |
|---------------|---------------|-------|-------|--------|-----------|-----------|---------|--------------------------------|
| February 1962 |               |       |       |        |           |           |         |                                |
| 23<br>Contd.  | Bokaro        | NE    | eP    | 20     | 32        | 42        | 7850    | Slight, distant                |
|               |               |       | eS    |        | 41        | 56        |         |                                |
|               | Visakhapatnam | E     | eP    | 20     | 32        | 49        | 8030    | Slight                         |
|               |               |       | eS    |        | 42        | 12        |         |                                |
|               | Madras        | E     | eP    | 20     | 33        | 02        | 8150    | Moderate                       |
|               |               |       | PP    |        | 35        | 47        |         |                                |
|               |               |       | e     |        | 33        | 45        |         |                                |
|               |               |       | iS    |        | 42        | 31        |         |                                |
|               |               |       | PS    |        | 43        | 02        |         |                                |
|               |               |       | PPS   |        | 43        | 23        |         |                                |
|               |               |       | SS    |        | 47        | 11        |         |                                |
|               |               |       | Lq    |        | 52        | 47        |         |                                |
|               |               |       | Lr    |        | 56        | 14        |         |                                |
|               |               |       | M     | 21     | 02        | 14        |         |                                |
|               | New Delhi     | Z     | eP    | 20     | 33        | 30        | 8730    | Slight,                        |
|               |               |       | iS    |        | 43        | 27        |         | compression                    |
|               | Poona         | Z     | iP    | 20     | 33        | 39        | 8960    | Slight,                        |
|               |               | N     | iS    |        | 43        | 46        |         | compression                    |
|               |               |       | PS    |        | 44        | 08        |         |                                |
|               |               |       | SS    |        | 49        | 00        |         |                                |
|               |               |       | PKKP1 |        | 51        | 28        |         |                                |
|               |               |       | SS    |        | 52        | 09        |         |                                |
|               | Bombay        | NE    | eP    | 20     | 33        | 45        | 8950    | Moderate                       |
|               |               | E     | e     |        | 33        | 56        |         |                                |
|               |               |       | PP    |        | 36        | 49        |         |                                |
|               |               |       | PPP   |        | 38        | 48        |         |                                |
|               |               |       | e     |        | 39        | 36        |         |                                |
|               |               |       | e     |        | 40        | 42        |         |                                |
|               |               |       | SKS   |        | 43        | 32        |         |                                |
|               |               | NE    | eS    |        | 43        | 52        |         |                                |
|               |               | E     | PS    |        | 44        | 45        |         |                                |
|               |               |       | PPS   |        | 45        | 12        |         |                                |
|               |               |       | e     |        | 46        | 33        |         |                                |
|               |               |       | e     |        | 48        | 33        |         |                                |
|               |               |       | SS    |        | 49        | 15        |         |                                |
| 23            | Dehra Dun     | Z     | eP    | 23     | 36        | 13        |         | Tremor                         |
|               | New Delhi     | Z     | eP    | 23     | 36        | 37        | 470     | Slight,                        |
|               |               |       | iS    |        | <b>37</b> | <b>27</b> |         | rarefaction                    |
| 24            | New Delhi     | Z     | iP    | 01     | 22        | 43        |         | Tremor, rarefaction            |
| 24            | Shillong      | Z     | eP    | 03     | 11        | 24        |         | Slight, distant                |
|               | Chatra        | Z     | iP    | 03     | 11        | 50        |         | Feeble, distant<br>rarefaction |
| 24            | Bokaro        | NE    | iP    | 08     | 03        | 57        |         | Slight, tremor                 |
| 24            | Shillong      | Z     | eP    | 11     | 22        | 29        |         | Slight, near                   |
| 24            | Shillong      | Z     | iP    | 12     | 32        | 15        |         | Slight, distant<br>compression |
| 24            | Chatra        | Z     | eP    | 13     | 10        | 35        |         | Feeble, distant                |

| DATE          | STATION                                                                                                            | COMPT | PHASE               | G  | M  | T                             | Δ   | REMARKS                     |
|---------------|--------------------------------------------------------------------------------------------------------------------|-------|---------------------|----|----|-------------------------------|-----|-----------------------------|
|               |                                                                                                                    |       |                     | h  | m  | s                             | km  |                             |
| February 1962 |                                                                                                                    |       |                     |    |    |                               |     |                             |
| 24            | Chatra                                                                                                             | Z     | i                   | 13 | 13 | 15                            |     | -                           |
| 24            | Shillong                                                                                                           | Z     | iP                  | 13 | 55 | 10                            |     | -                           |
|               | Chatra                                                                                                             | Z     | eP                  | 13 | 55 | 53                            |     | Feeble, distant             |
| 24            | Visakhapatnam                                                                                                      | E     | eP<br>eS            | 13 | 56 | 06<br>57 36                   | 870 | Slight                      |
| 24            | Bombay                                                                                                             | NE    | e<br>e              | 14 | 04 | 25<br>09 32                   |     | Slight                      |
| 24            | Shillong                                                                                                           | Z     | iP                  | 14 | 38 | 48                            |     | Slight, near rarefaction    |
| 24            | Epc: 34.3°N, 70.1°E. Afgan-Pakistan Border<br>- H = 18h 06m 45.1s. - h about 25 kms (USCGS)                        |       |                     |    |    |                               |     |                             |
|               | New Delhi                                                                                                          | Z     | iP<br>i<br>P*<br>iS | 18 | 08 | 43<br>08 53<br>09 07<br>10 10 | 830 | Slight, rarefaction         |
|               | Shillong                                                                                                           | Z     | iP                  | 18 | 11 | 24                            |     | Slight, distant rarefaction |
|               | Bokaro                                                                                                             | NE    | eS                  | 18 | 13 | 40                            |     | Slight                      |
|               | Bombay                                                                                                             | E     | e<br>e              | 18 | 14 | 22<br>15 16                   |     | Feeble, distant             |
|               | Visakhapatnam                                                                                                      | E     | eS<br>i             | 18 | 15 | 04<br>17 28                   |     | Slight, distant             |
|               | Madras                                                                                                             | E     | eS<br>e             | 18 | 16 | 21<br>13 51                   |     | Feeble                      |
|               | Shillong                                                                                                           | Z     | eP                  | 18 | 09 | 05                            |     | Slight, near                |
| 24            | Epc: 5.5°S, 146.1°E. Borth Coast of New Guinea<br>Felt at Kaiapit<br>- H = 19h 34m 33.6s. - h about 40 kms (USCGS) |       |                     |    |    |                               |     |                             |
|               | Shillong                                                                                                           | Z     | iP                  | 19 | 44 | 44                            |     | Slight, distant compression |
|               | Chatra                                                                                                             | Z     | iP                  | 19 | 45 | 11                            |     | Feeble, distant compression |
|               | New Delhi                                                                                                          | Z     | iP                  | 19 | 46 | 06                            |     | Slight, rarefaction         |
| 24            | Shillong                                                                                                           | Z     | iP                  | 20 | 29 | 38                            |     | Slight, near compression    |
| 24            | Port Blair                                                                                                         | E     | e                   | 20 | 31 | 50                            |     | Slight                      |
| 24            | Shillong                                                                                                           | Z     | eP                  | 21 | 16 | 08                            |     | Slight, near                |
| 24            | Shillong                                                                                                           | Z     | eP                  | 21 | 30 | 45                            |     | Slight, near                |

| DATE          | STATION                                                                                 | COMPT  | PHASE                    | G M T<br>h m s                         | $\Delta$<br>km | REMARKS                        |
|---------------|-----------------------------------------------------------------------------------------|--------|--------------------------|----------------------------------------|----------------|--------------------------------|
| February 1962 |                                                                                         |        |                          |                                        |                |                                |
| 25            | Shillong                                                                                | Z      | eP<br>Sg                 | 04 30 28<br>30 47                      | 150            | Slight                         |
| 25            | Shillong                                                                                | Z      | eP                       | 06 28 22                               |                | Slight, distant                |
| 25            | New Delhi                                                                               | Z      | iP                       | 07 11 34                               |                | Slight, rarefaction            |
| 25            | New Delhi                                                                               | Z      | iP                       | 07 13 15                               |                | Slight, rarefaction            |
| 25            | Port Blair                                                                              | N      | e                        | 09 32 01                               |                | Slight                         |
|               | Shillong                                                                                | Z      | eP                       | 09 34 08                               |                | Slight, distant                |
|               | New Delhi                                                                               | Z      | iP                       | 09 36 04                               |                | Slight, compression            |
| 25            | Shillong                                                                                | Z      | eP                       | 11 53 40                               |                | Slight, near                   |
| 25            | Shillong                                                                                | Z      | iP                       | 14 13 21                               |                | Slight, distant<br>rarefaction |
| 25            | Shillong                                                                                | Z      | ePg<br>Sg                | 14 51 14<br>51 19                      | 40             | Slight                         |
| 25            | Shillong                                                                                | Z      | iP                       | 15 03 04                               |                | Slight, distant<br>rarefaction |
| 25            | Shillong                                                                                | Z      | iP                       | 18 43 29                               |                | Slight, distant<br>rarefaction |
|               | Chatra                                                                                  | Z      | iP                       | 18 44 04                               |                | Feeble, distant<br>rarefaction |
|               | New Delhi                                                                               | Z      | iP                       | 18 45 07                               |                | Slight, rarefaction            |
| 25            | Shillong                                                                                | Z      | ePg<br>Sg                | 21 14 43<br>14 44                      | 10             | Slight                         |
| 25            | Shillong                                                                                | Z      | eP                       | 23 58 44                               |                | Slight, distant                |
| 26            | Shillong                                                                                | Z      | eP                       | 01 21 14                               |                | Slight, distant                |
| 26            | Shillong                                                                                | Z      | iP                       | 02 28 43                               |                | Slight, distant<br>compression |
| 26            | Epc: 0.1°S, 122.3°E. Northern Celebes. - h about 25 kms.<br>- H = 08h 44m 48.8s (USCGS) |        |                          |                                        |                |                                |
|               | Shillong                                                                                | Z<br>E | eP<br>iS                 | 08 52 15<br>58 13                      | 4350           | Slight                         |
|               | Visakhapatnam                                                                           | E      | eP                       | 08 52 44                               |                | Distant, tremor                |
|               | Chatra                                                                                  | Z      | eP<br>eS                 | 08 52 50<br>59 16                      | 4780           | Feeble, distant                |
|               | Poona                                                                                   | Z<br>N | eP<br>iS<br>Lq/SSS<br>Lr | 08 53 48<br>09 01 05<br>05 50<br>08 13 | 5650           | Slight                         |

| DATE            | STATION                                                      | COMPT | PHASE                 | G M T<br>h m s       | $\Delta$<br>km | REMARKS                     |
|-----------------|--------------------------------------------------------------|-------|-----------------------|----------------------|----------------|-----------------------------|
| - February 1962 |                                                              |       |                       |                      |                |                             |
| 26<br>Contd.    | Bombay                                                       | E     | eP                    | 08 53 58             | 4740           | Slight                      |
|                 |                                                              | NE    | eS                    | 09 01 19             |                |                             |
|                 |                                                              | E     | e                     | 01 41                |                |                             |
|                 |                                                              |       | e                     | 02 14                |                |                             |
|                 | New Delhi                                                    | Z     | iP                    | 08 53 55             |                | Slight, compression         |
|                 | Dehra Dun                                                    | NE    | e<br>iS               | 08 54 22<br>09 01 19 |                | Feeble                      |
| 26              | Shillong                                                     | Z     | eP<br>Sg              | 08 53 00<br>58 46    | 310            | Slight                      |
| 26              | Hyderabad                                                    | N     | e<br>M                | 09 00 06<br>03 37    |                | Per=6 sec, Gr.dis=2 $\mu$   |
|                 |                                                              | E     | M                     | 03 45                |                | Per=8 sec, Gr.dis=2 $\mu$   |
| 26              | Shillong                                                     | Z     | eP                    | 14 45 15             |                | Slight, near                |
| 26              | Shillong                                                     | Z     | eP <sub>g</sub><br>Sg | 15 40 54<br>41 15    | 180            | Slight                      |
| 26              | Shillong                                                     | Z     | iP                    | 16 04 10             |                | Slight, near rarefaction    |
|                 | New Delhi                                                    | Z     | iP                    | 16 05 14             |                | Slight, rarefaction         |
| 26              | Shillong                                                     | Z     | iP                    | 18 15 15             |                | Slight, distant compression |
| 26              | Shillong                                                     | Z     | iP                    | 21 40 21             |                | Slight, distant compression |
| 26              | Shillong                                                     | Z     | eP<br>i               | 22 58 33             |                | Slight, near                |
|                 |                                                              |       |                       | 59 06                |                |                             |
| 26              | Shillong                                                     | Z     | eP                    | 23 18 30             |                | Slight, near                |
| 27              | New Delhi                                                    | Z     | eP                    | 01 51 27             |                | Slight, rarefaction         |
| 27              | Epc: 34.5°N, 72.5°E. North East of Peshwar in West Pakistan. |       |                       |                      |                |                             |
|                 | - H = 05h 41m 10s (Shillong),                                |       |                       |                      |                |                             |
|                 | 36.6°N, 71.4°E. Hindukush. - h about 100 kms                 |       |                       |                      |                |                             |
|                 | - H = 05h 40m 53s (USCGS)                                    |       |                       |                      |                |                             |
| Dehra Dun       | Z                                                            | N     | eP                    | 05 42 52             | 820            | Slight                      |
|                 |                                                              |       | PPP                   | 43 10                |                |                             |
|                 |                                                              |       | Lq                    | 44 03                |                |                             |
|                 |                                                              |       | iS                    | 44 17                |                |                             |
|                 |                                                              |       | SS                    | 44 30                |                |                             |
|                 |                                                              |       | SSS                   | 44 41                |                |                             |
|                 |                                                              |       | M                     | 45 03                |                |                             |
| New Delhi       | Z                                                            |       | iP                    | 05 43 02             | 920            | Slight, compression         |
|                 |                                                              |       | i                     | 43 04                |                |                             |
|                 |                                                              |       | iS                    | 44 37                |                |                             |
|                 |                                                              |       | i                     | 45 47                |                |                             |
| Sehore          | N<br>E                                                       |       | iP                    | 05 44 36             | 1330           | Slight                      |
|                 |                                                              |       | i                     | 46 35                |                |                             |



| DATE | STATION | COMPT | PHASE | G M T<br>h m s | Δ<br>km | REMARKS |
|------|---------|-------|-------|----------------|---------|---------|
|------|---------|-------|-------|----------------|---------|---------|

February 1962

|               |                  |     |          |          |        |  |
|---------------|------------------|-----|----------|----------|--------|--|
| 27<br>Contd.  | Sehore<br>Contd. | E   | eS       | 05 46 52 |        |  |
|               |                  |     | SSS      | 47 15    |        |  |
|               |                  |     | i        | 48 30    |        |  |
|               |                  |     | M        | 48 46    |        |  |
| Chatra        | ZNE              | eP  | 05 44 37 | 1720     | Feeble |  |
|               |                  | S   | 47 31    |          |        |  |
| Poona         | Z<br>E           | eP  | 05 45 14 | 1870     | Slight |  |
|               |                  | iS  | 48 21    |          |        |  |
|               |                  | SS  | 48 36    |          |        |  |
|               |                  | SSS | 48 50    |          |        |  |
|               |                  | Lr  | 49 03    |          |        |  |
|               |                  | M   | 05 22    |          |        |  |
| Bombay        | N<br>NE          | eP  | 05 48 22 | 2000     | Slight |  |
|               |                  | e   | 48 11    |          |        |  |
|               |                  | eS  | 48 40    |          |        |  |
| Shillong      | Z<br>E           | eP  | 05 45 26 | 2010     | Slight |  |
|               |                  | PP  | 45 44    |          |        |  |
|               |                  | PPP | 45 56    |          |        |  |
|               |                  | iS  | 48 46    |          |        |  |
|               |                  | Lr  | 48 52    |          |        |  |
|               |                  | SSS | 49 27    |          |        |  |
| Visakhapatnam | E<br>NE          | eP  | 05 45 48 | 2300     | Slight |  |
|               |                  | iS  | 49 37    |          |        |  |
| Calcutta      | E                | e   | 05 45 58 |          | Slight |  |
|               |                  | i   | 49 02    |          |        |  |
| Madras        | E                | e   | 05 46 33 |          | Feeble |  |
|               |                  | e   | 46 58    |          |        |  |
|               |                  | e   | 50 41    |          |        |  |
|               |                  | e   | 53 29    |          |        |  |

27 Epc: 27.7°N, 101.9°E. Szechwan, China. - h about 40 kms  
- H = 03h 34m 55.4s (USCGS)

|               |          |        |          |      |                        |
|---------------|----------|--------|----------|------|------------------------|
| Tocklai       | E        | eP     | 06 36 49 | 610  | Weak                   |
|               |          | iS     | 37 53    |      |                        |
|               |          | Sg/M   | 38 30    |      |                        |
| Shillong      | Z<br>E   | eP     | 06 37 07 | 1040 | Slight                 |
|               |          | iS     | 38 54    |      |                        |
|               |          | M      | 37 54    |      |                        |
| Chatra        | ZNE<br>N | iP     | 06 38 00 | 1430 | Feeble,<br>compression |
|               |          | eS     | 40 26    |      |                        |
|               |          | SS     | 40 38    |      |                        |
|               |          | Lr/SSS | 40 50    |      |                        |
|               |          | M      | 41 50    |      |                        |
| Port Blair    | N        | eP     | 06 38 35 |      | Slight                 |
| Visakhapatnam | NE       | eP     | 06 39 28 | 2290 | Slight                 |
|               |          | eS     | 43 14    |      |                        |
| New Delhi     | Z        | eP     | 06 39 44 |      | Slight, compression    |

| DATE          | STATION                                                                                                                           | COMPT             | PHASE                                               | G<br>h | M<br>m                                             | T<br>s                                       | Δ<br>km | REMARKS                                          |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------|--------|----------------------------------------------------|----------------------------------------------|---------|--------------------------------------------------|
| February 1962 |                                                                                                                                   |                   |                                                     |        |                                                    |                                              |         |                                                  |
| 27<br>Contd.  | Dehra Dun                                                                                                                         | Z                 | e<br>i<br>i                                         | 06     | 39<br>43<br>46                                     | 45<br>28<br>32                               |         | Slight                                           |
|               | Madras                                                                                                                            | E                 | eP                                                  | 06     | 40                                                 | 18                                           |         | Feeble                                           |
|               | Poona                                                                                                                             | Z<br>N            | eP<br>iS                                            | 06     | 40<br>45                                           | 42<br>26                                     | 3110    | Slight                                           |
|               | Calcutta                                                                                                                          | E                 | e                                                   | 06     | 41                                                 | 27                                           |         | Slight                                           |
|               | Bombay                                                                                                                            | N<br>NE           | eS<br>e<br>e                                        | 06     | 45<br>47<br>49                                     | 43<br>27<br>55                               |         | Slight                                           |
| 27            | Epc: 35.7°N, 70.5°E. Pak-Afgan Border. - h about 122 kms<br>- H = 09h 20m 36s (USCGS)                                             |                   |                                                     |        |                                                    |                                              |         |                                                  |
|               | New Delhi                                                                                                                         | Z                 | iP<br>iS                                            | 09     | 22<br>24                                           | 42<br>17                                     | 920     | Slight,<br>compression                           |
|               | Dehra Dun                                                                                                                         | NE                | e                                                   | 09     | 23                                                 | 08                                           |         | Tremor                                           |
|               | Chatra                                                                                                                            | Z                 | eP                                                  | 09     | 24                                                 | 24                                           |         | Slight                                           |
|               | Shillong                                                                                                                          | Z                 | iP                                                  | 09     | 25                                                 | 12                                           |         | Slight, distant<br>compression                   |
| 27            | Shillong                                                                                                                          | Z                 | eP                                                  | 11     | 57                                                 | 18                                           |         | Slight, near                                     |
| 27            | Port Blair                                                                                                                        | N                 | e                                                   | 13     | 00                                                 | 01                                           |         | Slight                                           |
| 27            | Epc: 37.4°S, 73.2°W. Near Coast of Central Chile<br>- H = 12h 40m 48.9s. - h about 40 km (USCGS)<br>Mag: 6½ - 6¾ (Pas), 6 (Berk). |                   |                                                     |        |                                                    |                                              |         |                                                  |
|               | Bombay                                                                                                                            | E<br>NE<br>E<br>N | ePKP<br>PP<br>PKS2<br>e<br>e<br>PS<br>eSS<br>M<br>M | 13     | 00<br>03<br>04<br>10<br>11<br>14<br>22<br>14<br>04 | 18<br>43<br>07<br>23<br>14<br>52<br>29<br>13 | 16390   | Per=15 sec, Gr.dis=3 μ<br>Per=15 sec, Gr.dis=3 μ |
|               | Poona                                                                                                                             | Z<br>NE           | iPKP<br>e                                           | 13     | 00<br>09                                           | 20<br>00                                     |         |                                                  |
|               | Madras                                                                                                                            | E                 | ePKP<br>e<br>e<br>e<br>e                            | 13     | 00<br>00<br>14<br>22<br>53                         | 25<br>50<br>04<br>35<br>24                   |         |                                                  |
|               | New Delhi                                                                                                                         | ZNE               | ePKP<br>ePP<br>PPP<br>PS                            | 13     | 00<br>04<br>08<br>14                               | 34<br>32<br>13<br>48                         | 17070   | Compression                                      |
|               | Dehra Dun                                                                                                                         | NE<br>N           | ePKP<br>ePP                                         | 13     | 00<br>04                                           | 40<br>40                                     | 17070   |                                                  |

| DATE          | STATION                                                                        | COMPT | PHASE     | G<br>h | M<br>m | T<br>s      | Δ<br>km | REMARKS                     |
|---------------|--------------------------------------------------------------------------------|-------|-----------|--------|--------|-------------|---------|-----------------------------|
| February 1962 |                                                                                |       |           |        |        |             |         |                             |
| 27            | Dehra Dun                                                                      | N     | PPP       | 13     | 03     | 38          |         |                             |
| Contd.        | Contd.                                                                         |       | i         |        | 11     | 30          |         |                             |
|               |                                                                                |       | i         |        |        | 11 50       |         |                             |
|               | Bokaro                                                                         | NE    | e         | 13     | 01     | 10          |         |                             |
|               | Hyderabad                                                                      | N     | M         | 14     | 00     | 14          |         | Per=20 séc, Gr.dis=7 μ      |
|               |                                                                                | E     | M         |        | 00     | 41          |         | Per=16 séc, Gr.dis=6 μ      |
| 27            | Shillong                                                                       | Z     | ePg<br>Sg | 14     | 11     | 38<br>11 49 | 90      | Slight                      |
| 27            | New Delhi                                                                      | Z     | iP        | 14     | 22     | 58          |         | Slight, compression         |
| 27            | Epc: 2.7°S, 130.1°E. Ceram Sea. - H = 14h 21m 24.5s<br>- h about 40 km (USCGS) |       |           |        |        |             |         |                             |
|               | Shillong                                                                       | Z     | iP        | 14     | 29     | 49          |         | Slight, distant rarefaction |
|               | Chatra                                                                         | Z     | iP        | 14     | 30     | 22          |         | Feeble, distant compression |
|               | New Delhi                                                                      | Z     | iP        | 14     | 31     | 22          |         | Slight, compression         |
| 27            | Felt: Shillong and Goalpara                                                    |       |           |        |        |             |         |                             |
|               | Shillong                                                                       | Z     | Pg        | 17     | 19     | 27          | 130     | Slight                      |
|               |                                                                                | E     | Sg        |        | 19     | 42          |         |                             |
|               | Tocklai                                                                        | E     | e         | 17     | 19     | 00          |         | Slight                      |
| 27            | Chatra                                                                         | ZNE   | iP        | 17     | 19     | 59          | 390     |                             |
|               |                                                                                |       | i         |        | 20     | 01          |         |                             |
|               |                                                                                |       | PPP       |        | 20     | 13          |         |                             |
|               |                                                                                |       | S         |        | 20     | 43          |         |                             |
|               |                                                                                |       | S*        |        | 20     | 52          |         |                             |
|               |                                                                                |       | SS        |        | 20     | 54          |         |                             |
|               |                                                                                |       | Sg        |        | 21     | 01          |         |                             |
|               |                                                                                |       | SSS       |        | 21     | 04          |         |                             |
|               | Bokaro                                                                         | E     | eP        | 17     | 20     | 21          | 630     | Slight                      |
|               |                                                                                |       | i         |        | 20     | 31          |         |                             |
|               |                                                                                | NE    | iS        |        | 21     | 28          |         |                             |
| 27            | Bombay                                                                         | E     | e         | 17     | 28     | 24          |         | Feeble, tremor, near        |
| 27            | Chatra                                                                         | Z     | iP        | 21     | 43     | 03          |         | Feeble, distant compression |
|               | Shillong                                                                       | Z     | eP        | 21     | 43     | 30          |         | Slight, near compression    |
| 27            | Shillong                                                                       | Z     | ePg<br>Sg | 21     | 46     | 23<br>46 36 | 110     | Slight                      |
| 28            | Shillong                                                                       | Z     | ePg<br>Sg | 02     | 57     | 01<br>57 14 | 110     | Slight                      |
| 28            | Shillong                                                                       | Z     | eP        | 07     | 27     | 40          |         | Slight, distant             |

| DATE          | STATION   | COMPT | PHASE     | G M T<br>h m s    | $\Delta$<br>km | REMARKS                        |
|---------------|-----------|-------|-----------|-------------------|----------------|--------------------------------|
| February 1962 |           |       |           |                   |                |                                |
| 28            | Shillong  | Z     | ePg<br>Sg | 09 42 40<br>42 59 | 160            | Slight                         |
| 28            | Shillong  | Z     | iP        | 18 15 35          |                | Slight, near<br>compression    |
| 28            | New Delhi | Z     | iP<br>i   | 18 51 43<br>51 55 |                | Slight, compression            |
|               | Shillong  | Z     | eP        | 18 52 46          |                | Slight, near                   |
| 28            | Shillong  | Z     | eP        | 20 33 03          |                | Slight, near                   |
| 28            | Shillong  | Z     | iP        | 20 53 55          |                | Slight, distant<br>compression |
| 28            | Shillong  | Z     | iP<br>Sg  | 21 04 11<br>04 24 | 110            | Slight                         |
| 28            | Shillong  | Z     | eP        | 23 15 18          |                | Slight, near                   |
| 28            | Shillong  | Z     | eP        | 23 19 11          |                | Slight, distant                |

*Earthquake Report*  
( Non Instrumental)

The following is the list of Earthquakes that were reported by  
Voluntary Observers from different stations during the month of  
February 1962

| Place at<br>which felt | Date in<br>G M T | Time in<br>G M T<br>h. m. | No. of<br>Shocks | Duration<br>of shocks<br>in secs | Intensity<br>in<br>R-F Scale | Remarks        |
|------------------------|------------------|---------------------------|------------------|----------------------------------|------------------------------|----------------|
| Goalpara               | 05               | 03 52                     | 1                | 2                                | IV                           | From North     |
| Shillong               | 13               | 23 35                     | 1                | 10                               | IV                           |                |
| Gangtok                | 15               | 08 05                     | 1                | 12                               | V                            | From Northwest |
| Porbandar              | 15               | 22 45                     | 1                | 1                                | II                           |                |
| Goalpara               | 27               | 05 20                     | 1                | 3                                | VI                           | From Southwest |

*Microseismic Tabulation*

| Date                                 | Hour | K | Mean Amplitude<br>in mm | Mean Period<br>in sec. | Date                 | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec. |
|--------------------------------------|------|---|-------------------------|------------------------|----------------------|------|-----|-------------------------|------------------------|
| <i>Station. Shillong Compt. E-W.</i> |      |   |                         |                        | <i>February 1962</i> |      |     |                         |                        |
| 01                                   | 00   | 1 | 0.4                     | 4.0                    | 12                   | 12   | 2   | 0.3                     | 5.0                    |
|                                      | 06   | 1 | 0.6                     | 4.5                    | Contd.               | 18   | 2   | 0.4                     | 3.0                    |
|                                      | 12   | 1 | 0.4                     | 5.0                    |                      |      |     |                         |                        |
|                                      | 18   | 3 | 0.5                     | 4.5                    | 13                   | 00   | 2   | 0.3                     | 3.0                    |
| 02                                   | 00   | 3 | 0.4                     | 5.4                    |                      | 06   | 2   | 0.3                     | 6.0                    |
|                                      | 06   | 1 | 0.4                     | 4.0                    |                      | 12   | 2   | 0.3                     | 5.5                    |
|                                      | 12   | 3 | 0.3                     | 4.0                    |                      | 18   | 2   | 0.3                     | 4.5                    |
|                                      | 18   | 3 | 0.3                     | 4.5                    | 14                   | 00   | 3   | 0.2                     | 4.0                    |
| 03                                   | 00   | 3 | 0.4                     | 4.0                    |                      | 06   | 3   | 0.2                     | 4.0                    |
|                                      | 06   | 1 | 0.6                     | 5.0                    |                      | 12   | 3   | 0.3                     | 4.2                    |
|                                      | 12   | 3 | 0.6                     | 6.0                    |                      | 18   | 3   | 0.2                     | 4.0                    |
|                                      | 18   | 3 | 0.4                     | 4.5                    | 15                   | 00   | 3   | 0.2                     | 4.0                    |
| 04                                   | 00   | 1 | 0.4                     | 4.4                    |                      | 06   | 3   | 0.1                     | 4.0                    |
|                                      | 06   | 1 | 0.5                     | 4.0                    |                      | 12   | 1   | 0.2                     | 4.2                    |
|                                      | 12   | 3 | 0.4                     | 4.5                    |                      | 18   | 1   | 0.2                     | 4.0                    |
|                                      | 18   | 1 | 0.4                     | 5.0                    | 16                   | 00   | 1   | 0.1                     | 4.0                    |
| 05                                   | 00   | 3 | 0.3                     | 4.5                    |                      | 06   | 1   | 0.2                     | 4.0                    |
|                                      | 06   | 2 | 0.3                     | 4.2                    |                      | 12   | 1   | 0.2                     | 4.2                    |
|                                      | 12   | 3 | 0.3                     | 4.0                    |                      | 18   | 3   | 0.2                     | 4.2                    |
|                                      | 18   | 3 | 0.2                     | 4.5                    | 17                   | 00   | 3   | 0.2                     | 4.5                    |
| 06                                   | 00   | 3 | 0.2                     | 4.0                    |                      | 06   | 3   | 0.3                     | 4.2                    |
|                                      | 06   | 3 | 0.2                     | 4.0                    |                      | 12   | 2   | 0.3                     | 4.2                    |
|                                      | 12   | 3 | 0.3                     | 5.0                    |                      | 18   | 2   | 0.2                     | 4.0                    |
|                                      | 18   | 3 | 0.3                     | 4.0                    | 18                   | 00   | 2   | 0.3                     | 4.0                    |
| 07                                   | 00   | 3 | 0.4                     | 5.0                    |                      | 06   | ... | -                       | -                      |
|                                      | 06   | 2 | 0.4                     | 6.0                    |                      | 12   | 3   | 0.2                     | 4.0                    |
|                                      | 12   | 3 | 0.3                     | 5.0                    |                      | 18   | 3   | 0.2                     | 4.0                    |
|                                      | 18   | 3 | 0.4                     | 4.5                    | 19                   | 00   | 3   | 0.2                     | 4.2                    |
| 08                                   | 00   | 3 | 0.2                     | 4.0                    |                      | 06   | 3   | 0.2                     | 4.2                    |
|                                      | 06   | 3 | 0.2                     | 3.0                    |                      | 12   | 3   | 0.2                     | 4.0                    |
|                                      | 12   | 3 | 0.2                     | 4.0                    |                      | 18   | 3   | 0.3                     | 4.0                    |
|                                      | 18   | 3 | 0.2                     | 4.0                    | 20                   | 00   | 3   | 0.2                     | 4.2                    |
| 09                                   | 00   | 3 | 0.3                     | 4.0                    |                      | 06   | 1   | 0.3                     | 4.0                    |
|                                      | 06   | 3 | 0.2                     | 4.0                    |                      | 12   | 1   | 0.2                     | 4.0                    |
|                                      | 12   | 3 | 0.2                     | 4.5                    |                      | 18   | 2   | 0.2                     | 3.5                    |
|                                      | 18   | 1 | 0.2                     | 4.0                    | 21                   | 00   | 3   | 0.2                     | 3.5                    |
| 10                                   | 00   | 1 | 0.2                     | 4.0                    |                      | 03   | 2   | 0.2                     | 4.0                    |
|                                      | 06   | 1 | 0.2                     | 4.5                    |                      | 12   | 3   | 0.3                     | 4.0                    |
|                                      | 12   | 1 | 0.3                     | 4.0                    |                      | 18   | 3   | 0.2                     | 4.2                    |
|                                      | 18   | 3 | 0.2                     | 4.5                    | 22                   | 00   | 3   | 0.3                     | 4.2                    |
| 11                                   | 00   | 3 | 0.2                     | 4.0                    |                      | 06   | 2   | 0.2                     | 4.0                    |
|                                      | 06   | 3 | 0.3                     | 6.0                    |                      | 12   | 3   | 0.2                     | 4.2                    |
|                                      | 12   | 2 | 0.3                     | 6.0                    |                      | 18   | 3   | 0.2                     | 4.0                    |
|                                      | 18   | 2 | 0.3                     | 5.5                    | 23                   | 00   | 2   | 0.2                     | 4.2                    |
| 12                                   | 00   | 2 | 0.4                     | 6.0                    |                      | 06   | 3   | 0.2                     | 4.2                    |
|                                      | 06   | 2 | 0.3                     | 4.0                    |                      | 12   | 3   | 0.2                     | 4.0                    |
|                                      |      |   |                         |                        |                      | 18   | 3   | 0.2                     | 4.2                    |

| Date                                 | Hour | K | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|--------------------------------------|------|---|-------------------------|-----------------------|
| <i>Station: Shillong Compt. E-W.</i> |      |   |                         |                       |
| 24                                   | 00   | 1 | 0.2                     | 4.0                   |
|                                      | 06   | 3 | 0.2                     | 4.0                   |
|                                      | 12   | 2 | 0.2                     | 3.5                   |
|                                      | 18   | 2 | 0.2                     | 4.0                   |
| 25                                   | 00   | 3 | 0.2                     | 4.0                   |
|                                      | 06   | 3 | 0.2                     | 4.0                   |
|                                      | 12   | 3 | 0.2                     | 4.0                   |
|                                      | 18   | 3 | 0.2                     | 4.0                   |
| 26                                   | 00   | 3 | 0.2                     | 4.2                   |
|                                      | 06   | 2 | 0.2                     | 4.0                   |
|                                      | 12   | 2 | 0.2                     | 4.0                   |
|                                      | 18   | 1 | 0.2                     | 4.2                   |
| 27                                   | 00   | 2 | 0.2                     | 4.0                   |
|                                      | 06   | 2 | 0.2                     | 4.0                   |
|                                      | 12   | 3 | 0.2                     | 4.2                   |
|                                      | 18   | 3 | 0.2                     | 4.0                   |
| 28                                   | 00   | 3 | 0.2                     | 4.0                   |
|                                      | 06   | 2 | 0.2                     | 4.2                   |
|                                      | 12   | 3 | 0.2                     | 4.0                   |
|                                      | 18   | 3 | 0.2                     | 4.0                   |

*Station: Madras Compt. E-W.*

|    |    |   |     |     |
|----|----|---|-----|-----|
| 01 | 00 | 3 | 0.3 | 2.9 |
|    |    | 3 | 0.4 | 3.7 |
|    |    | 3 | 0.1 | 1.6 |
|    | 03 | 3 | 0.4 | 2.9 |
|    |    | 3 | 0.1 | 1.6 |
|    | 06 | 3 | 0.4 | 2.7 |
|    |    | 3 | 0.1 | 1.5 |
|    | 12 | 3 | 0.4 | 2.7 |
|    |    | 3 | 0.2 | 2.2 |
|    |    | 3 | 0.1 | 1.3 |
|    | 18 | 3 | 0.4 | 3.1 |
|    |    | 3 | 0.2 | 2.2 |
|    |    | 3 | 0.1 | 1.6 |
| 02 | 00 | 3 | 0.4 | 3.0 |
|    |    | 3 | 0.1 | 1.7 |
|    | 03 | 3 | 0.3 | 2.9 |
|    | 06 | 3 | 0.2 | 2.8 |
|    | 12 | 3 | 0.4 | 2.8 |
|    |    | 3 | 0.1 | 1.4 |
|    | 18 | 1 | 0.5 | 2.6 |
|    |    | 3 | 0.1 | 1.6 |
| 03 | 00 | 1 | 0.5 | 3.1 |
|    |    | 3 | 0.4 | 2.2 |
|    | 03 | 1 | 0.3 | 2.7 |
|    | 06 | 1 | 0.5 | 2.9 |
|    | 12 | 3 | 0.5 | 2.9 |
|    | 18 | 1 | 0.3 | 2.2 |
|    |    | 1 | 0.2 | 1.6 |
| 04 | 00 | 1 | 0.5 | 3.0 |
|    |    | 1 | 0.2 | 1.3 |

| Date                                 | Hour | K | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|--------------------------------------|------|---|-------------------------|-----------------------|
| <i>February 1962 Station: Madras</i> |      |   |                         |                       |
| 04                                   | 03   | 1 | 0.5                     | 2.7                   |
| Contl.                               |      | 1 | 0.3                     | 1.6                   |
|                                      | 06   | 1 | 0.3                     | 2.9                   |
|                                      |      | 1 | 0.2                     | 1.7                   |
|                                      | 12   | 1 | 0.5                     | 2.8                   |
|                                      |      | 1 | 0.2                     | 1.6                   |
|                                      | 18   | 1 | 0.5                     | 2.9                   |
|                                      |      | 1 | 0.3                     | 1.7                   |
| 05                                   | 00   | 1 | 0.5                     | 2.9                   |
|                                      |      | 1 | 0.2                     | 1.7                   |
|                                      | 03   | 3 | 0.4                     | 2.6                   |
|                                      |      | 3 | 0.2                     | 1.7                   |
|                                      | 06   | 3 | 0.4                     | 2.7                   |
|                                      |      | 3 | 0.1                     | 1.3                   |
|                                      | 12   | 3 | 0.3                     | 2.7                   |
|                                      | 18   | 3 | 0.3                     | 2.8                   |
| 06                                   | 00   | 3 | 0.3                     | 2.3                   |
|                                      |      | 3 | 0.1                     | 1.5                   |
|                                      | 03   | 3 | 0.3                     | 2.7                   |
|                                      |      | 3 | 0.1                     | 1.6                   |
|                                      | 06   | 3 | 0.3                     | 2.6                   |
|                                      | 12   | 3 | 0.3                     | 2.5                   |
|                                      | 18   | 3 | 0.4                     | 2.7                   |
|                                      |      | 3 | 0.1                     | 1.5                   |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 07 | 00 | 3   | 0.1 | 1.5 |
|    | 03 | to  |     |     |
|    | 18 | 0,0 | -   | -   |
| 08 | 00 | 3   | 0.2 | 1.3 |
|    | 03 | 3   | 0.1 | 1.4 |
|    | 06 | 3   | 0.2 | 1.3 |
|    | 12 | 3   | 0.2 | 1.4 |
|    | 18 | 3   | 0.1 | 1.4 |
| 09 | 00 | 3   | 0.1 | 1.4 |
|    |    | 3   | 0.2 | 2.1 |
|    | 03 | 3   | 0.2 | 2.4 |
|    |    | 3   | 0.1 | 1.4 |
|    | 06 | 3   | 0.2 | 1.4 |
|    | 12 | 3   | 0.1 | 1.3 |
|    | 18 | 0,0 | -   | -   |
| 10 | 00 | 0,0 | -   | -   |
|    | 03 | 3   | 0.1 | 1.3 |
|    | 06 | 3   | 0.1 | 1.3 |
|    | 12 | 3   | 0.1 | 1.4 |
|    | 18 | 3   | 0.1 | 1.3 |
| 11 | 00 | 3   | 0.2 | 1.3 |
|    | 03 | 3   | 0.2 | 1.3 |
|    | 06 | 3   | 0.1 | 1.3 |
|    | 12 | ... | -   | -   |
|    | 18 | 3   | 0.2 | 1.3 |
| 12 | 00 | 3   | 0.3 | 2.4 |
|    |    | 3   | 0.1 | 1.3 |

| Date                               | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|------------------------------------|------|-----|-------------------------|-----------------------|
| <i>Station. Madras Compt. E-W.</i> |      |     |                         |                       |
| 12                                 | 03   | 3   | 0.1                     | 1.3                   |
| Contd.                             | 06   | 3   | 0.1                     | 1.4                   |
|                                    | 12   | 3   | 0.2                     | 1.4                   |
|                                    | 18   | 3   | 0.1                     | 1.5                   |
| 13                                 | 00   | 3   | 0.1                     | 1.4                   |
|                                    | 03   | 3   | 0.2                     | 1.3                   |
|                                    | 06   | 0,0 | -                       | -                     |
|                                    | 12   | 3   | 0.2                     | 1.3                   |
|                                    | 18   | 3   | 0.1                     | 1.5                   |
| 14                                 | 00   | 3   | 0.1                     | 1.5                   |
|                                    | 03   | 3   | 0.1                     | 1.5                   |
|                                    | 06   | ... | -                       | -                     |
|                                    | 12   | ... | -                       | -                     |
|                                    | 18   | 3   | 0.2                     | 1.5                   |
| 15                                 | 00   | 3   | 0.2                     | 1.4                   |
|                                    | 03   | 3   | 0.3                     | 2.7                   |
|                                    |      | 3   | 0.1                     | 1.5                   |
|                                    | 06   | 3   | 0.2                     | 2.8                   |
|                                    |      | 3   | 0.1                     | 1.7                   |
|                                    | 12   | 3   | 0.3                     | 3.1                   |
|                                    | 18   | 3   | 0.3                     | 3.5                   |
|                                    |      | 3   | 0.2                     | 2.1                   |
| 16                                 | 00   | 3   | 0.3                     | 4.1                   |
|                                    |      | 3   | 0.2                     | 2.3                   |
|                                    |      | 3   | 0.1                     | 1.7                   |
|                                    | 03   | 3   | 0.3                     | 4.0                   |
|                                    |      | 3   | 0.2                     | 2.5                   |
|                                    |      | 3   | 0.1                     | 1.5                   |
|                                    | 06   | 3   | 0.3                     | 4.1                   |
|                                    |      | 3   | 0.2                     | 2.4                   |
|                                    | 12   | 3   | 0.2                     | 2.6                   |
|                                    | 18   | ... | -                       | -                     |
| 17                                 | 00   | 3   | 0.4                     | 5.2                   |
|                                    |      | 3   | 0.2                     | 2.7                   |
|                                    | 03   | 3   | 0.3                     | 4.7                   |
|                                    |      | 3   | 0.2                     | 2.7                   |
|                                    |      | 3   | 0.1                     | 1.7                   |
|                                    | 06   | 3   | 0.3                     | 4.3                   |
|                                    |      | 3   | 0.2                     | 2.3                   |
|                                    | 12   | 3   | 0.3                     | 4.5                   |
|                                    |      | 3   | 0.2                     | 2.3                   |
|                                    | 18   | 3   | 0.4                     | 4.6                   |
|                                    |      | 3   | 0.1                     | 2.0                   |
| 18                                 | 00   | 3   | 0.4                     | 4.8                   |
|                                    |      | 3   | 0.1                     | 1.9                   |
|                                    | 03   | 3   | 0.3                     | 4.6                   |
|                                    |      | 3   | 0.1                     | 1.9                   |
|                                    | 06   | 3   | 0.3                     | 5.2                   |
|                                    |      | 3   | 0.1                     | 1.7                   |
|                                    | 12   | ... | -                       | -                     |
|                                    | 18   | 3   | 0.1                     | 1.9                   |
| 19                                 | 00   | 3   | 0.2                     | 5.9                   |
|                                    |      | 3   | 0.1                     | 1.7                   |

| Date                 | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|----------------------|------|-----|-------------------------|-----------------------|
| <i>February 1962</i> |      |     |                         |                       |
| 19                   | 03   | 3   | 0.3                     | 5.8                   |
| Contd.               |      | 3   | 0.1                     | 2.3                   |
|                      | 06   | ... | -                       | -                     |
|                      |      | 3   | 0.1                     | 2.1                   |
|                      | 12   | ... | -                       | -                     |
|                      | 18   | ... | -                       | -                     |
|                      |      | 3   | 0.1                     | 2.3                   |
| 20                   | 00   | 3   | 0.3                     | 5.6                   |
|                      |      | 3   | 0.2                     | 2.3                   |
|                      | 03   | 3   | 0.4                     | 5.6                   |
|                      |      | 3   | 0.2                     | 2.3                   |
|                      | 06   | 3   | 0.2                     | 2.3                   |
|                      | 12   | 3   | 0.2                     | 2.5                   |
|                      | 18   | 3   | 0.4                     | 4.5                   |
|                      |      | 3   | 0.2                     | 2.7                   |
| 21                   | 00   | 3   | 0.4                     | 4.4                   |
|                      |      | 3   | 0.2                     | 1.8                   |
|                      | 03   | 3   | 0.2                     | 1.9                   |
|                      | 06   | 3   | 0.2                     | 2.0                   |
|                      | 12   | 3   | 0.2                     | 1.8                   |
|                      | 18   | 3   | 0.2                     | 1.9                   |
| 22                   | 00   | 3   | 0.3                     | 2.3                   |
|                      |      | 3   | 0.1                     | 1.7                   |
|                      | 03   | 3   | 0.4                     | 4.4                   |
|                      |      | 3   | 0.2                     | 2.5                   |
|                      |      | 3   | 0.1                     | 1.5                   |
|                      | 06   | 3   | 0.2                     | 2.4                   |
|                      |      | 3   | 0.1                     | 1.8                   |
|                      | 12   | 3   | 0.1                     | 2.1                   |
|                      | 18   | 3   | 0.3                     | 4.8                   |
|                      |      | 3   | 0.2                     | 2.1                   |
|                      |      | 3   | 0.1                     | 1.7                   |
| 23                   | 00   | 3   | 0.4                     | 4.8                   |
|                      |      | 3   | 0.1                     | 1.6                   |
|                      | 03   | 3   | 0.4                     | 4.3                   |
|                      |      | 3   | 0.1                     | 1.7                   |
|                      | 06   | 3   | 0.4                     | 5.1                   |
|                      |      | 3   | 0.1                     | 2.1                   |
|                      | 12   | 3   | 0.4                     | 4.6                   |
|                      |      | 3   | 0.1                     | 2.1                   |
|                      | 18   | 3   | 0.4                     | 4.7                   |
|                      |      | 3   | 0.1                     | 1.9                   |
| 24                   | 00   | 3   | 0.3                     | 4.6                   |
|                      |      | 3   | 0.1                     | 2.0                   |
|                      | 03   | 3   | 0.3                     | 4.7                   |
|                      |      | 3   | 0.1                     | 1.7                   |
|                      | 06   | 3   | 0.3                     | 4.8                   |
|                      | 12   | ... | -                       | -                     |
|                      | 18   | 3   | 0.4                     | 5.2                   |
| 25                   | 00   | 3   | 0.4                     | 5.4                   |
|                      | 03   | 3   | 0.3                     | 5.7                   |
|                      | 06   | 3   | 0.3                     | 5.7                   |
|                      | 12   | ... | -                       | -                     |
|                      | 18   | 3   | 0.3                     | 5.0                   |
|                      |      | 3   | 0.1                     | 2.0                   |

| Date                              | Hour | K      | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|-----------------------------------|------|--------|-------------------------|-----------------------|
| <i>Station. Madras Compt. E-W</i> |      |        |                         |                       |
| 26                                | 00   | 3<br>3 | 0.3<br>0.1              | 5.2<br>1.6            |
|                                   | 03   | 3      | 0.3                     | 5.3                   |
|                                   | 06   | 3      | 0.3                     | 4.8                   |
|                                   | 12   | ...    | -                       | -                     |
|                                   | 18   | 3<br>3 | 0.3<br>0.1              | 5.1<br>1.5            |
| 27                                | 00   | 3      | 0.3                     | 5.0                   |
|                                   |      | 3      | 0.1                     | 1.4                   |
|                                   | 03   | 3      | 0.3                     | 5.2                   |
|                                   |      | 3      | 0.1                     | 1.1                   |
|                                   | 06   | 3<br>3 | 0.3<br>0.1              | 4.3<br>1.0            |
|                                   | 12   | 3<br>3 | 0.3<br>0.1              | 4.6<br>1.3            |
|                                   | 18   | 3<br>3 | 0.3<br>0.1              | 4.8<br>1.0            |
| 28                                | 00   | 3      | 0.4                     | 4.8                   |
|                                   | 03   | 3      | 0.3                     | 4.7                   |
|                                   | 06   | 3      | 0.3                     | 4.4                   |
|                                   | 12   | ...    | -                       | -                     |
|                                   | 18   | 3<br>3 | 0.3<br>0.3              | 4.7<br>3.5            |

*Station. Bombay (Colaba) Compt. E-W*

|    |    |     |            |            |
|----|----|-----|------------|------------|
| 01 | 00 | 3   | 0.5<br>0.5 | 4.3<br>2.3 |
|    | 03 | 1   | 0.5        | 2.1        |
|    | 06 | 1   | 0.7        | 2.5        |
|    | 09 | 1   | 0.3        | 3.8        |
|    | 12 | 1   | 0.7        | 2.7        |
|    | 15 | 1   | 0.7        | 2.7        |
|    | 18 | 1   | 0.7        | 2.7        |
|    | 21 | 1   | 0.7        | 2.3        |
| 02 | 00 | 1   | 0.7        | 2.7        |
|    | 03 | 3   | 0.6<br>0.4 | 2.0<br>1.3 |
|    | 12 | 3   | 0.5        | 3.3        |
|    | 18 | ... | -          | -          |
| 03 | 00 | 3   | 0.5<br>0.4 | 4.3<br>2.2 |
|    | 03 | 3   | 0.6<br>0.4 | 4.2<br>2.5 |
|    | 12 | ... | -          | -          |
|    | 18 | 3   | 0.6<br>0.4 | 4.7<br>1.7 |
| 04 | 00 | 3   | 0.5<br>0.4 | 4.1<br>2.5 |
|    | 06 | 3   | 0.5<br>0.4 | 4.2<br>3.0 |
|    | 12 | 3   | 0.5<br>0.4 | 4.0<br>3.0 |
|    | 18 | 3   | 0.5<br>0.4 | 4.0<br>3.0 |

| Date                                 | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|--------------------------------------|------|-----|-------------------------|-----------------------|
| <i>February 1962 Station. Bombay</i> |      |     |                         |                       |
| 05                                   | 00   | 3   | 0.4<br>0.3              | 4.2<br>2.8            |
|                                      | 06   | ... | -                       | -                     |
|                                      | 12   | 3   | 0.5<br>0.4              | 4.4<br>3.0            |
|                                      | 18   | 3   | 0.3<br>0.5              | 1.9<br>4.3            |
| 06                                   | 00   | 3   | 0.4                     | 4.3                   |
|                                      | 03   | 3   | 0.3<br>0.5              | 2.0<br>4.1            |
|                                      | 12   | 3   | 0.4<br>0.5              | 2.0<br>4.5            |
|                                      | 18   | 3   | 0.5<br>0.4              | 2.5<br>2.2            |
| 07                                   | 00   | ... | -                       | -                     |
|                                      | 03   | 3   | 0.5                     | 5.3                   |
|                                      |      |     | 0.4                     | 2.4                   |
|                                      | 12   | 3   | 0.4                     | 5.3                   |
|                                      | 18   | 3   | 0.4<br>0.5              | 2.5<br>5.6            |
|                                      |      |     | 0.3                     | 2.6                   |
| 08                                   | 00   | 3   | 0.5<br>0.3              | 5.1<br>2.5            |
|                                      | 03   | 3   | 0.5                     | 5.1                   |
|                                      |      |     | 0.4                     | 2.7                   |
|                                      | 12   | 3   | 0.5                     | 4.8                   |
|                                      | 18   | 3   | 0.4<br>0.3              | 1.8<br>2.2            |
| 09                                   | 00   | 3   | 0.4                     | 4.4                   |
|                                      |      |     | 0.3                     | 2.2                   |
|                                      | 06   | 3   | 0.4                     | 4.7                   |
|                                      |      |     | 0.3                     | 1.7                   |
|                                      | 12   | 3   | 0.4                     | 4.8                   |
|                                      | 18   | 3   | 0.3<br>0.5              | 1.7<br>4.0            |
| 10                                   | 00   | 3   | 0.4                     | 4.4                   |
|                                      |      |     | 0.3                     | 2.0                   |
|                                      | 03   | 3   | 0.5                     | 4.8                   |
|                                      |      |     | 0.4                     | 2.3                   |
|                                      | 12   | 3   | 0.5                     | 4.9                   |
|                                      | 13   | 3   | 0.4<br>0.5              | 2.3<br>5.1            |
|                                      |      |     | 0.4                     | 2.5                   |
| 11                                   | 00   | 3   | 0.5                     | 5.5                   |
|                                      |      |     | 0.4                     | 2.5                   |
|                                      | 06   | 3   | 0.5                     | 5.1                   |
|                                      |      |     | 0.4                     | 2.6                   |
|                                      | 12   | ... | -                       | -                     |
|                                      | 13   | 3   | 0.6                     | 6.3                   |
|                                      |      |     | 0.4                     | 2.3                   |
| 12                                   | 00   | 3   | 0.5                     | 6.3                   |
|                                      |      |     | 0.4                     | 2.3                   |



| Date                                       | Hour | K   | Mean Amplitude in mm | Mean Period in sec | Date                 | Hour | K | mean Amplitude in mm | mean Period in sec |
|--------------------------------------------|------|-----|----------------------|--------------------|----------------------|------|---|----------------------|--------------------|
| <i>Station. Bombay (Colaba) Compt. E-W</i> |      |     |                      |                    | <i>February 1962</i> |      |   |                      |                    |
| 12                                         | 06   | 3   | 0.6                  | 5.9                | 20                   | 00   | 3 | 0.5                  | 5.4                |
| Contd.                                     | 12   | 3   | 0.4                  | 2.3                |                      |      |   | 0.5                  | 2.3                |
|                                            |      |     | 0.5                  | 6.0                |                      | 06   | 3 | 0.6                  | 5.7                |
|                                            |      |     | 0.4                  | 2.0                |                      | 12   | 3 | 0.4                  | 2.5                |
|                                            | 18   | 3   | 0.6                  | 5.7                |                      | 12   | 3 | 0.5                  | 6.1                |
|                                            |      |     | 0.3                  | 2.0                |                      | 18   | 3 | 0.3                  | 2.0                |
|                                            |      |     |                      |                    |                      |      |   | 0.5                  | 5.3                |
|                                            |      |     |                      |                    |                      |      |   | 0.4                  | 2.0                |
| 13                                         | 00   | 3   | 0.5                  | 5.3                |                      |      |   |                      |                    |
|                                            |      |     | 0.4                  | 2.7                | 21                   | 00   | 3 | 0.5                  | 5.5                |
|                                            | 06   | 3   | 0.5                  | 5.0                |                      | 06   | 3 | 0.5                  | 2.3                |
|                                            |      |     | 0.4                  | 2.7                |                      | 06   | 3 | 0.5                  | 5.5                |
|                                            | 12   | 3   | 0.4                  | 5.0                |                      | 12   | 3 | 0.5                  | 2.3                |
|                                            |      |     | 0.3                  | 3.0                |                      | 12   | 3 | 0.5                  | 5.1                |
|                                            | 18   | 3   | 0.5                  | 5.0                |                      |      |   | 0.5                  | 1.6                |
|                                            |      |     | 0.3                  | 2.7                |                      | 15   | 1 | 0.7                  | 1.7                |
| 14                                         | 00   | 3   | 0.4                  | 4.2                |                      | 18   | 3 | 0.5                  | 5.1                |
|                                            |      |     | 0.3                  | 2.0                |                      |      |   | 0.4                  | 1.9                |
|                                            | 06   | ... | -                    | -                  |                      |      |   |                      |                    |
|                                            | 12   | 3   | 0.4                  | 4.1                | 22                   | 00   | 3 | 0.4                  | 5.3                |
|                                            |      |     | 0.3                  | 1.7                |                      | 06   | 3 | 0.4                  | 2.0                |
|                                            | 18   | 3   | 0.4                  | 4.3                |                      | 06   | 3 | 0.5                  | 5.1                |
|                                            |      |     | 0.3                  | 2.0                |                      |      |   | 0.3                  | 1.8                |
| 15                                         | 00   | 3   | 0.4                  | 5.0                |                      | 12   | 3 | 0.4                  | 5.0                |
|                                            |      |     | 0.3                  | 1.8                |                      |      |   | 0.3                  | 1.9                |
|                                            | 06   | 2   | 0.4                  | 4.7                |                      | 18   | 3 | 0.4                  | 5.0                |
|                                            | 12   | 2   | 0.4                  | 4.4                |                      |      |   | 0.3                  | 2.0                |
|                                            | 18   | 3   | 0.6                  | 4.3                | 23                   | 00   | 3 | 0.5                  | 5.1                |
|                                            |      |     | 0.3                  | 1.8                |                      |      |   | 0.3                  | 2.0                |
| 16                                         | 00   | 3   | 0.5                  | 4.4                |                      | 06   | 2 | 0.4                  | 5.6                |
|                                            |      |     | 0.3                  | 2.0                |                      | 12   | 2 | 0.5                  | 4.9                |
|                                            | 06   | 3   | 0.5                  | 2.8                |                      | 18   | 2 | 0.4                  | 5.2                |
|                                            |      |     | 0.3                  | 2.0                | 24                   | 00   | 3 | 0.5                  | 5.2                |
|                                            | 12   | 3   | 0.6                  | 4.4                |                      |      |   | 0.3                  | 1.9                |
|                                            |      |     | 0.3                  | 1.9                |                      | 06   | 3 | 0.4                  | 5.2                |
|                                            | 18   | 3   | 0.5                  | 4.6                |                      |      |   | 0.5                  | 2.0                |
|                                            |      |     | 0.3                  | 2.0                |                      | 12   | 3 | 0.5                  | 5.0                |
| 17                                         | 00   | 3   | 0.5                  | 5.4                |                      | 13   | 3 | 0.5                  | 2.5                |
|                                            |      |     | 0.3                  | 2.3                |                      |      |   | 0.4                  | 5.4                |
|                                            | 06   | 3   | 0.4                  | 4.9                |                      |      |   | 0.4                  | 1.9                |
|                                            |      |     | 0.3                  | 2.0                |                      |      |   |                      |                    |
|                                            | 12   | 3   | 0.6                  | 5.1                |                      |      |   |                      |                    |
|                                            |      |     | 0.4                  | 2.2                | 25                   | 00   | 3 | 0.4                  | 5.3                |
|                                            | 18   | 3   | 0.6                  | 5.2                |                      | 06   | 3 | 0.3                  | 2.0                |
|                                            |      |     | 0.3                  | 2.0                |                      |      |   | 0.5                  | 5.5                |
| 18                                         | 00   | 3   | 0.5                  | 5.1                |                      | 12   | 3 | 0.4                  | 2.0                |
|                                            |      |     | 0.3                  | 1.8                |                      |      |   | 0.5                  | 5.2                |
|                                            | 06   | 3   | 0.5                  | 5.3                |                      | 18   | 3 | 0.3                  | 2.2                |
|                                            |      |     | 0.3                  | 1.8                |                      |      |   | 0.5                  | 5.2                |
|                                            | 12   | 3   | 0.4                  | 5.4                |                      |      |   | 0.3                  | 2.7                |
|                                            |      |     | 0.4                  | 2.0                |                      |      |   |                      |                    |
|                                            | 18   | ... | -                    | -                  | 23                   | 00   | 3 | 0.6                  | 5.6                |
| 19                                         | 00   | 3   | 0.5                  | 6.0                |                      |      |   | 0.4                  | 3.0                |
|                                            |      |     | 0.4                  | 2.0                |                      | 06   | 3 | 0.5                  | 5.4                |
|                                            | 06   | 3   | 0.5                  | 6.4                |                      |      |   | 0.4                  | 3.0                |
|                                            |      |     | 0.4                  | 2.2                |                      | 12   | 3 | 0.5                  | 5.3                |
|                                            | 12   | 3   | 0.5                  | 3.0                |                      |      |   | 0.4                  | 3.0                |
|                                            |      |     | 0.3                  | 2.0                |                      | 18   | 3 | 0.3                  | 1.8                |
|                                            | 18   | 3   | 0.5                  | 6.2                |                      |      |   | 0.6                  | 5.2                |
|                                            |      |     | 0.4                  | 2.1                |                      |      |   | 0.3                  | 1.8                |
|                                            |      |     |                      |                    | 27                   | 00   | 3 | 0.5                  | 5.2                |
|                                            |      |     |                      |                    |                      |      |   | 0.4                  | 2.0                |

| Date | Hour | K | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|------|------|---|-------------------------|-----------------------|
|------|------|---|-------------------------|-----------------------|

Station: *Bombay (Colaba)* Compt. *E-W.*

|              |          |   |            |            |
|--------------|----------|---|------------|------------|
| 27<br>Contd. | 06<br>12 | 3 | 0.6<br>0.4 | 5.0<br>1.7 |
|              | 18       | 3 | 0.5<br>0.4 | 4.8<br>2.0 |
| 28           | 00       | 2 | 0.6        | 4.9        |
|              | 06       | 2 | 0.5        | 5.3        |
|              | 12       | 3 | 0.5<br>0.4 | 5.0<br>2.2 |
|              | 18       | 3 | 0.6        | 5.2        |
|              |          |   | 0.4        | 2.3        |

Station: *Bokaro* Compt. *E-W.*

|    |             |     |     |     |
|----|-------------|-----|-----|-----|
| 01 | 00          | 0,0 | -   | -   |
|    | 06          | 3   | 0.3 | 4.5 |
|    | 12          | 0,0 | -   | -   |
|    | 18          | 3   | 0.3 | 4.2 |
| 02 | 00          |     |     |     |
| to | to          | 0,0 | -   | -   |
| 03 | 18          |     |     |     |
| 04 | 00          | 0,0 | -   | -   |
|    | 06          | 0,0 | -   | -   |
|    | 12          | 3   | 0.3 | 4.0 |
|    | 18          | 0,0 | -   | -   |
| 05 | 00          |     |     |     |
| to | to          | 0,0 | -   | -   |
| 07 | 18          |     |     |     |
| 08 | 00          | 3   | 0.4 | 4.6 |
|    | 06          | 0,0 | -   | -   |
|    | 12          | ... | -   | -   |
|    | 18          | 0,0 | -   | -   |
| 09 | 00          |     |     |     |
| to | to          | 0,0 | -   | -   |
| 10 | 18          |     |     |     |
| 11 | 00          | 0,0 | -   | -   |
|    | 06          | 0,0 | -   | -   |
|    | 12          | ... | -   | -   |
|    | 18          | 0,0 | -   | -   |
| 12 | 00          | 3   | 0.4 | 5.0 |
|    | 06          | 3   | 0.5 | 5.2 |
|    | 12          | 3   | 0.4 | 5.0 |
|    | 18          | 3   | 0.4 | 5.0 |
| 13 | 00          | 3   | 0.4 | 5.0 |
|    | 06 to<br>18 | 0,0 | -   | -   |
| 14 | 00 to<br>18 | 0,0 | -   | -   |
| 15 | 00          | 3   | 0.4 | 4.2 |

| Date | Hour | K | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|------|------|---|-------------------------|-----------------------|
|------|------|---|-------------------------|-----------------------|

February 1962

|              |             |     |     |     |
|--------------|-------------|-----|-----|-----|
| 15<br>Contd. | 06 to<br>18 | 0,0 | -   | -   |
|              | 18          | 0,0 | -   | -   |
| 16           | 00          | 0,0 | -   | -   |
|              | 06          | 3   | 0.4 | 4.3 |
|              | 12          | 3   | 0.4 | 4.5 |
|              | 18          | 3   | 0.3 | 4.5 |
| 17           | 00          | 3   | 0.3 | 4.5 |
|              | 06          | 3   | 0.3 | 4.2 |
|              | 12          | 3   | 0.4 | 4.4 |
|              | 18          | 0,0 | -   | -   |
| 18           | 00          | 0,0 | -   | -   |
|              | 06          | 3   | 0.4 | 4.8 |
|              | 12          | 0,0 | -   | -   |
|              | 18          | 3   | 0.3 | 4.3 |
| 19           | 00          | 3   | 0.3 | 4.5 |
|              | 06 to<br>18 | 0,0 | -   | -   |
| 20           | 00          | 3   | 0.3 | 4.5 |
|              | 06          | 0,0 | -   | -   |
|              | 12          | 3   | 0.4 | 4.6 |
|              | 18          | ... | -   | -   |
| 21           | 00          | 3   | 0.4 | 4.2 |
|              | 06          | 3   | 0.4 | 4.3 |
|              | 12          | 0,0 | -   | -   |
|              | 18          | 0,0 | -   | -   |
| 22           | 00          | 0,0 | -   | -   |
|              | 06          | 3   | 0.4 | 4.8 |
|              | 12          | 3   | 0.4 | 5.0 |
|              | 18          | 3   | 0.5 | 5.2 |
| 23           | 00          | 3   | 0.4 | 4.8 |
|              | 06          | 3   | 0.4 | 5.0 |
|              | 12          | 3   | 0.5 | 5.0 |
|              | 18          | 0,0 | -   | -   |
| 24           | 00          | 3   | 0.4 | 5.0 |
|              | 06          | 3   | 0.3 | 4.8 |
|              | 12          | 3   | 0.3 | 5.0 |
|              | 18          | 0,0 | -   | -   |
| 25           | 00 to<br>12 | 0,0 | -   | -   |
|              | 18          | ... | -   | -   |
|              |             |     |     |     |
| 26           | 00 to<br>12 | 0,0 | -   | -   |
|              | 18          | ... | -   | -   |
| 27           | 00          | ... | -   | -   |
|              | 06          | 0,0 | -   | -   |
|              | 12          | 3   | 0.4 | 4.5 |
|              | 18          | 0,0 | -   | -   |

| Date                                       | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|--------------------------------------------|------|-----|-------------------------|-----------------------|
| <i>Station. Bokaro Compt. E-W.</i>         |      |     |                         |                       |
| 28                                         | 00   | 3   | 0.3                     | 4.3                   |
|                                            | 06   | 3   | 0.3                     | 4.5                   |
|                                            | 12   | 3   | 0.3                     | 4.5                   |
|                                            | 18   | 0,0 | -                       | -                     |
| <i>Station. Visakhapatnam. Compt. E-W.</i> |      |     |                         |                       |
| 01                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 4.0                   |
|                                            | 12   | 3   | 0.3                     | 4.9                   |
|                                            | 18   | 0,0 | -                       | -                     |
| 02                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 5.0                   |
|                                            | 12   | 3   | 0.2                     | 5.1                   |
|                                            | 18   | 0,0 | -                       | -                     |
| 03                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 4.1                   |
|                                            | 12   | ... | -                       | -                     |
|                                            | 18   | 0,0 | -                       | -                     |
| 04                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 3.4                   |
|                                            | 12   | 0,0 | -                       | -                     |
|                                            | 18   | 0,0 | -                       | -                     |
| 05                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 3.1                   |
|                                            | 12   | 3   | 0.2                     | 4.4                   |
|                                            | 18   | 3   | 0.3                     | 4.7                   |
| 06                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.3                     | 5.3                   |
|                                            | 12   | 3   | 0.3                     | 5.2                   |
|                                            | 18   | 3   | 0.2                     | 4.0                   |
| 07                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.4                     | 5.7                   |
|                                            | 12   | 3   | 0.3                     | 5.1                   |
|                                            | 18   | 3   | 0.2                     | 4.1                   |
| 08                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 4.6                   |
|                                            | 12   | ... | -                       | -                     |
|                                            | 18   | 3   | 0.3                     | 5.0                   |
| 09                                         | 00   | 3   | 0.2                     | 4.8                   |
|                                            | 06   | 3   | 0.3                     | 5.0                   |
|                                            | 12   | 3   | 0.2                     | 4.9                   |
|                                            | 18   | 3   | 0.2                     | 4.8                   |
| 10                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.2                     | 4.8                   |
|                                            | 12   | 3   | 0.3                     | 4.9                   |
|                                            | 18   | 3   | 0.3                     | 5.3                   |
| 11                                         | 00   | 0,0 | -                       | -                     |
|                                            | 06   | 3   | 0.4                     | 5.4                   |
|                                            | 12   | 3   | 0.5                     | 6.1                   |
|                                            | 18   | 0,0 | -                       | -                     |

| Date                                        | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|---------------------------------------------|------|-----|-------------------------|-----------------------|
| <i>February 1962 Station. Visakhapatnam</i> |      |     |                         |                       |
| 12                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.4                     | 5.9                   |
|                                             | 12   | 3   | 0.4                     | 6.0                   |
|                                             | 18   | 3   | 0.3                     | 5.4                   |
| 13                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.5                     | 5.9                   |
|                                             | 12   | 3   | 0.3                     | 5.6                   |
|                                             | 18   | 3   | 0.3                     | 5.2                   |
| 14                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.2                     | 4.5                   |
|                                             | 12   | 3   | 0.2                     | 4.7                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 15                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.2                     | 4.8                   |
|                                             | 12   | 3   | 0.2                     | 4.8                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 16                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.2                     | 5.1                   |
|                                             | 12   | 3   | 0.3                     | 5.3                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 17                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.3                     | 5.6                   |
|                                             | 12   | 3   | 0.3                     | 4.9                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 18                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | ... | -                       | -                     |
|                                             | 12   | ... | -                       | -                     |
|                                             | 18   | 0,0 | -                       | -                     |
| 19                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.2                     | 4.4                   |
|                                             | 12   | 3   | 0.3                     | 4.8                   |
|                                             | 18   | 3   | 0.2                     | 4.0                   |
| 20                                          | 00   | 3   | 0.2                     | 4.6                   |
|                                             | 06   | 3   | 0.3                     | 4.1                   |
|                                             | 12   | 3   | 0.2                     | 4.6                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 21                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.1                     | 3.1                   |
|                                             | 12   | 3   | 0.2                     | 4.7                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 22                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.2                     | 3.7                   |
|                                             | 12   | 3   | 0.2                     | 4.6                   |
|                                             | 18   | 0,0 | -                       | -                     |
| 23                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.3                     | 5.2                   |
|                                             | 12   | 3   | 0.3                     | 4.6                   |
|                                             | 18   | 3   | 0.2                     | 5.0                   |
| 24                                          | 00   | 0,0 | -                       | -                     |
|                                             | 06   | 3   | 0.3                     | 5.1                   |
|                                             | 12   | 3   | 0.3                     | 4.8                   |
|                                             | 18   | 0,0 | -                       | -                     |

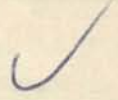
| Date                                      | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|-------------------------------------------|------|-----|-------------------------|-----------------------|
| <i>Station. Visakhapatnam Compt. E-W.</i> |      |     |                         |                       |
| 25                                        | 00   | 0.0 | -                       | -                     |
|                                           | 06   | 3   | 0.2                     | 5.0                   |
|                                           | 12   | 3   | 0.2                     | 5.0                   |
|                                           | 18   | 0.0 | -                       | -                     |
| 26                                        | 00   | 3   | 0.2                     | 4.6                   |
|                                           | 06   | 3   | 0.2                     | 5.5                   |
|                                           | 12   | 3   | 0.3                     | 4.9                   |
|                                           | 18   | 0.0 | -                       | -                     |
| 27                                        | 00   | 0.0 | -                       | -                     |
|                                           | 06   | ... | -                       | -                     |
|                                           | 12   | 3   | 0.2                     | 5.0                   |
|                                           | 18   | 0.0 | -                       | -                     |
| 28                                        | 00   | 0.0 | -                       | -                     |
|                                           | 06   | 3   | 0.2                     | 5.1                   |
|                                           | 12   | 3   | 0.2                     | 3.8                   |
|                                           | 18   | 0.0 | -                       | -                     |

| Date                                   | Hour  | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|----------------------------------------|-------|-----|-------------------------|-----------------------|
| <i>Station. Port Blair Compt. E-W.</i> |       |     |                         |                       |
| 01                                     | 00    |     |                         |                       |
| to                                     | to    | 0.0 | -                       | -                     |
| 05                                     | 18    |     |                         |                       |
| 06                                     | 00    | 0.0 | -                       | -                     |
|                                        | 06 to |     |                         |                       |
|                                        | 18    | 0.. | -                       | -                     |
| 07                                     | 00    |     |                         |                       |
| to                                     | to    | 0.. | -                       | -                     |
| 17                                     | 18    |     |                         |                       |
| 18                                     | 00    | 0.. | -                       | -                     |
|                                        | 06 to |     |                         |                       |
|                                        | 18    | 3   | 0.4                     | 7.2                   |

| Date                                     | Hour  | K   | mean Amplitude<br>Micron | mean Period<br>in sec |
|------------------------------------------|-------|-----|--------------------------|-----------------------|
| <i>February 1962 Station. Port Blair</i> |       |     |                          |                       |
| 19                                       | 00    | 3   | 0.4                      | 7.2                   |
|                                          | 06    | 1   | 0.8                      | 7.3                   |
|                                          | 12    | 1   | 0.8                      | 7.2                   |
|                                          | 18    | 1   | 0.8                      | 7.2                   |
| 20                                       | 00    | 1   | 0.4                      | 7.3                   |
|                                          | 06 to |     |                          |                       |
|                                          | 18    | ... | -                        | -                     |
| 21                                       | 00    | ... | -                        | -                     |
|                                          | 06 to |     |                          |                       |
|                                          | 18    | 0.0 | -                        | -                     |
| 22                                       | 00    | 0.0 | -                        | -                     |
|                                          | 06 to |     |                          |                       |
|                                          | 18    | 0.. | -                        | -                     |
| 23                                       | 00    |     |                          |                       |
| to                                       | to    | 0.. | -                        | -                     |
| 24                                       | 18    |     |                          |                       |
| 25                                       | 00    | 0.. | -                        | -                     |
|                                          | 06 to |     |                          |                       |
|                                          | 18    | ... | -                        | -                     |
| 26                                       | 00    |     |                          |                       |
| to                                       | to    | ... | -                        | -                     |
| 27                                       | 18    |     |                          |                       |
| 28                                       | 00    | ... | -                        | -                     |
|                                          | 06    | 0.0 | -                        | -                     |
|                                          | 12    | 0.0 | -                        | -                     |
|                                          | 18    | 0.0 | -                        | -                     |



MAR 3 1965



# SEISMOLOGICAL BULLETIN

MAR 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

| Station           | Latitude         | Longitude | Height<br>a.s.l.<br>(Metres) | Lithographic<br>foundation | Instrument           | Compt      | Period<br>in<br>secs | Static<br>Magnifica-<br>tion | Damping<br>ratio | Paper speed<br>mm/min. |    |
|-------------------|------------------|-----------|------------------------------|----------------------------|----------------------|------------|----------------------|------------------------------|------------------|------------------------|----|
| Agra              |                  |           |                              |                            | Columbia             | E          | To=15 Tg=100         |                              |                  | 15                     |    |
|                   |                  |           |                              |                            | Long Period          | N          | To=15 Tg=85          |                              | 15               |                        |    |
|                   |                  |           |                              |                            | - do -               | Z          | To=15 Tg=70          |                              | 15               |                        |    |
| Bombay            | 18.54°N, 72.40°E |           | 5                            | Deccan Trap                | Milne-Shaw           | N          | 12 350               | 13:1                         |                  | 14                     |    |
|                   |                  |           |                              |                            | Milne-Shaw           | E          | 12 350               | 23:1                         |                  | 8                      |    |
| Bokaro            | 23.50°N, 85.48°E |           |                              | Rock                       | Sprengnether         | E          | To=Tg=7 secs         |                              |                  | 30                     |    |
|                   |                  |           |                              |                            | Milne-Shaw           | N          | 12 250               | 20:1                         |                  | 15                     |    |
|                   |                  |           |                              |                            | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | 15                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | E          | 0.8 950              | h=0.8                        |                  | 50                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | N          | 0.8 1000             | h=0.8                        |                  | 50                     |    |
| Calcutta          | 22.32°N, 88.22°E |           |                              | Alluvium                   | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | 8                      |    |
|                   |                  |           |                              |                            | Wood-Anderson        | N          | 2 870                | Critical                     |                  | 30                     |    |
|                   |                  |           |                              |                            | Omori-Ewing          | N          | 15 32                |                              |                  | 25.4                   |    |
|                   |                  |           |                              |                            | Omori-Ewing          | E          | 21 30                |                              |                  | 25.4                   |    |
|                   |                  |           |                              |                            | (1) 7 Milne-Shaw     |            |                      |                              |                  |                        |    |
| (2) 6 Omori-Ewing |                  |           |                              |                            |                      |            |                      |                              |                  |                        |    |
| Chatra            | 26.50°N, 87.10°E |           | 151                          | Sand stone                 | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | 15                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | N          | 1 1000               | 30:1                         |                  | 50                     |    |
|                   |                  |           |                              |                            | Benioff              | Z          | To=0 Tg=0.45 secs    | Critical                     |                  | 60                     |    |
|                   |                  |           |                              |                            | Wenner Accelerograph | ZNE        |                      |                              |                  |                        |    |
| Colombo           | 03.54°N, 79.52°E |           | 7                            | Beach Sand                 | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | -                      |    |
| Gehra Dun         | 30.10°N, 78.02°E |           | 582                          | Gravel                     | Wood-Anderson        | N          | 0.8 950              | Critical                     |                  | -                      |    |
|                   |                  |           |                              |                            | Wood-Anderson        | E          | 0.8 850              | Critical                     |                  | 50                     |    |
| Hyderabad         | 17.25°N, 78.27°E |           | 536                          | Granite                    | Milne-Shaw           | N          | 12 250               | 20:1                         |                  | 8                      |    |
|                   |                  |           |                              |                            | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | 8                      |    |
|                   |                  |           |                              |                            | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | 8                      |    |
|                   |                  |           |                              |                            | Milne-Shaw           | E          | 12 250               | 20:1                         |                  | 8                      |    |
| Kodakamal         | 10.14°N, 77.28°E |           | 2285                         | Rock                       | Milne-Shaw           | E          | 10 250               | 20:1                         |                  | 8                      |    |
| Madras            | 13.00°N, 80.11°E |           | 15                           | -                          | Sprengnether         | E          | To=Tg=2 secs         | Critical                     |                  | 30                     |    |
| New Delhi         | 28.38°N, 77.12°E |           | 207                          | Massive Quartzite          |                      |            |                      |                              |                  |                        |    |
| Poona             | 18.32°N, 73.51°E |           | 550                          | Deccan Trap                | Sprengnether         | Z          | To=Tg=1.5            |                              | Critical         | 30                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | E          | 4 1000               |                              |                  | 15                     |    |
|                   |                  |           |                              |                            | Milne-Shaw           | N          | 12 280               | 20:1                         |                  | 8                      |    |
| Port Blair        | 11.40°N, 92.43°E |           |                              |                            | Wood-Anderson        | N          | 2 1000               | 20:1                         |                  | 30                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | E          | 0.8 1000             | 55:1                         |                  | 30                     |    |
|                   |                  |           |                              |                            | Milne-Shaw           | N          | 12 350               | 20:1                         |                  | 8                      |    |
|                   |                  |           |                              |                            | Wood-Anderson        | N          | 0.8 980              | Critical                     |                  | 30                     |    |
| Sohore            |                  |           |                              |                            | Wood-Anderson        | N          | 0.8 1000             | h=0.8                        |                  | 30                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | E          | 0.8 1000             | h=0.8                        |                  | 30                     |    |
| Shillong          | 25.34°N, 91.53°E |           | 1500                         | Quartzite                  | Wood-Anderson        | N          | 12 250               | 20:1                         |                  | 8                      |    |
|                   |                  |           |                              |                            | (Shillong            | Milne-Shaw | N                    | 12 250                       |                  |                        | 50 |
|                   |                  |           |                              |                            | Quartzite)           | Benioff    | Z                    | To=1.0 Tg=18                 |                  |                        | 30 |
|                   |                  |           |                              |                            | Sprengnether         | E          | To=Tg=5.3            | Critical                     |                  | 30                     |    |
|                   |                  |           |                              |                            | Wenner Accelerograph | ZNE        |                      |                              |                  |                        |    |
| Tocklwa           | 28.45°N, 94.45°E |           |                              | Alluvium                   | Wood-Anderson        | E          | 0.8 970              | h=0.8                        |                  | 50                     |    |
|                   |                  |           |                              |                            | Wood-Anderson        | E          | 0.8 1000             | h=0.8                        |                  | 30                     |    |
| Vizianagram       | 18.07°N, 83.27°E |           |                              |                            | Wood-Anderson        | N          | 2 1000               | 20:1                         |                  | 30                     |    |

| LATE | STATION                                                                                                | COMPT                   | PHASE                  | G  | M  | T                                      | $\Delta$ | REMARKS                                    |
|------|--------------------------------------------------------------------------------------------------------|-------------------------|------------------------|----|----|----------------------------------------|----------|--------------------------------------------|
|      |                                                                                                        |                         |                        | h  | m  | s                                      | km       |                                            |
| 01   | Poona                                                                                                  | Z                       | iP                     | 02 | 32 | 21                                     |          | Tremor, compression                        |
|      | Shillong                                                                                               | Z                       | iP                     | 02 | 33 | 28                                     |          | Slight, distant rarefaction                |
| 01   | Shillong                                                                                               | Z                       | iPg<br>iSg             | 03 | 00 | 21<br>00 24                            | 30       | Slight, compression                        |
| 01   | Shillong                                                                                               | Z                       | ePg<br>iSg             | 04 | 25 | 34<br>25 41                            | 60       | Slight                                     |
| 01   | Epc: 25.7°N, 124.8°E. Ryukyu Islands.<br>- H = 04h 51m 57.2s. - h about 52 km (USCGS)                  |                         |                        |    |    |                                        |          |                                            |
|      | Shillong                                                                                               | Z                       | iP                     | 04 | 58 | 04                                     | 3180     | Slight, rarefaction                        |
|      |                                                                                                        | E                       | iS                     | 05 | 02 | 51                                     |          |                                            |
|      | Chatra                                                                                                 | Z                       | iP                     | 04 | 58 | 41                                     |          | Feeble, distant rarefaction                |
|      | Bokaro                                                                                                 | E                       | e<br>i<br>i            | 04 | 58 | 56<br>59 19<br>05 04 20                |          | Slight, distant other phases not developed |
|      | Madras                                                                                                 | E                       | eP<br>PPP<br>eS<br>Lq  | 05 | 00 | 06<br>02 21<br>06 28<br>09 58          | 4700     | Slight                                     |
|      | Dehara Dun                                                                                             | NE                      | e<br>e                 | 05 | 00 | 25<br>05 52                            |          | Feeble                                     |
|      | Poona                                                                                                  | Z<br>N                  | eP<br>iS               | 05 | 00 | 33<br>07 20                            | 5140     | Slight, other phases not clear             |
|      | Calcutta                                                                                               | E                       | i                      | 05 | 04 | 04                                     |          | Slight                                     |
|      | Bombay                                                                                                 | NE<br>E<br>NE<br>N<br>E | iS<br>i<br>i<br>e<br>e | 05 | 07 | 33<br>08 21<br>10 19<br>11 14<br>12 58 |          | Feeble                                     |
| 01   | Shillong                                                                                               | Z                       | iP<br>iS               | 12 | 08 | 47<br>09 27                            | 370      | Slight, compression                        |
| 01   | Shillong                                                                                               | Z                       | iP                     | 12 | 46 | 55                                     |          | Slight, distant compression                |
|      | New Delhi                                                                                              | Z                       | iP                     | 12 | 48 | 44                                     |          | Tremor, rarefaction                        |
| 01   | Epc: 43°N, 143.2°E. Near East Coast of Hokkaido, Japan<br>- H = 18h 35m 12.9s. - h about 43 km (USCGS) |                         |                        |    |    |                                        |          |                                            |
|      | Shillong                                                                                               | Z                       | eP                     | 18 | 43 | 46                                     |          | Slight, distant                            |
|      | Chatra                                                                                                 | Z                       | eP                     | 18 | 44 | 11                                     |          | Feeble, distant                            |
|      | New Delhi                                                                                              | Z                       | iP<br>i                | 18 | 44 | 54<br>45 06                            |          | Slight, compression                        |
|      | Poona                                                                                                  | Z                       | eP                     | 18 | 46 | 03                                     |          | Tremor                                     |
| 01   | Shillong                                                                                               | Z                       | eP                     | 20 | 40 | 25                                     |          | Slight, near                               |
| 01   | Shillong                                                                                               | Z                       | eP                     | 21 | 11 | 03                                     |          | Slight, near                               |

| DATE  | STATION                                                                                           | COMPT             | PHASE                                                                | G<br>h | M<br>m | T<br>s                                                               | $\Delta$<br>km | REMARKS                        |
|-------|---------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------|----------------|--------------------------------|
| 01    | Epc: 34.5°N, 81°E. - H = 22h 09m 30s (Shillong)                                                   |                   |                                                                      |        |        |                                                                      |                |                                |
|       | Dehra Dun                                                                                         | NE                | eP<br>eS                                                             | 22     | 10     | 57<br>12 03                                                          | 610            | Feeble                         |
|       | New Delhi                                                                                         | Z                 | iP<br>iS                                                             | 22     | 11     | 11<br>12 29                                                          | 740            | Slight.<br>Rarefaction         |
|       | Chatra                                                                                            | ZN                | eP<br>PP<br>PPP<br>P*<br>Pg<br>Lq<br>S<br>SS<br>Lr<br>SSS<br>S*<br>M | 22     | 11     | 30<br>38<br>46<br>51<br>53<br>55<br>05<br>55<br>17<br>26<br>33<br>55 | 920            |                                |
|       | Shillong                                                                                          | Z                 | eP                                                                   | 22     | 12     | 15                                                                   |                | Slight, distant                |
|       | Bombay                                                                                            | E                 | e                                                                    | 22     | 16     | 38                                                                   |                | Slight                         |
| 01    | Shillong                                                                                          | Z                 | iP                                                                   | 23     | 08     | 07                                                                   |                | Slight, distant<br>compression |
| 01/02 | Epc: 14°S, 172.5°E. Samos Islands. - h about 78 km<br>- H = 23h 41m 14.5s. (USCGS). Mag: 6 (Pas). |                   |                                                                      |        |        |                                                                      |                |                                |
|       | Shillong                                                                                          | Z<br>E            | iP<br>eS                                                             | 23     | 53     | 57<br>00 04 31                                                       | 9550           | Rarefaction                    |
|       | Bombay                                                                                            | N<br>E<br>NE<br>E | e<br>e<br>i<br>e<br>e                                                | 23     | 57     | 19<br>00 05 53<br>05 53<br>08 50<br>16 09<br>01 35 35                |                |                                |
|       | New Delhi                                                                                         | Z                 | e                                                                    | 23     | 58     | 09                                                                   |                | Slight                         |
|       | Dehra Dun                                                                                         | NE                | e<br>e                                                               | 23     | 59     | 17<br>00 03 40                                                       |                |                                |
|       | Bokaro                                                                                            | NE                | i                                                                    | 00     | 04     | 56                                                                   |                | Tremor                         |
|       | Madras                                                                                            | E                 | e                                                                    | 00     | 05     | 17                                                                   |                | Surface waves                  |
|       | Calcutta                                                                                          | E                 | i                                                                    | 00     | 07     | 03                                                                   |                |                                |
| 02    | Shillong                                                                                          | Z                 | iP                                                                   | 00     | 35     | 23                                                                   |                | Slight, distant<br>compression |
| 02    | Shillong                                                                                          | Z                 | iP                                                                   | 00     | 38     | 09                                                                   |                | Slight, distant<br>rarefaction |
| 02    | Shillong                                                                                          | Z                 | iP                                                                   | 04     | 25     | 23                                                                   |                | Slight, distant<br>compression |
|       | New Delhi                                                                                         | Z                 | iP                                                                   | 04     | 27     | 03                                                                   |                | Slight, rarefaction            |
| 02    | Bokaro                                                                                            | NE                | i                                                                    | 07     | 49     | 48                                                                   |                | Slight, near                   |
| 02    | Bokaro                                                                                            | NE                | e                                                                    | 08     | 44     | 53                                                                   |                |                                |



| DATE | STATION                                                                                        | COMPT               | PHASE | G  | M  | T  | $\Delta$ | REMARKS                                                             |
|------|------------------------------------------------------------------------------------------------|---------------------|-------|----|----|----|----------|---------------------------------------------------------------------|
|      |                                                                                                |                     |       | h  | m  | s  | km       |                                                                     |
| 02   | Chatra                                                                                         | Z                   | iP    | 09 | 08 | 46 |          | Feeble, distant                                                     |
| 02   | New Delhi                                                                                      | Z                   | iP    | 13 | 00 | 37 |          | Tremor, compression                                                 |
|      | Shillong                                                                                       | Z                   | iP    | 13 | 04 | 31 |          | Slight, distant<br>compression                                      |
| 02   | Epc: 5.4°N, 126.5°E. Off South of Mindanao, P.I.<br>- H = 13h 92m 59s. - h about 30 km (USCGS) |                     |       |    |    |    |          |                                                                     |
|      | Shillong                                                                                       | ZE                  | iP    | 13 | 10 | 25 | 4220     | Slight, Initial<br>ground motion<br>towards East and<br>rarefaction |
|      |                                                                                                |                     | PP    |    | 11 | 52 |          |                                                                     |
|      |                                                                                                |                     | PPP   |    | 12 | 15 |          |                                                                     |
|      |                                                                                                |                     | PcP   |    | 12 | 30 |          |                                                                     |
|      |                                                                                                |                     | iS    |    | 16 | 18 |          |                                                                     |
|      |                                                                                                |                     | ScS   |    | 20 | 25 |          |                                                                     |
|      |                                                                                                |                     | Lr    |    | 20 | 56 |          |                                                                     |
|      | Chatra                                                                                         | Z                   | iP    | 13 | 11 | 01 |          | Feeble, distant<br>compression                                      |
|      | Bokaro                                                                                         | E                   | iP    | 13 | 11 | 02 | 4700     | Slight, phases not<br>well developed.                               |
|      |                                                                                                |                     | i     |    | 11 | 19 |          |                                                                     |
|      |                                                                                                |                     | iS    |    | 12 | 49 |          |                                                                     |
|      |                                                                                                |                     | iS    |    | 17 | 24 |          | Initial ground<br>motion towards West                               |
|      | Visakhapatnam                                                                                  | EN                  | eP    | 13 | 11 | 09 | 4790     | Moderate                                                            |
|      |                                                                                                |                     | eS    |    | 17 | 36 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 17 | 43 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 17 | 49 |          |                                                                     |
|      | Madras                                                                                         | E                   | e     | 13 | 11 | 34 |          | Phases not<br>clear                                                 |
|      |                                                                                                |                     | e     |    | 13 | 25 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 18 | 12 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 22 | 06 |          |                                                                     |
|      | New Delhi                                                                                      | EZ<br>EN<br>E<br>EN | iP    | 13 | 12 | 10 | 5610     | Slight, initial<br>ground motion<br>towards East and<br>rarefaction |
|      |                                                                                                |                     | eS    |    | 19 | 24 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 19 | 51 |          |                                                                     |
|      |                                                                                                |                     | ScS   |    | 22 | 02 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 23 | 42 |          |                                                                     |
|      | Dehra Dun                                                                                      | Z<br>N              | eP    | 13 | 12 | 11 | 5860     | Slight                                                              |
|      |                                                                                                |                     | PPP   |    | 15 | 25 |          |                                                                     |
|      |                                                                                                |                     | iS    |    | 19 | 38 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 24 | 13 |          |                                                                     |
|      |                                                                                                |                     | Lr    |    | 26 | 22 |          |                                                                     |
|      |                                                                                                |                     | M     |    | 30 | 15 |          |                                                                     |
|      | Poona                                                                                          | Z<br>N              | iP    | 13 | 12 | 17 | 5780     | Slight, initial<br>ground motion<br>towards Eastward<br>rarefaction |
|      |                                                                                                |                     | PcP   |    | 13 | 26 |          |                                                                     |
|      |                                                                                                |                     | iS    |    | 19 | 40 |          |                                                                     |
|      |                                                                                                |                     | PS    |    | 19 | 47 |          |                                                                     |
|      |                                                                                                |                     | PPS   |    | 19 | 56 |          |                                                                     |
|      |                                                                                                |                     | ScS   |    | 22 | 06 |          |                                                                     |
|      |                                                                                                |                     | Lq    |    | 24 | 51 |          |                                                                     |
|      |                                                                                                |                     | Lr    |    | 27 | 19 |          |                                                                     |
|      |                                                                                                |                     | M     |    | 31 | 30 |          |                                                                     |
|      | Bombay                                                                                         | E                   | e     | 13 | 12 | 42 |          | Slight                                                              |
|      |                                                                                                |                     | e     |    | 13 | 17 |          |                                                                     |
|      |                                                                                                |                     | PP    |    | 14 | 47 |          |                                                                     |
|      |                                                                                                |                     | PcS   |    | 17 | 48 |          |                                                                     |
|      |                                                                                                |                     | eS    |    | 19 | 55 |          |                                                                     |
|      |                                                                                                |                     | e     |    | 20 | 47 |          |                                                                     |
|      |                                                                                                |                     | SS    |    | 23 | 41 |          |                                                                     |

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Five

| DATE | STATION                                                                                      | COMPT. | PHASE    | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | REMARKS                     |
|------|----------------------------------------------------------------------------------------------|--------|----------|--------|--------|-------------|----------------|-----------------------------|
| 02   | Hyderabad                                                                                    | N      | M        | 13     | 23     | 23          |                | Per=9 sec, Grds=3 $\mu$     |
|      | Contd.                                                                                       | E      | M        |        | 23     | 24          |                | Per=9 sec, Grds=2 $\mu$     |
| 02   | Shillong                                                                                     | Z      | iP       | 17     | 02     | 07          |                | Slight, distant rarefaction |
| 02   | Chatra                                                                                       | Z      | eP<br>S  | 18     | 36     | 29<br>36 53 | 200            | Feeble                      |
|      | Shillong                                                                                     | Z      | eP       | 18     | 39     | 14          |                | Slight, near                |
| 02   | New Delhi                                                                                    | Z      | iP       | 19     | 53     | 03          |                | Slight, compression         |
| 02   | Shillong                                                                                     | Z      | eP       | 20     | 45     | 28          |                | Slight, near                |
| 03   | Epc: 28.2°N, 100.8°E. Sikang Province, China<br>- H = 00h 54m 20.9s. - h about 25 km (USCGS) |        |          |        |        |             |                |                             |
|      | Shillong                                                                                     | Z      | eP       | 00     | 56     | 25          | 890            | Slight, distant             |
|      |                                                                                              | N      | iS       |        | 57     | 56          |                |                             |
|      | Tocklai                                                                                      | E      | e        | 00     | 56     | 31          |                | Slight, distant             |
|      | New Delhi                                                                                    | Z      | iP       | 00     | 59     | 05          |                | Slight, rarefaction         |
| 03   | Bokaro                                                                                       | E      | e<br>i   | 01     | 01     | 07<br>02 04 |                | Slight, near                |
| 03   | Bombay                                                                                       | NE     | e        | 01     | 09     | 25          |                | Feeble, near                |
| 03   | Shillong                                                                                     | Z      | iP       | 05     | 01     | 20          |                | Slight, distant rarefaction |
|      | New Delhi                                                                                    | Z      | iP       | 05     | 03     | 01          |                | Slight, compression         |
| 03   | Shillong                                                                                     | Z      | eP       | 05     | 05     | 32          |                | Slight, near                |
| 03   | Epc: 34°N, 82.5°E. Tibet. - H = 03h 17m 20s (Shillong)                                       |        |          |        |        |             |                |                             |
|      | Dehra Dun                                                                                    | Z      | e        | 06     | 18     | 54          | 290            | Feeble                      |
|      |                                                                                              | N      | iS<br>i  |        | 19     | 89<br>19 57 |                |                             |
|      | New Delhi                                                                                    | Z      | iP       | 06     | 19     | 03          |                | Slight, rarefaction         |
|      | Chatra                                                                                       | Z      | iP<br>S  | 06     | 19     | 22<br>20 53 | 880            | Feeble, compression         |
|      | Shillong                                                                                     | Z      | eP<br>iS | 06     | 20     | 03<br>22 15 | 1270           | Slight                      |
|      | Bombay                                                                                       | NE     | eP       | 06     | 21     | 23          | 1940           | Slight                      |
|      |                                                                                              | E      | e        |        | 22     | 45          |                |                             |
|      |                                                                                              | NE     | eS       |        | 24     | 37          |                |                             |
|      |                                                                                              | E      | SS       |        | 24     | 59          |                |                             |
|      |                                                                                              |        | Lq       |        | 25     | 29          |                |                             |
|      |                                                                                              |        | Lr       |        | 26     | 10          |                |                             |
|      | Bokaro                                                                                       | E      | eS       | 06     | 21     | 45          |                | Slight, distant             |
|      | Visakhapatnam                                                                                | E      | e<br>e   | 06     | 23     | 56<br>26 02 |                | Slight                      |
| 03   | Shillong                                                                                     | Z      | eP<br>iS | 07     | 08     | 51<br>09 24 | 230            | Slight                      |
| 03   | New Delhi                                                                                    | Z      | eP       | 09     | 54     | 50          |                | Slight, compression         |

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| DATE | STATION                                                                                          | COMPT              | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                                                                 |
|------|--------------------------------------------------------------------------------------------------|--------------------|-------|--------|--------|--------|----------------|-------------------------------------------------------------------------|
| 03   | Shillong                                                                                         | Z                  | eP    | 10     | 09     | 07     |                | Slight, distant                                                         |
| 03   | Epc: 7.4°N, 126.5°E. Near Coast of Mindanao, P.I.<br>- H = 12h 14m 52.1s. h about 90 km. (USCGS) |                    |       |        |        |        |                |                                                                         |
|      | Tocklai                                                                                          | E                  | eP    | 12     | 21     | 53     |                | Slight, distant                                                         |
|      | Shillong                                                                                         | ZNE<br>E           | iP    | 12     | 22     | 04     | 4180           | Slight, Initial ground motion towards Northwest and compression         |
|      |                                                                                                  |                    | PP    | 23     | 33     |        |                |                                                                         |
|      |                                                                                                  |                    | PPP   | 23     | 58     |        |                |                                                                         |
|      |                                                                                                  |                    | PcP   | 24     | 12     |        |                |                                                                         |
|      |                                                                                                  |                    | ScP   | 27     | 46     |        |                |                                                                         |
|      |                                                                                                  |                    | iS    | 27     | 54     |        |                |                                                                         |
|      |                                                                                                  |                    | SS    | 30     | 20     |        |                |                                                                         |
|      |                                                                                                  |                    | Lq    | 30     | 51     |        |                |                                                                         |
|      |                                                                                                  |                    | SSS   | 31     | 06     |        |                |                                                                         |
|      | Lr                                                                                               | 32                 | 42    |        |        |        |                |                                                                         |
|      | Chatra                                                                                           | Z                  | iP    | 12     | 22     | 42     |                | Feeble, compression                                                     |
|      |                                                                                                  |                    | PP    | 24     | 24     |        |                |                                                                         |
|      | Bokaro                                                                                           | E                  | iP    | 12     | 22     | 44     |                | Slight, other phases not developed. Initial ground motion towards West. |
|      |                                                                                                  |                    | iPP   | 24     | 25     |        |                |                                                                         |
|      |                                                                                                  |                    | i     | 29     | 24     |        |                |                                                                         |
|      | Visakhapatnam                                                                                    | E                  | iP    | 12     | 22     | 53     | 4790           | Moderate, Initial ground motion towards East                            |
|      |                                                                                                  |                    | e     | 24     | 21     |        |                |                                                                         |
|      |                                                                                                  |                    | e     | 24     | 40     |        |                |                                                                         |
|      |                                                                                                  |                    | PP    | 24     | 48     |        |                |                                                                         |
|      |                                                                                                  |                    | eS    | 29     | 20     |        |                |                                                                         |
|      |                                                                                                  |                    | e     | 29     | 30     |        |                |                                                                         |
|      |                                                                                                  |                    | e     | 29     | 40     |        |                |                                                                         |
|      | Hyderabad                                                                                        | E                  | iP    | 12     | 23     | 31     | 5190           | Slight, Initial ground motion towards West                              |
|      |                                                                                                  |                    | PP    | 25     | 26     |        |                |                                                                         |
|      |                                                                                                  |                    | PPP   | 26     | 23     |        |                |                                                                         |
|      |                                                                                                  |                    | PcS   | 28     | 50     |        |                |                                                                         |
|      |                                                                                                  |                    | S     | 30     | 21     |        |                |                                                                         |
|      |                                                                                                  |                    | ScS   | 33     | 14     |        |                |                                                                         |
|      |                                                                                                  |                    | e     | 34     | 09     |        |                |                                                                         |
|      |                                                                                                  |                    | Lr    | 36     | 48     |        |                |                                                                         |
|      |                                                                                                  |                    | M     | 41     | 28     |        |                |                                                                         |
|      |                                                                                                  |                    | M     | 41     | 31     |        |                |                                                                         |
|      |                                                                                                  |                    |       |        |        |        |                |                                                                         |
|      | New Delhi                                                                                        | EN<br>Z<br>EZ<br>E | iP    | 12     | 23     | 49     | 5780           | Slight, Initial ground motion towards West and compression              |
|      |                                                                                                  |                    | i     | 23     | 50     |        |                |                                                                         |
|      |                                                                                                  |                    | i     | 24     | 10     |        |                |                                                                         |
|      |                                                                                                  |                    | PcP   | 24     | 59     |        |                |                                                                         |
|      |                                                                                                  |                    | iPP   | 25     | 55     |        |                |                                                                         |
|      |                                                                                                  |                    | PPP   | 27     | 01     |        |                |                                                                         |
|      |                                                                                                  |                    | eS    | 31     | 11     |        |                |                                                                         |
|      |                                                                                                  |                    | i     | 32     | 32     |        |                |                                                                         |
|      | EN                                                                                               | i                  | 35    | 07     |        |        |                |                                                                         |
|      | Dehra Dun                                                                                        | NE                 | eP    | 12     | 23     | 50     | 5550           | Feeble                                                                  |
|      |                                                                                                  |                    | eS    | 31     | 01     |        |                |                                                                         |
|      |                                                                                                  |                    | i     | 35     | 10     |        |                |                                                                         |
|      | Poona                                                                                            | Z<br>E             | iP    | 12     | 24     | 00     |                | Slight, Initial ground motion towards West and compression              |
|      |                                                                                                  |                    | iPP   | 26     | 09     |        |                |                                                                         |

| DATE | STATION                                       | COMPT   | PHASE                                                 | G<br>h | M<br>m | T<br>s | Δ<br>km | REMARKS                              |
|------|-----------------------------------------------|---------|-------------------------------------------------------|--------|--------|--------|---------|--------------------------------------|
| 03   | Bombay<br>Contd.                              | NE<br>E | iP<br>PcP<br>e<br>PP<br>PPP<br>PcS<br>eS<br>ScS<br>SS | 12     | 24     | 10     | 5830    | Slight                               |
| 03   | Shillong                                      | Z       | eP<br>iSg                                             | 13     | 00     | 45     | 100     | Slight                               |
| 03   | Shillong                                      | Z       | eP                                                    | 20     | 59     | 14     |         | Slight, distant                      |
| 03   | Shillong                                      | Z       | iP                                                    | 22     | 23     | 41     |         | Slight, distant<br>rarefaction       |
| 03   | Shillong                                      | Z       | iP                                                    | 22     | 30     | 52     |         | Slight, distant<br>rarefaction       |
| 04   | New Delhi                                     | Z       | eP                                                    | 01     | 01     | 26     |         | Tremor, compression                  |
| 04   | Shillong                                      | Z       | ePg                                                   | 01     | 34     | 28     |         | Slight, near                         |
| 04   | Epc: 23°N, 90°E. - H = 01h 34m 20s (Shillong) |         |                                                       |        |        |        |         |                                      |
|      | Shillong                                      | Z<br>E  | iP<br>i<br>S                                          | 01     | 35     | 05     | 310     | Slight, rarefaction                  |
|      | Chatra                                        | Z       | iP<br>S                                               | 01     | 35     | 19     | 470     | Slight, rarefaction                  |
|      | Tocklai                                       | E       | eP<br>iS                                              | 01     | 35     | 31     | 580     | Slight, near                         |
|      | Bokaro                                        | E       | e<br>i                                                | 01     | 36     | 45     |         | Slight                               |
|      | New Delhi                                     | Z       | iP                                                    | 01     | 37     | 12     |         | Slight, rarefaction                  |
|      | Bombay                                        | NE      | e                                                     | 01     | 43     | 53     |         | Feeble                               |
| 04   | Shillong                                      | Z       | eP                                                    | 04     | 51     | 51     |         | Slight, near                         |
| 04   | Shillong                                      | Z       | iP                                                    | 08     | 33     | 23     |         | Slight, distant,<br>compression      |
|      | New Delhi                                     | Z       | iP                                                    | 03     | 35     | 08     |         | Slight, compression                  |
| 04   | Shillong                                      | Z       | eP                                                    | 12     | 56     | 37     |         | Slight, near                         |
| 04   | Shillong                                      | Z       | eP                                                    | 14     | 21     | 31     |         | Slight, distant                      |
| 04   | Shillong                                      | Z       | ePg<br>Sg                                             | 15     | 40     | 43     | 110     | Slight                               |
|      | Shillong                                      | Z       | ePg<br>Sg                                             | 20     | 01     | 40     | 60      | Slight                               |
| 04   | Shillong                                      | Z       | eP                                                    | 22     | 19     | 40     |         |                                      |
| 04   | Shillong                                      | Z       | iPg<br>Sg                                             | 22     | 53     | 14     | 50      | Slight, compression<br>locally felt. |
| 05   | Shillong                                      | Z       | ePg<br>Sg                                             | 00     | 25     | 57     | 50      | Slight                               |

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| DATE | STATION                                                                                                                                                                                                       | COMPT   | PHASE                                                       | G<br>h   | M<br>m                                                   | T<br>s                                                   | $\Delta$<br>km | REMARKS                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------|----------|----------------------------------------------------------|----------------------------------------------------------|----------------|------------------------------------------------------------------------|
| 05   | Dehra Dun                                                                                                                                                                                                     | Z       | eP<br>i                                                     | 00       | 56<br>57                                                 | 58<br>28                                                 |                | Feeble                                                                 |
| 05   | Shillong                                                                                                                                                                                                      | Z       | iP                                                          | 03       | 48                                                       | 55                                                       |                | Slight, distant<br>compression                                         |
|      | Chatra                                                                                                                                                                                                        | Z       | iP                                                          | 03       | 49                                                       | 19                                                       |                | Feeble, distant<br>compression                                         |
| 05   | Shillong                                                                                                                                                                                                      | Z       | iP                                                          | 12       | 13                                                       | 19                                                       |                | Slight, distant<br>rarefaction                                         |
| 05   | Shillong                                                                                                                                                                                                      | Z       | iP                                                          | 15       | 06                                                       | 48                                                       |                | Slight, distant<br>compression                                         |
|      | Chatra                                                                                                                                                                                                        | Z       | iP                                                          | 15       | 07                                                       | 22                                                       |                | Feeble, distant<br>compression                                         |
| 05   | Chatra                                                                                                                                                                                                        | Z       | iP                                                          | 15       | 52                                                       | 54                                                       |                | Feeble, distant<br>rarefaction                                         |
| 05   | Shillong                                                                                                                                                                                                      | Z       | eP                                                          | 16       | 14                                                       | 44                                                       |                | Slight, distant                                                        |
| 05   | Shillong                                                                                                                                                                                                      | Z       | iP                                                          | 16       | 52                                                       | 16                                                       |                | Slight, distant<br>rarefaction                                         |
|      | New Delhi                                                                                                                                                                                                     | Z       | iP                                                          | 16       | 54                                                       | 09                                                       |                | Slight, rarefaction                                                    |
| 05   | Shillong                                                                                                                                                                                                      | Z       | iP                                                          | 19       | 12                                                       | 03                                                       |                | Slight, near                                                           |
| 05   | Dehra Dun                                                                                                                                                                                                     | NE      | eP                                                          | 21       | 11                                                       | 52                                                       |                | Tremor                                                                 |
| 06   | Shillong                                                                                                                                                                                                      | Z       | eP                                                          | 00       | 44                                                       | 21                                                       |                | Slight, distant                                                        |
| 06   | Epc: 14°N, 93°E. Andaman Islands Region<br>- H = 05h 55m 40s. h about 18 km (Shillong)<br>13.7°N, 93.7°E. Andaman Islands<br>- H = 05h 55m 42.3s. h about 18 km (USCGS)<br>Felt: Mayabandar (Andaman Islands) |         |                                                             |          |                                                          |                                                          |                |                                                                        |
|      | Port Blair                                                                                                                                                                                                    | N       | iP<br>eS                                                    | 05       | 56<br>56                                                 | 18<br>46                                                 | 240            | Slight                                                                 |
|      | Calcutta                                                                                                                                                                                                      | E       | eP<br>iS                                                    | 05       | 57<br>59                                                 | 55<br>48                                                 | 1100           | Slight                                                                 |
|      | Visakhapatnam                                                                                                                                                                                                 | NE      | iP<br>Lq<br>iS<br>SS<br>Lr<br>SSS<br>M<br>PcP<br>PcS<br>ScS | 05<br>06 | 58<br>00<br>00<br>00<br>00<br>00<br>01<br>02<br>04<br>07 | 14<br>06<br>11<br>27<br>36<br>39<br>32<br>42<br>05<br>33 | 1140           | Initial ground<br>movement towards<br>South and East                   |
|      | Shillong                                                                                                                                                                                                      | ZN<br>E | iP<br>PP<br>PPP<br>Lq<br>iS<br>SS<br>Lr<br>M                | 05<br>06 | 58<br>58<br>58<br>00<br>00<br>01<br>02                   | 32<br>41<br>48<br>37<br>42<br>57<br>09<br>04             | 1280           | Slight, Initial<br>ground movement<br>towards North<br>and compression |

| DATE         | STATION               | COMPT  | PHASE  | G<br>h | M<br>m | T<br>s | $\Delta$<br>km                                                      | REMARKS |                                                  |      |        |                                                    |
|--------------|-----------------------|--------|--------|--------|--------|--------|---------------------------------------------------------------------|---------|--------------------------------------------------|------|--------|----------------------------------------------------|
| 06<br>Contd. | Bokaro                | NE     | eP     | 05     | 58     | 40     | 1350                                                                | Slight  |                                                  |      |        |                                                    |
|              |                       |        | PP     |        | 58     | 48     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | e      |        | 59     | 35     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | e      | 06     | 00     | 51     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | S      |        | 00     | 57     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | SS     |        | 01     | 03     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | SSS    |        | 01     | 11     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | M      |        | 02     | 25     |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        | Madras | E      | iP     | 05     |                                                                     |         | 58                                               | 45   | 1440   | Moderate, initial<br>ground motion<br>towards West |
|              |                       |        |        |        | PP     |        |                                                                     |         | 58                                               | 55   |        |                                                    |
| PPP          |                       | 59     |        |        | 02     |        |                                                                     |         |                                                  |      |        |                                                    |
| i            |                       | 59     |        |        | 42     |        |                                                                     |         |                                                  |      |        |                                                    |
| e            | 06                    | 00     |        |        | 48     |        |                                                                     |         |                                                  |      |        |                                                    |
| i            |                       | 01     |        |        | 00     |        |                                                                     |         |                                                  |      |        |                                                    |
| S            |                       | 01     |        |        | 12     |        |                                                                     |         |                                                  |      |        |                                                    |
| Lr           |                       | 01     |        |        | 24     |        |                                                                     |         |                                                  |      |        |                                                    |
| M            |                       | 02     |        |        | 25     |        |                                                                     |         |                                                  |      |        |                                                    |
| Hyderabad    | E<br>N<br>E<br>N<br>E | iP     |        |        | 05     | 59     | 06                                                                  | 1540    | Slight, initial<br>ground motion<br>towards East |      |        |                                                    |
|              |                       | rP     |        | 59     | 17     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | S      | 06     | 01     | 40     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | Lr     |        | 02     | 20     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | M      |        | 03     | 18     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | M      |        | 04     | 27     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | Chatra | ZNE    | eP     | 05     | 59     | 07                                                                  |         |                                                  | 1820 | Slight |                                                    |
|              |                       |        |        | PPP    |        | 59     | 23                                                                  |         |                                                  |      |        |                                                    |
|              |                       |        |        | S      | 06     | 02     | 08                                                                  |         |                                                  |      |        |                                                    |
|              |                       |        |        | SS     |        | 02     | 29                                                                  |         |                                                  |      |        |                                                    |
| SSS          |                       |        |        | 02     | 40     |        |                                                                     |         |                                                  |      |        |                                                    |
| Lr           |                       |        |        | 02     | 52     |        |                                                                     |         |                                                  |      |        |                                                    |
| PcP          |                       |        |        | 03     | 49     |        |                                                                     |         |                                                  |      |        |                                                    |
| M            |                       |        |        | 04     | 31     |        |                                                                     |         |                                                  |      |        |                                                    |
| Tocklai      | E                     |        |        | e      | 05     | 59     | 11                                                                  |         | Slight, distant                                  |      |        |                                                    |
|              |                       |        |        |        |        |        |                                                                     |         |                                                  |      |        |                                                    |
| Kodaikanal   | E                     | iP     | 05     | 59     | 27     |        | Slight, other<br>phases not clear                                   |         |                                                  |      |        |                                                    |
|              |                       | e      | 06     | 04     | 51     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | i      |        | 10     | 15     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | i      |        | 17     | 18     |        |                                                                     |         |                                                  |      |        |                                                    |
| Sohore       | N                     | iP     | 05     | 59     | 59     | 2050   | Slight                                                              |         |                                                  |      |        |                                                    |
|              |                       | eS     | 06     | 03     | 23     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | SS     |        | 03     | 51     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | SSS    |        | 04     | 10     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | M      |        | 05     | 55     |        |                                                                     |         |                                                  |      |        |                                                    |
| Poona        | Z<br>E                | iP     | 03     | 00     | 10     | 2150   | Slight, initial<br>ground motion<br>towards East and<br>rarefaction |         |                                                  |      |        |                                                    |
|              |                       | PP     |        | 01     | 31     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | PPP    |        | 01     | 41     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | iS     |        | 04     | 43     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | Lq     |        | 05     | 04     |        |                                                                     |         |                                                  |      |        |                                                    |
|              | N                     | PcP    |        | 05     | 13     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | Lr     |        | 05     | 56     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | M      |        | 07     | 43     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | ScS    |        | 12     | 22     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       |        |        |        |        |        |                                                                     |         |                                                  |      |        |                                                    |
| Bombay       | NE<br>E               | P      | 03     | 00     | 25     | 2360   | Moderate, initial<br>ground motion<br>towards South<br>and East     |         |                                                  |      |        |                                                    |
|              |                       | i      |        | 00     | 27     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | i      |        | 00     | 36     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | PP     |        | 00     | 51     |        |                                                                     |         |                                                  |      |        |                                                    |
|              |                       | PPP    |        | 01     | 01     |        |                                                                     |         |                                                  |      |        |                                                    |

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| DATE         | STATION                                         | COMPT                       | PHASE                                              | G<br>h | M<br>m | T<br>s                                                                     | $\Delta$<br>km | REMARKS                                                           |
|--------------|-------------------------------------------------|-----------------------------|----------------------------------------------------|--------|--------|----------------------------------------------------------------------------|----------------|-------------------------------------------------------------------|
| 06<br>Contd. | Bombay<br>Contd.                                | NE                          | eS<br>Lr<br>M                                      | 06     | 04     | 17<br>41<br>18/19                                                          |                | Per=10 sec, Grds=4 $\mu$                                          |
|              | New Delhi                                       | ENZ<br>E<br>ENZ<br>E<br>ENZ | iP<br>i<br>iS, PcP<br>Lq<br>SSS                    | 06     | 00     | 30<br>33<br>14<br>26<br>34<br>24                                           | 2410           | Slight, Initial ground motion towards South, East and rarefaction |
|              | Dehra Dun                                       | Z<br>N                      | eP<br>PP<br>PPP<br>iS<br>SS<br>SSS<br>e<br>Lr<br>M | 06     | 00     | 40<br>01 02<br>01 20<br>04 40<br>05 09<br>05 38<br>05 55<br>06 23<br>08 11 | 2460           | Slight                                                            |
| 06           | Bombay                                          | E                           | eP<br>e                                            | 06     | 03     | 33<br>57                                                                   |                | Feeble                                                            |
| 06           | Bombay                                          | E                           | eP                                                 | 06     | 13     | 19                                                                         |                | Feeble                                                            |
| 06           | Port Blair                                      | N                           | ePg<br>eSg                                         | 07     | 11     | 42<br>43                                                                   | 60             | Slight                                                            |
| 06           | Shillong                                        | Z                           | iP<br>Sg                                           | 09     | 52     | 40<br>55                                                                   | 130            | Slight                                                            |
| 06           | Bokaro                                          | NE                          | iP                                                 | 11     | 57     | 41                                                                         |                | Slight, tremor                                                    |
| 06           | Shillong                                        | Z                           | iP                                                 | 15     | 05     | 24                                                                         |                | Slight, distant compression                                       |
| 06           | Shillong                                        | Z                           | iP                                                 | 15     | 41     | 34                                                                         |                | Slight, distant compression                                       |
| 06           | Shillong                                        | Z                           | eP                                                 | 17     | 41     | 19                                                                         |                | Slight, near                                                      |
| 06           | Chatra                                          | Z                           | eP                                                 | 17     | 44     | 10                                                                         |                | Feeble, near, other phases not clear.                             |
| 06           | Shillong                                        | Z                           | eP                                                 | 19     | 03     | 50                                                                         |                | Slight, distant                                                   |
| 06           | Shillong                                        | Z                           | iP                                                 | 20     | 58     | 36                                                                         |                | Slight, distant compression                                       |
| 06           | Shillong                                        | Z                           | eP<br>Sg                                           | 21     | 15     | 19<br>31                                                                   | 110            | Slight                                                            |
| 06           | Epc: 25°N, 93.5°E. - H = 23h 12m 04s (Shillong) |                             |                                                    |        |        |                                                                            |                |                                                                   |
|              | Shillong                                        | Z                           | iP<br>Sg                                           | 23     | 12     | 36<br>01                                                                   | 190            | Slight, compression                                               |
|              | Tocklai                                         | E                           | eP<br>i                                            | 23     | 12     | 38<br>16                                                                   |                | Slight, distant                                                   |
|              | Chatra                                          | ZNE                         | iP<br>PP<br>PPP<br>Pg<br>Lq<br>S<br>Lr             | 23     | 13     | 36<br>44<br>48<br>04<br>37<br>47<br>56                                     | 680            | Feeble, rarefaction                                               |

| DATE   | STATION                                     | COMPT    | PHASE                                                                      | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                                                   |
|--------|---------------------------------------------|----------|----------------------------------------------------------------------------|--------|--------|--------|----------------|-----------------------------------------------------------|
| 06     | Chatra                                      | ZNE      | SS                                                                         | 23     | 14     | 58     |                |                                                           |
| Contd. | Contd.                                      |          | SSS                                                                        |        | 15     | 09     |                |                                                           |
|        |                                             |          | Sg,M                                                                       |        | 15     | 24     |                |                                                           |
| 06     | Chatra                                      | Z        | eP<br>eS                                                                   | 23     | 39     | 54     | 380            | Feeble, other phases not clear                            |
|        |                                             |          |                                                                            |        | 40     | 32     |                |                                                           |
| 06     | Shillong                                    | Z        | iP                                                                         | 23     | 58     | 13     |                | Slight, distant compression                               |
| 07     | Shillong                                    | Z        | eP<br>Sg                                                                   | 01     | 08     | 27     | 140            | Slight                                                    |
|        |                                             |          |                                                                            |        | 08     | 44     |                |                                                           |
|        | Chatra                                      | Z        | eP<br>S                                                                    | 01     | 09     | 04     | 370            | Feeble                                                    |
|        |                                             |          |                                                                            |        | 09     | 45     |                |                                                           |
| 07     | Port Blair                                  | N        | iP                                                                         | 01     | 47     | 06     |                | Slight                                                    |
| 07     | Shillong                                    | Z        | iP                                                                         | 01     | 57     | 01     |                | Slight, distant rarefaction                               |
| 07     | Shillong                                    | Z        | iP                                                                         | 05     | 11     | 22     |                | Slight, distant rarefaction                               |
| 07     | New Delhi                                   | Z        | iP                                                                         | 05     | 13     | 09     |                | Feeble, rarefaction                                       |
| 07     | Chatra                                      | Z        | iP                                                                         | 05     | 19     | 32     |                | Feeble, compression                                       |
| 07     | Shillong                                    | Z        | iP                                                                         | 07     | 21     | 57     |                | Slight, near compression                                  |
|        | Chatra                                      | Z        | eP<br>S                                                                    | 07     | 22     | 51     | 450            | Feeble                                                    |
|        |                                             |          |                                                                            |        | 23     | 42     |                |                                                           |
| 07     | Port Blair                                  | N        | iPg                                                                        | 08     | 08     | 52     |                | Slight                                                    |
| 07     | New Delhi                                   | Z        | iP<br>iS                                                                   | 08     | 19     | 16     | 1180           | Slight, compression                                       |
|        |                                             |          |                                                                            |        | 21     | 15     |                |                                                           |
| 07     | Shillong                                    | Z        | eP<br>S                                                                    | 09     | 54     | 04     | 220            | Slight                                                    |
|        |                                             |          |                                                                            |        | 54     | 26     |                |                                                           |
| 07     | Epc: 19.30N, 145.30E. Mariana Islands       |          |                                                                            |        |        |        |                |                                                           |
|        | - H = 11h 01m 00.4s, h about 680 km (USCGS) |          |                                                                            |        |        |        |                |                                                           |
|        | Mag: 7 (Pas), 6 (Berk).                     |          |                                                                            |        |        |        |                |                                                           |
|        | Tocklai                                     | EP       | eP                                                                         | 11     | 08     | 42     |                | Distant                                                   |
|        | Shillong                                    | NEZ<br>E | iP<br>PcP<br>pP<br>sP<br>PPP<br>PcS<br>iS<br>PS<br>PPS<br>ScS<br>SS<br>SSS | 11     | 08     | 57     | 5410           | Initial ground motion towards North, East and rarefaction |
|        |                                             |          |                                                                            |        | 10     | 09     |                |                                                           |
|        |                                             |          |                                                                            |        | 11     | 10     |                |                                                           |
|        |                                             |          |                                                                            |        | 12     | 21     |                |                                                           |
|        |                                             |          |                                                                            |        | 12     | 25     |                |                                                           |
|        |                                             |          |                                                                            |        | 13     | 57     |                |                                                           |
|        |                                             |          |                                                                            |        | 15     | 10     |                |                                                           |
|        |                                             |          |                                                                            |        | 17     | 09     |                |                                                           |
|        |                                             |          |                                                                            |        | 17     | 14     |                |                                                           |
|        |                                             |          |                                                                            |        | 17     | 41     |                |                                                           |
|        |                                             |          |                                                                            |        | 18     | 59     |                |                                                           |
|        |                                             |          |                                                                            |        | 20     | 51     |                |                                                           |
|        | Port Blair                                  | N        | iP<br>iS                                                                   | 11     | 09     | 09     | 5660           |                                                           |
|        |                                             |          |                                                                            |        | 15     | 36     |                |                                                           |
|        | Calcutta                                    | E        | iP<br>i<br>i                                                               | 11     | 09     | 18     |                |                                                           |
|        |                                             |          |                                                                            |        | 11     | 03     |                |                                                           |
|        |                                             |          |                                                                            |        | 16     | 03     |                |                                                           |



| DATE          | STATION | COMPT                                    | PHASE    | G  | M                      | T  | $\Delta$ | REMARKS                                                  |    |
|---------------|---------|------------------------------------------|----------|----|------------------------|----|----------|----------------------------------------------------------|----|
|               |         |                                          |          | h  | m                      | s  | km       |                                                          |    |
| 07<br>Contd.  | Chatra  | ZNE<br>NE                                | iP       | 11 | 09                     | 27 | 5780     | Initial ground motion towards North East and rarefaction |    |
|               |         |                                          | e        |    |                        | 10 |          |                                                          | 59 |
|               |         |                                          | e        |    |                        | 11 |          |                                                          | 11 |
|               |         |                                          | e        |    |                        | 11 |          |                                                          | 54 |
|               |         |                                          | S        |    |                        | 16 |          |                                                          | 01 |
|               |         |                                          | i        |    |                        | 17 |          |                                                          | 50 |
|               |         |                                          | ScS      |    |                        | 19 |          |                                                          | 12 |
|               |         |                                          | S3       |    |                        | 19 |          |                                                          | 12 |
|               |         |                                          | S3S      |    |                        | 20 |          |                                                          | 20 |
|               |         |                                          | Lr       |    |                        | 22 |          |                                                          | 12 |
|               |         |                                          | i        |    |                        | 23 |          |                                                          | 14 |
|               |         |                                          | M        |    |                        | 25 |          |                                                          | -  |
| Bokaro        |         | NE                                       | iP       | 11 | 09                     | 37 | 6120     |                                                          |    |
|               |         |                                          | i        |    |                        | 12 |          |                                                          | 54 |
|               |         |                                          | e        |    |                        | 14 |          |                                                          | 27 |
|               |         |                                          | iS       |    |                        | 13 |          |                                                          | 30 |
| Visakhapatnam |         | NE                                       | iP       | 11 | 10                     | 00 | 6500     | Initial ground motion towards South and East             |    |
|               |         |                                          | iS       |    |                        | 17 |          |                                                          | 12 |
| New Delhi     |         | ENZ<br>EZ<br>Z<br>EZ                     | iP       | 11 | 10                     | 23 | 6930     | Initial ground motion towards South East and rarefaction |    |
|               |         |                                          | i        |    |                        | 10 |          |                                                          | 31 |
|               |         |                                          | e        |    |                        | 10 |          |                                                          | 54 |
|               |         |                                          | pP       |    |                        | 12 |          |                                                          | 30 |
|               |         |                                          | PP       |    |                        | 13 |          |                                                          | 40 |
|               |         |                                          | PcS, ScP |    |                        | 15 |          |                                                          | 46 |
|               |         |                                          | i        |    |                        | 17 |          |                                                          | 26 |
|               |         |                                          | iS       |    |                        | 17 |          |                                                          | 58 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 06 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 16 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 48 |
|               |         |                                          | PS       |    |                        | 20 |          |                                                          | 04 |
| sS            |         |                                          | 21       | 36 |                        |    |          |                                                          |    |
| Madras        |         | E                                        | iP       | 11 | 10                     | 26 | 6930     | Initial ground motion towards East                       |    |
|               |         |                                          | e        |    |                        | 10 |          |                                                          | 56 |
|               |         |                                          | pP       |    |                        | 12 |          |                                                          | 33 |
|               |         |                                          | e        |    |                        | 13 |          |                                                          | 39 |
|               |         |                                          | iS       |    |                        | 18 |          |                                                          | 02 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 12 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 21 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 51 |
|               |         |                                          | sS       |    |                        | 21 |          |                                                          | 55 |
|               |         |                                          | e        |    |                        | 23 |          |                                                          | 00 |
| Hyderabad     |         | EN<br>E<br><br>EN<br><br>E<br><br>N<br>E | iP       | 11 | 10                     | 27 | 7010     | Initial ground motion towards North and East             |    |
|               |         |                                          | e        |    |                        | 11 |          |                                                          | 25 |
|               |         |                                          | pP       |    |                        | 12 |          |                                                          | 34 |
|               |         |                                          | e        |    |                        | 13 |          |                                                          | 43 |
|               |         |                                          | iS       |    |                        | 18 |          |                                                          | 06 |
|               |         |                                          | e        |    |                        | 18 |          |                                                          | 34 |
|               |         |                                          | sS       |    |                        | 21 |          |                                                          | 55 |
|               |         |                                          | e        |    |                        | 24 |          |                                                          | 05 |
|               |         |                                          | e        |    |                        | 26 |          |                                                          | 16 |
|               |         |                                          | M        |    |                        | 30 |          |                                                          | 55 |
|               |         |                                          | M        |    |                        | 31 |          |                                                          | 46 |
|               |         |                                          | Sehore   |    | EN<br>N<br><br>NE<br>N | iP |          |                                                          | 11 |
| e             |         |                                          |          |    |                        | 11 | 19       |                                                          |    |
| e             |         |                                          |          |    |                        | 13 | 55       |                                                          |    |
| iS            |         |                                          |          |    |                        | 18 | 10       |                                                          |    |
| e             |         |                                          |          |    |                        | 18 | 23       |                                                          |    |
| e             |         |                                          |          |    |                        | 18 | 34       |                                                          |    |

| DATE | STATION                                                                       | COMPT | PHASE    | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                                            |    |
|------|-------------------------------------------------------------------------------|-------|----------|--------|--------|--------|----------------|----------------------------------------------------|----|
| 07   | Poona<br>Contd.                                                               | Z     | iP       | 11     | 10     | 52     | 7440           |                                                    |    |
|      |                                                                               | N     | iS       |        |        | 18     |                | 53                                                 |    |
|      |                                                                               |       | e        |        |        | 19     |                | 08                                                 |    |
|      |                                                                               |       | e        |        |        | 20     |                | 53                                                 |    |
|      |                                                                               |       | sS       |        |        | 22     |                | 50                                                 |    |
|      |                                                                               |       | e        |        |        | 24     |                | 40                                                 |    |
|      |                                                                               |       | e        |        |        | 24     |                | 55                                                 |    |
|      |                                                                               |       | e        |        |        | 27     |                | 42                                                 |    |
|      |                                                                               |       | e        |        |        | 32     |                | 13                                                 |    |
|      |                                                                               |       | M        |        |        |        |                |                                                    |    |
| 07   | Bombay                                                                        | NE    | iP       | 11     | 11     | 01     | 7570           | Initial ground<br>motion towards<br>North and East |    |
|      |                                                                               | E     | e        |        |        | 12     |                |                                                    | 10 |
|      |                                                                               |       | e        |        |        | 13     |                |                                                    | 01 |
|      |                                                                               |       | e        |        |        | 13     |                |                                                    | 12 |
|      |                                                                               | N     | pP       |        |        | 14     |                |                                                    | 12 |
|      |                                                                               | NE    | sp       |        |        | 16     |                |                                                    | 43 |
|      |                                                                               |       | e        |        |        | 18     |                |                                                    | 55 |
|      |                                                                               | NE    | iS       |        |        | 19     |                |                                                    | 03 |
|      |                                                                               |       | sS       |        |        | 19     |                |                                                    | 55 |
|      |                                                                               |       | e        |        |        | 20     |                |                                                    | 17 |
|      |                                                                               |       | e        |        |        | 20     |                |                                                    | 56 |
|      |                                                                               |       | e        |        |        | 21     |                |                                                    | 07 |
|      |                                                                               |       | e        |        |        | 21     |                |                                                    | 31 |
|      |                                                                               |       | sS       |        |        | 22     |                |                                                    | 42 |
| 07   | Kodaikanal                                                                    | E     | i        | 11     | 18     | 09     |                | Distant                                            |    |
|      |                                                                               |       | i        |        |        | 19     |                |                                                    | 27 |
|      |                                                                               |       | i        |        |        | 23     |                |                                                    | 42 |
| 07   | Tocklai                                                                       | Z     | eP       | 11     | 14     | 45     |                | Slight, distant                                    |    |
| 07   | Shillong                                                                      | Z     | eP       | 11     | 38     | 43     |                | Slight, distant                                    |    |
| 07   | Shillong                                                                      | Z     | eP       | 11     | 46     | 00     |                | Slight, distant                                    |    |
| 07   | Shillong                                                                      | Z     | iP       | 14     | 07     | 38     |                | Slight, distant<br>compression                     |    |
| 07   | Shillong                                                                      | Z     | iP       | 15     | 25     | 43     |                | Slight, distant<br>rarefaction                     |    |
|      | Chatra                                                                        | Z     | iP       | 15     | 25     | 59     |                | Feeble, distant<br>rarefaction                     |    |
| 07   | Shillong                                                                      | Z     | er<br>S  | 15     | 51     | 52     | 260            | Slight                                             |    |
|      |                                                                               |       |          |        |        | 52 21  |                |                                                    |    |
| 07   | Shillong                                                                      | Z     | er<br>S  | 15     | 53     | 25     | 220            | Slight                                             |    |
|      |                                                                               |       |          |        |        | 53 50  |                |                                                    |    |
| 07   | Shillong                                                                      | Z     | iP       | 17     | 19     | 27     |                | Slight, distant<br>compression                     |    |
| 07   | Shillong                                                                      | Z     | iP       | 17     | 43     | 05     |                | Slight, distant<br>compression                     |    |
| 07   | Shillong                                                                      | Z     | iP<br>i  | 18     | 17     | 20     |                | Slight, distant<br>compression                     |    |
|      |                                                                               |       |          |        |        | 18 22  |                |                                                    |    |
| 07   | Epc: 36.4°N, 71.6°E. Hindukush<br>- H = 19h 20m 01.1s, h about 100 km (USCGS) |       |          |        |        |        |                |                                                    |    |
|      | Chatra                                                                        | Z     | er<br>eS | 19     | 23     | 43     | 1730           | Feeble                                             |    |
|      |                                                                               |       |          |        |        | 26 37  |                |                                                    |    |

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| DATE | STATION                                                                               | COMPT   | PHASE                                     | G<br>h | M<br>m | T<br>s                                                   | Δ<br>km | REMARKS                        |
|------|---------------------------------------------------------------------------------------|---------|-------------------------------------------|--------|--------|----------------------------------------------------------|---------|--------------------------------|
| 07   | Shillong<br>Contd.                                                                    | Z       | iP                                        | 19     | 24     | 31                                                       |         | Slight, distant<br>compression |
| 07   | Chatra                                                                                | Z       | eP                                        | 21     | 13     | 43                                                       |         | Feeble, distant                |
| 07   | Shillong                                                                              | Z       | eP                                        | 21     | 14     | 20                                                       |         | Slight, distant                |
| 07   | Shillong                                                                              | Z       | iP                                        | 22     | 04     | 47                                                       |         | Slight, distant<br>rarefaction |
|      | Chatra                                                                                | Z       | iP                                        | 22     | 05     | 24                                                       |         | Feeble, distant<br>rarefaction |
| 07   | Shillong                                                                              | Z       | veR<br>S                                  | 23     | 24     | 11<br>24 35                                              | 200     | Slight                         |
| 07   | Shillong                                                                              | Z       | eP<br>i                                   | 23     | 32     | 00<br>32 24                                              |         | Slight, distant                |
| 08   | Shillong                                                                              | Z       | iP                                        | 03     | 05     | 49                                                       |         | Slight, distant<br>rarefaction |
| 08   | Shillong                                                                              | Z       | eP                                        | 03     | 27     | 37                                                       |         | Slight, near                   |
| 08   | Shillong                                                                              | Z       | eP                                        | 03     | 20     | 14                                                       |         | Slight, distant                |
|      | Poona                                                                                 | Z       | iP                                        | 03     | 22     | 13                                                       |         | Tremor, compression            |
| 08   | Chatra                                                                                | Z       | eP<br>i                                   | 09     | 12     | 57<br>13 12                                              |         | Feeble                         |
| 08   | Epc: 46°N, 152.7°E. Kurile Islands<br>- H = 10h 47m 03.9s, h about 48 km (USCGS)      |         |                                           |        |        |                                                          |         |                                |
|      | Shillong                                                                              | Z       | iP                                        | 10     | 56     | 12                                                       |         | Slight, distant<br>compression |
|      | Chatra                                                                                | Z       | iP                                        | 10     | 56     | 33                                                       |         | Feeble, distant<br>compression |
|      | Poona                                                                                 | Z       | iP                                        | 10     | 58     | 11                                                       |         | Tremor, compression            |
| 08   | Shillong                                                                              | Z       | iP                                        | 18     | 11     | 03                                                       |         | Slight, distant<br>compression |
| 08   | Shillong                                                                              | Z       | eP                                        | 18     | 57     | 56                                                       |         | Slight, distant                |
| 08   | Shillong                                                                              | Z       | iP                                        | 19     | 48     | 37                                                       |         | Slight, distant<br>compression |
| 08   | Shillong                                                                              | Z       | iP                                        | 20     | 43     | 30                                                       |         | Slight, distant                |
| 08   | Shillong                                                                              | Z       | iP                                        | 21     | 00     | 18                                                       |         | Slight, distant                |
| 08   | Shillong                                                                              | Z       | eP                                        | 21     | 08     | 43                                                       |         | Slight, distant                |
| 08   | Epc: 3.4°S, 29.2°E. Republic of the Congo.<br>- H = 21h 38m 35.4s, h = 25 km. (USCGS) |         |                                           |        |        |                                                          |         |                                |
|      | Bombay                                                                                | NE<br>E | eP<br>PP<br>PcS<br>eS<br>PPS<br>ScS<br>SS | 21     | 47     | 20<br>49 16<br>52 19<br>54 25<br>54 43<br>57 04<br>57 58 | 5450    | Feeble                         |

| DATE         | STATION                                                                                          | COMPT    | PHASE        | G<br>h | M<br>m | T<br>s               | $\Delta$<br>km | REMARKS                                                                            |
|--------------|--------------------------------------------------------------------------------------------------|----------|--------------|--------|--------|----------------------|----------------|------------------------------------------------------------------------------------|
| 08<br>Contd. | Poona                                                                                            | Z        | iP           | 21     | 47     | 24                   |                | Slight, other phases not clear, initial ground motion towards East and compression |
|              | Madras                                                                                           | E        | eP<br>e<br>e | 21     | 47     | 54<br>51 09<br>59 19 |                | Slight                                                                             |
|              | New Delhi                                                                                        | ENZ<br>N | iP<br>iS     | 21     | 48     | 15<br>53 09          | 6330           | Slight, initial ground motion towards South, West and rarefaction                  |
|              | Dehra Dun                                                                                        | NE       | eP<br>e      | 21     | 48     | 46<br>56 37          |                | Feeble, phases not clear                                                           |
|              | Chatra                                                                                           | Z        | eP           | 21     | 49     | 05                   |                | Feeble, distant                                                                    |
|              | Shillong                                                                                         | Z        | iP           | 21     | 49     | 29                   |                | Slight, distant rarefaction                                                        |
| 09           | Shillong                                                                                         | Z        | eP           | 00     | 34     | 21                   |                | Very feeble, distant                                                               |
| 09           | Bombay                                                                                           | E        | eP<br>iS     | 00     | 57     | 13<br>57 41          | 240            | Mild                                                                               |
| 09           | Shillong                                                                                         | Z        | iP           | 08     | 42     | 25                   |                | Slight, distant compression                                                        |
| 09           | New Delhi                                                                                        | Z        | iP           | 11     | 08     | 25                   |                | Slight, rarefaction                                                                |
| 09           | Shillong                                                                                         | Z        | ePg<br>Sg    | 11     | 28     | 45<br>28 57          | 100            | Slight                                                                             |
| 09           | Shillong                                                                                         | Z        | ePg<br>Sg    | 11     | 32     | 48<br>33 00          | 100            | Slight                                                                             |
| 09           | Shillong                                                                                         | Z        | iPg<br>Sg    | 13     | 07     | 15<br>07 17          | 20             | Slight, compression                                                                |
| 09           | Shillong                                                                                         | Z        | iP           | 14     | 22     | 24                   |                | Slight, distant rarefaction                                                        |
|              | New Delhi                                                                                        | Z        | iP           | 14     | 23     | 43                   |                | Slight, distant compression                                                        |
| 09           | Shillong                                                                                         | Z        | iP           | 16     | 26     | 41                   |                | Slight, distant compression                                                        |
| 09           | Shillong                                                                                         | Z        | iP           | 19     | 46     | 39                   |                | Slight, distant compression                                                        |
| 09           | New Delhi                                                                                        | Z        | iP           | 21     | 01     | 42                   |                | Tremor, rarefaction                                                                |
| 09           | Epc: 5.8°S, 146.4°E. Near East Coast of New Guinea<br>- H = 22h 07m 35.6s, h about 76 km (USCGS) |          |              |        |        |                      |                |                                                                                    |
|              | Shillong                                                                                         | Z        | iP           | 22     | 17     | 49                   |                | Slight, distant compression                                                        |
|              | Madras                                                                                           | E        | eP<br>e<br>e | 22     | 18     | 37<br>23 45<br>27 36 |                | Slight, phases not clear                                                           |
|              | New Delhi                                                                                        | Z        | iP           | 22     | 19     | 12                   |                | Slight, rarefaction                                                                |

| DATE | STATION                                                                   | COMPT | PHASE | G  | M  | T  | $\Delta$ | REMARKS                                          |
|------|---------------------------------------------------------------------------|-------|-------|----|----|----|----------|--------------------------------------------------|
|      |                                                                           |       |       | h  | m  | s  | km       |                                                  |
| 09   | Poona<br>Contd.                                                           | Z     | iP    | 22 | 19 | 17 |          | Slight, rarefaction<br>Other phases not<br>clear |
|      | Bombay                                                                    | NE    | eP    | 22 | 19 | 24 | 9440     | Feeble                                           |
|      |                                                                           | E     | e     |    | 21 | 57 |          |                                                  |
|      |                                                                           | NE    | eS    |    | 29 | 07 |          |                                                  |
|      | Dehra Dun                                                                 | NE    | e     | 22 | 19 | 23 |          | Feeble                                           |
|      |                                                                           |       | e     |    | 28 | 46 |          |                                                  |
| 09   | Shillong                                                                  | Z     | eP    | 22 | 46 | 38 |          | Slight, distant                                  |
|      |                                                                           |       | i     |    | 47 | 19 |          |                                                  |
| 10   | Shillong                                                                  | Z     | iP    | 00 | 23 | 42 | 350      | Slight, compression                              |
|      |                                                                           |       | iS    |    | 24 | 21 |          |                                                  |
| 10   | Shillong                                                                  | Z     | iP    | 01 | 05 | 56 |          | Slight, distant<br>compression                   |
|      |                                                                           |       | i     |    | 07 | 18 |          |                                                  |
|      | New Delhi                                                                 | Z     | iP    | 01 | 07 | 27 |          | Slight, compression                              |
| 10   | Shillong                                                                  | Z     | eP    | 02 | 08 | 30 | 240      | Slight                                           |
|      |                                                                           |       | Sg    |    | 09 | 04 |          |                                                  |
| 10   | Epc: 3.8°N, 97.7°E. Sumatra. - H = 03h 01m 17.5s<br>h about 25 km (USCGS) |       |       |    |    |    |          |                                                  |
|      | Madras                                                                    | E     | eP    | 03 | 05 | 48 | 2220     | Moderate                                         |
|      |                                                                           |       | PP    |    | 06 | 05 |          |                                                  |
|      |                                                                           |       | PPP   |    | 06 | 15 |          |                                                  |
|      |                                                                           |       | eS    |    | 09 | 28 |          |                                                  |
|      | Visakhapatnam                                                             | NE    | eP    | 03 | 05 | 48 | 2210     | Slight                                           |
|      |                                                                           |       | eS    |    | 09 | 27 |          |                                                  |
|      | Shillong                                                                  | Z     | iP    | 03 | 03 | 14 | 2510     | Slight, compression                              |
|      |                                                                           | E     | PP    |    | 06 | 43 |          |                                                  |
|      |                                                                           |       | iS    |    | 10 | 13 |          |                                                  |
|      |                                                                           |       | Lq    |    | 10 | 25 |          |                                                  |
|      |                                                                           |       | SS    |    | 10 | 53 |          |                                                  |
|      |                                                                           |       | SSS   |    | 11 | 16 |          |                                                  |
|      |                                                                           |       | M     |    | 13 | 34 |          |                                                  |
|      | Hyderabad                                                                 | E     | iP    | 03 | 06 | 29 | 2580     | Slight, Initial<br>ground motion                 |
|      |                                                                           |       | PPP   |    | 07 | 17 |          | towards West                                     |
|      |                                                                           | EN    | iS    |    | 10 | 38 |          |                                                  |
|      |                                                                           |       | Lq    |    | 11 | 11 |          |                                                  |
|      |                                                                           |       | Lr    |    | 12 | 31 |          |                                                  |
|      |                                                                           |       | M     |    | 13 | 18 |          | Per=16 sec, Grds=4 $\mu$                         |
|      |                                                                           |       | M     |    | 14 | 47 |          | Per=15 sec, Grds=3 $\mu$                         |
|      | Chatra                                                                    | Z     | iP    | 03 | 06 | 40 |          | Feeble, distant<br>compression                   |
|      | Bokaro                                                                    | NE    | eP    | 03 | 06 | 47 |          | Slight                                           |
|      |                                                                           |       | i     |    | 10 | 30 |          |                                                  |
|      | Poona                                                                     | Z     | iP    | 03 | 07 | 06 |          | Slight                                           |
|      |                                                                           |       | i     |    | 12 | 01 |          |                                                  |
|      | Bombay                                                                    | E     | eP    | 03 | 07 | 18 | 3220     | Feeble                                           |
|      |                                                                           |       | e     |    | 10 | 46 |          |                                                  |

| DATE         | STATION          | COMPT  | PHASE     | G<br>h | M<br>m | T<br>s         | $\Delta$<br>km | REMARKS                                                                 |  |
|--------------|------------------|--------|-----------|--------|--------|----------------|----------------|-------------------------------------------------------------------------|--|
| 10<br>Contd. | Bombay<br>Contd. | E      | eS        | 03     | 12     | 09             |                |                                                                         |  |
|              |                  |        | e         |        |        | 12             | 55             |                                                                         |  |
|              |                  |        | e         |        |        | 14             | 49             |                                                                         |  |
|              | Calcutta         | E      | i         | 03     | 09     | 53             |                | Slight                                                                  |  |
| 10           | Dehra Dun        | NE     | eP        | 03     | 13     | 10             |                | Feeble                                                                  |  |
| 10           | Chatra           | Z      | iP<br>eS  | 03     | 32     | 19<br>33 02    | 390            | Feeble, compression                                                     |  |
|              | Shillong         | Z      | eP        | 03     | 33     | 10             |                | Slight, near                                                            |  |
| 10           | Bokaro           | NE     | eP        | 08     | 41     | 41             |                | Slight, tremor                                                          |  |
|              | Chatra           | Z      | eP        | 08     | 50     | 13             |                | Feeble, distant                                                         |  |
| 10           | Shillong         | Z      | iPg<br>Sg | 09     | 49     | 33<br>42 44    | 100            | Slight, rarefaction                                                     |  |
| 10           | Shillong         | Z      | iP        | 12     | 20     | 21             |                | Slight, distant,<br>compression                                         |  |
| 10           | Shillong         | Z      | eP        | 12     | 31     | 08             |                | Slight, distant                                                         |  |
| 10           | New Delhi        | ENZ    | iPg       | 13     | 42     | 08             | 60             | Slight, Initial ground<br>motion towards South,<br>East and compression |  |
|              | Dehra Dun        | NE     | eP        | 13     | 42     | 30             |                | Tremor                                                                  |  |
| 10           | Chatra           | Z      | eP        | 13     | 45     | 53             |                | Feeble                                                                  |  |
| 10           | New Delhi        | Z      | iP<br>iS  | 18     | 53     | 32<br>19 00 02 | 870            | Slight, compression                                                     |  |
|              | Dehra Dun        | NE     | e         | 19     | 00     | 17             |                | Feeble                                                                  |  |
|              | Chatra           | Z      | eP<br>eS  | 19     | 00     | 27<br>03 39    | 1920           | Feeble                                                                  |  |
|              | Madras           | E      | e         | 19     | 01     | 13             |                | Slight                                                                  |  |
|              |                  |        | e         |        | 06     | 28             |                |                                                                         |  |
|              |                  |        | e         |        | 07     | 44             |                |                                                                         |  |
|              |                  |        | e         |        | 10     | 18             |                |                                                                         |  |
|              | Shillong         | Z      | eP<br>iS  | 19     | 01     | 26<br>05 13    | 2300           | Slight, distant                                                         |  |
|              | Bombay           | E      | e         | 19     | 03     | 13             |                | Feeble                                                                  |  |
|              |                  |        | e         |        | 04     | 19             |                |                                                                         |  |
|              |                  |        | e         |        | 06     | 00             |                |                                                                         |  |
|              | Bokaro           | E      | eS        | 19     | 03     | 33             |                | Slight, other<br>phases not clear                                       |  |
|              | Visakhapatnam    | NE     | e<br>i    | 19     | 04     | 40<br>03 42    |                | Slight                                                                  |  |
|              | Hyderabad        | N<br>E | M<br>M    | 19     | 06     | 09<br>06 12    |                | Per=12 sec, Grds=2 $\mu$<br>Per=10 sec, Grds=2 $\mu$                    |  |
| 10           | Shillong         | Z      | iP        | 21     | 22     | 30             |                | Slight, distant<br>compression                                          |  |

|    | COMPT                                                                                                                                                                   | PHASE   | G<br>h                     | M<br>m                     | T<br>s                     | Δ<br>km | REMARKS                                                                 |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------|----------------------------|----------------------------|---------|-------------------------------------------------------------------------|
| 11 | Shillong                                                                                                                                                                | Z       | eP<br>iS                   | 00<br>38                   | 37<br>15                   | 360     | Slight                                                                  |
| 11 | New Delhi                                                                                                                                                               | Z       | iP                         | 02                         | 45 05                      |         | Slight, compression                                                     |
|    | Shillong                                                                                                                                                                | Z       | e                          | 02                         | 45 11                      |         | Feeble, distant                                                         |
| 11 | Shillong                                                                                                                                                                | Z       | ePg<br>Sg                  | 06<br>51                   | 50<br>00                   | 90      | Slight                                                                  |
| 11 | Bombay                                                                                                                                                                  | E       | e                          | 07                         | 44 35                      |         | Feeble, distant                                                         |
| 11 | New Delhi                                                                                                                                                               | Z       | iP                         | 08                         | 35 45                      |         | Slight, compression                                                     |
| 11 | Epc: 52.30N, 178°E. Rat Islands, Aleutian Islands<br>- H = 15h 23m 40.7s. h about 135 km (USCGS)                                                                        |         |                            |                            |                            |         |                                                                         |
|    | Shillong                                                                                                                                                                | Z       | iP                         | 15                         | 34 31                      |         | Slight, distant<br>compression                                          |
|    | Chatra                                                                                                                                                                  | Z       | iP<br>eS                   | 15<br>43                   | 34<br>43                   | 7630    | Feeble, rarefaction                                                     |
|    | Bokaro                                                                                                                                                                  | E       | eP<br>i                    | 15<br>44                   | 35<br>19                   |         | Slight, other phases<br>not clear                                       |
|    | New Delhi                                                                                                                                                               | ENZ     | iP<br>iS                   | 15<br>44                   | 35<br>30                   | 8020    | Slight, Initial ground<br>motion towards North,<br>East and rarefaction |
|    | Poona                                                                                                                                                                   | Z       | iP                         | 15                         | 36 01                      |         | Slight, compression<br>Other phases not clear                           |
|    | Bombay                                                                                                                                                                  | N<br>NE | eP<br>SKS<br>eS<br>e<br>PS | 15<br>46<br>46<br>47<br>47 | 36<br>16<br>21<br>04<br>13 | 9110    | Feeble                                                                  |
| 11 | Shillong                                                                                                                                                                | Z       | iP                         | 16                         | 24 35                      |         | Slight, distant<br>rarefaction                                          |
|    | Chatra                                                                                                                                                                  | Z       | iP                         | 16                         | 25 03                      |         | Feeble, distant<br>rarefaction                                          |
| 11 | Bokaro                                                                                                                                                                  | NE      | iP                         | 16                         | 35 19                      |         | Slight, tremor                                                          |
|    | Shillong                                                                                                                                                                | Z       | iP                         | 16                         | 35 25                      |         | Slight, near, compression                                               |
| 11 | Shillong                                                                                                                                                                | Z       | iP<br>Sg                   | 18<br>56                   | 12<br>31                   | 150     | Slight, compression                                                     |
|    | Chatra                                                                                                                                                                  | Z       | eP                         | 18                         | 56 36                      |         | Feeble, distant<br>phases not clear                                     |
| 11 | Shillong                                                                                                                                                                | Z       | eP<br>Sg                   | 19<br>23                   | 03<br>21                   | 150     | Slight                                                                  |
| 11 | Epc: 10°N, 127°E. Philippine Islands Region<br>- H = 19h 19m 00s (Shillong)<br>9°N, 126.7°E, Near Coast of Mindanao, P.I.<br>- H = 19h 19m 05.6s. h about 25 km (USCGS) |         |                            |                            |                            |         |                                                                         |
|    | Tocklai                                                                                                                                                                 | E       | eP                         | 19                         | 24 03                      |         | Slight, distant                                                         |

| DATE         | STATION       | COMPT     | PHASE                                                            | G<br>h | M<br>m | T<br>s                                                                                       | Δ<br>km | REMARKS                                                                                          |
|--------------|---------------|-----------|------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------------------|
| 11<br>Contd. | Port Blair    | N         | iP<br>iS                                                         | 19     | 25     | 48<br>31 09                                                                                  | 3710    | Moderate                                                                                         |
|              | Shillong      | NZE<br>E  | iP<br>PP<br>PPP<br>PcP<br>iS<br>ScP<br>Lq<br>SSS<br>Lr           | 19     | 26     | 13<br>27 40<br>27 51<br>28 23<br>31 53<br>32 05<br>34 39<br>34 52<br>36 19                   | 4010    | Moderate, initial ground motion towards North, West and compression                              |
|              | Calcutta      | E         | iP<br>PP<br>iS<br>SSS<br>M                                       | 19     | 26     | 21<br>27 53<br>32 32<br>35 59<br>40 59                                                       | 4350    | Moderate                                                                                         |
|              | Chatra        | ZNE<br>NE | iP<br>PcP<br>PP<br>PPP<br>S<br>ScS<br>SS<br>Lq<br>SSS<br>Lr      | 19     | 26     | 49<br>28 17<br>28 28<br>29 09<br>33 22<br>36 26<br>36 41<br>37 34<br>37 49<br>39 49          | 4900    | Moderate, compression                                                                            |
|              | Bokaro        | NE        | iP<br>PcP<br>i<br>PPP<br>S<br>SS<br>Lr<br>M                      | 19     | 26     | 54<br>28 20<br>28 46<br>29 20<br>29 29<br>36 47<br>39 48<br>43 41                            | 4920    | Slight, initial ground motion towards North and West                                             |
|              | Visakhapatnam | NE        | iP<br>PP<br>PPP<br>iS                                            | 19     | 27     | 05<br>28 44<br>29 23<br>33 34                                                                | 4820    | Moderate, initial ground motion towards South and West                                           |
|              | Madras        | E         | iP<br>PcP<br>PP<br>PPP<br>iS<br>PS<br>PPS<br>SS<br>Lq<br>Lr<br>M | 19     | 27     | 26<br>28 58<br>29 16<br>29 57<br>34 12<br>34 19<br>34 26<br>37 35<br>38 22<br>40 37<br>44 23 | 5120    | Moderate, initial ground motion towards West                                                     |
|              | Hyderabad     | E         | iP<br>PP<br>iS<br>e<br>e<br>Lr<br>M<br>M                         | 19     | 27     | 41<br>29 33<br>34 37<br>38 27<br>39 43<br>42 27<br>45 51<br>45 57                            | 5300    | Moderate, initial ground motion towards West<br>Per=23 secs, Grds=24 μ<br>Per=21 secs, Grds=14 μ |



| DATE         | STATION    | COMPT   | PHASE   | G<br>h | M<br>m | T<br>s | $\Delta$<br>km                                                                  | REMARKS                        |
|--------------|------------|---------|---------|--------|--------|--------|---------------------------------------------------------------------------------|--------------------------------|
| 11<br>Contd. | Kodaikanal | E       | iP      | 19     | 27     | 52     | 5480                                                                            | Slight                         |
|              |            |         | iS      |        | 34     | 58     |                                                                                 |                                |
|              |            |         | SS      |        | 38     | 41     |                                                                                 |                                |
|              |            |         | i       |        | 49     | 08     |                                                                                 |                                |
|              | Sehore     | E       | i       | 19     | 27     | 57     |                                                                                 | Slight                         |
|              |            |         | i       |        | 28     | 17     |                                                                                 |                                |
|              |            |         | e       |        | 35     | 24     |                                                                                 |                                |
|              | Dehra Dun  | NE      | er      | 19     | 28     | 00     | 5570                                                                            | Moderate                       |
|              |            |         | PP      |        | 30     | 06     |                                                                                 |                                |
|              |            |         | PPP     |        | 31     | 10     |                                                                                 |                                |
|              |            |         | iS      |        | 35     | 12     |                                                                                 |                                |
|              |            |         | SSS, Lq |        | 40     | 29     |                                                                                 |                                |
| Lr           |            |         |         | 42     | 44     |        |                                                                                 |                                |
| M            |            |         |         | 47     | 05     |        |                                                                                 |                                |
| New Delhi    | ENZ        | iP      | 19      | 28     | 01     | 5680   | Moderate, initial<br>ground motion<br>towards North,<br>West and<br>compression |                                |
|              |            | i?      |         | 28     | 21     |        |                                                                                 |                                |
|              | E          | PcP     |         | 29     | 09     |        |                                                                                 |                                |
|              | EZ         | PP      |         | 29     | 58     |        |                                                                                 |                                |
|              |            | PPP     |         | 31     | 04     |        |                                                                                 |                                |
|              |            | i?      |         | 31     | 40     |        |                                                                                 |                                |
|              | ENZ        | iS      |         | 35     | 19     |        |                                                                                 |                                |
|              |            | PS      |         | 35     | 27     |        |                                                                                 |                                |
|              | EN         | PPS     |         | 35     | 33     |        |                                                                                 |                                |
|              |            | i?      |         | 36     | 39     |        |                                                                                 |                                |
|              |            | ScS     |         | 38     | 06     |        |                                                                                 |                                |
|              |            | SS      |         | 39     | 07     |        |                                                                                 |                                |
|              |            | Lq, SSS |         | 40     | 48     |        |                                                                                 |                                |
|              | Lr         |         | 43      | 51     |        |        |                                                                                 |                                |
| Poona        | Z          | iP      | 19      | 28     | 13     | 5860   | Moderate, initial<br>ground motion<br>towards North,<br>West and<br>compression |                                |
|              | N          | PcS     |         | 33     | 29     |        |                                                                                 |                                |
|              |            | iS      |         | 35     | 40     |        |                                                                                 |                                |
|              |            | PS      |         | 35     | 50     |        |                                                                                 |                                |
|              |            | PPS     |         | 36     | 01     |        |                                                                                 |                                |
|              |            | ScS     |         | 38     | 01     |        |                                                                                 |                                |
|              |            | SSS     |         | 40     | 48     |        |                                                                                 |                                |
|              |            | Lr      |         | 44     | 10     |        |                                                                                 |                                |
|              |            | M       |         | 48     | 37     |        |                                                                                 |                                |
|              | Bombay     | NE      | iP      | 19     | 28     |        |                                                                                 | 24                             |
| E            |            | PcP     |         | 29     | 25     |        |                                                                                 |                                |
| NE           |            | PP      |         | 30     | 21     |        |                                                                                 |                                |
| E            |            | PPP     |         | 31     | 19     |        |                                                                                 |                                |
|              |            | e       |         | 32     | 02     |        |                                                                                 |                                |
|              |            | e       |         | 32     | 27     |        |                                                                                 |                                |
|              |            | PcS     |         | 33     | 16     |        |                                                                                 |                                |
|              |            | eS      |         | 35     | 54     |        |                                                                                 |                                |
|              |            | PS      |         | 33     | 03     |        |                                                                                 |                                |
|              |            | PPS     |         | 36     | 10     |        |                                                                                 |                                |
|              |            | e       |         | 38     | 04     |        |                                                                                 |                                |
|              |            | SS      |         | 38     | 29     |        |                                                                                 |                                |
|              |            | SSS     |         | 40     | 23     |        |                                                                                 |                                |
| NE           |            | Lr      |         | 42     | 17     |        |                                                                                 |                                |
|              |            | M       |         | 56     |        |        |                                                                                 |                                |
|              | M          |         | 56      |        |        |        |                                                                                 |                                |
| 11           | Shillong   | Z       | eP      | 19     | 54     | 23     |                                                                                 | Slight, distant                |
|              | Chatra     | Z       | iP      | 19     | 54     | 43     |                                                                                 | Feeble, distant<br>rarefaction |

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| DATE | STATION                                                                      | COMPT   | PHASE                            | G<br>h | M<br>m | T<br>s                                          | $\Delta$<br>km | REMARKS                                                           |
|------|------------------------------------------------------------------------------|---------|----------------------------------|--------|--------|-------------------------------------------------|----------------|-------------------------------------------------------------------|
| 11   | Shillong                                                                     | Z       | iP                               | 20     | 05     | 44                                              |                | Slight, distant compression                                       |
|      | Chatra                                                                       | Z       | iP                               | 20     | 06     | 21                                              |                | Feeble, distant compression                                       |
| 11   | Shillong                                                                     | Z       | iP<br>i                          | 20     | 14     | 21<br>26                                        |                | Slight, distant compression                                       |
|      | Chatra                                                                       | Z       | iP                               | 20     | 14     | 57                                              |                | Feeble, distant rarefaction                                       |
| 11   | Shillong                                                                     | Z       | iP                               | 21     | 30     | 07                                              |                | Slight, distant compression                                       |
|      | Chatra                                                                       | Z       | iP                               | 21     | 30     | 43                                              |                | Feeble, distant compression                                       |
| 11   | Shillong                                                                     | Z       | iP                               | 23     | 24     | 39                                              |                | Slight, distant compression                                       |
| 11   | Chatra                                                                       | Z       | eP<br>S                          | 23     | 38     | 45<br>39 04                                     | 150            | Feeble                                                            |
| 12   | Shillong                                                                     | Z       | iP                               | 00     | 22     | 48                                              |                | Slight, distant rarefaction                                       |
| 12   | Shillong                                                                     | Z       | iP<br>i                          | 01     | 15     | 01<br>21 55                                     |                | Slight, distant rarefaction                                       |
|      | Chatra                                                                       | Z       | iP                               | 01     | 15     | 38                                              |                | Feeble, distant rarefaction                                       |
|      | Calcutta                                                                     | E       | i                                | 01     | 21     | 28                                              |                | Slight                                                            |
|      | New Delhi                                                                    | EN      | i                                | 01     | 24     | 06                                              |                |                                                                   |
| 12   | Chatra                                                                       | Z       | iPg<br>Sg                        | 02     | 01     | 53<br>02 05                                     | 100            | Feeble, compression                                               |
|      | Shillong                                                                     | Z       | iP<br>iS                         | 02     | 02     | 01<br>03 09                                     | 540            | Slight, rarefaction                                               |
|      | Bokaro                                                                       | NE      | iP                               | 02     | 03     | 26                                              |                | Slight, tremor                                                    |
| 12   | Epc: 34.1°N, 70.9°E, Hindukush. - H = 02h 11m 09.6s<br>h about 44 km (USCGS) |         |                                  |        |        |                                                 |                |                                                                   |
|      | Dehra Dun                                                                    | Z<br>N  | eP<br>iS<br>SS<br>SSS<br>M       | 02     | 12     | 57<br>14 15<br>14 27<br>14 38<br>14 54          | 750            | Slight                                                            |
|      | New Delhi                                                                    | ENZ     | iP<br>PP<br>PPP<br>iS<br>SS<br>M | 02     | 13     | 02<br>13 08<br>13 13<br>14 23<br>14 39<br>15 12 | 780            | Slight, initial ground motion towards North, West and rarefaction |
|      | Bombay                                                                       | N<br>NE | e<br>e                           | 02     | 14     | 48<br>17 56                                     |                | Feeble                                                            |

| DATE | STATION                                                                                                                                    | COMPT        | PHASE                                                               | G  | M  | T                                                                          | $\Delta$ | REMARKS                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------|----|----|----------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------------|
|      |                                                                                                                                            |              |                                                                     | h  | m  | s                                                                          | km       |                                                                                                             |
| 12   | Chatra<br>Contd.                                                                                                                           | Z            | iP<br>eS                                                            | 02 | 14 | 49                                                                         | 1640     | Feeble,<br>compression                                                                                      |
|      | Poona                                                                                                                                      | Z            | eP<br>iS                                                            | 02 | 14 | 57                                                                         | 1820     | Slight                                                                                                      |
|      | Shillong                                                                                                                                   | Z            | iP                                                                  | 02 | 15 | 43                                                                         |          | Slight, distant<br>compression                                                                              |
|      | Sehore                                                                                                                                     | E            | i<br>e<br>e<br>i                                                    | 02 | 16 | 16<br>30<br>35<br>46                                                       |          | Slight                                                                                                      |
|      | Calcutta                                                                                                                                   | E            | e<br>e                                                              | 02 | 18 | 43<br>49                                                                   |          | Slight                                                                                                      |
| 12   | Epc: 9°N, 83°W. Costa Rica - H = 09h 41m 45.7s<br>h about 113 km (USCGS)                                                                   |              |                                                                     |    |    |                                                                            |          |                                                                                                             |
|      | Chatra                                                                                                                                     | Z            | eP                                                                  | 10 | 01 | 06                                                                         |          | Feeble                                                                                                      |
|      | Poona                                                                                                                                      | Z            | iP                                                                  | 10 | 01 | 09                                                                         |          | Slight, compression<br>Other phases not<br>clear                                                            |
|      | Shillong                                                                                                                                   | Z            | iP                                                                  | 10 | 01 | 13                                                                         |          | Slight, distant<br>compression                                                                              |
| 12   | Epc: 8.1°N, 83°W. Near South Coasts of Panama and Costa Rica<br>- H = 11h 40m 12.8s, h about 58 km (USCGS)<br>Mag= 6½ (Pas), 6½ - 6½ (Pal) |              |                                                                     |    |    |                                                                            |          |                                                                                                             |
|      | New Delhi                                                                                                                                  | ENZ          | iPKP<br>e                                                           | 11 | 59 | 34<br>20                                                                   |          | Rarefaction                                                                                                 |
|      | Poona                                                                                                                                      | Z            | iPKP1                                                               | 11 | 59 | 47                                                                         |          | Rarefaction                                                                                                 |
|      | Dehra Dun                                                                                                                                  | NE           | e<br>i                                                              | 11 | 59 | 48<br>19                                                                   |          | Phases not clear                                                                                            |
|      | Calcutta                                                                                                                                   | E            | iPKP<br>e<br>i                                                      | 11 | 59 | 49<br>06<br>31                                                             |          |                                                                                                             |
|      | Bombay                                                                                                                                     | NE<br>N<br>E | PKP<br>e<br>PP<br>e<br>PPP<br>e<br>e<br>e<br>e<br>SS<br>e<br>M<br>M | 11 | 59 | 50<br>17<br>32<br>36<br>04<br>56<br>44<br>01<br>27<br>22<br>22<br>00<br>07 | 16330    | Initial ground<br>ground motion<br>towards West<br><br>Per=25 sec, Grds=4 $\mu$<br>Per=21 sec, Grds=3 $\mu$ |
|      | Shillong                                                                                                                                   | Z            | iPKP1<br>PKP2<br>PP                                                 | 11 | 59 | 50<br>03<br>36                                                             | 16370    |                                                                                                             |

| DATE | STATION          | COMPT | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                         |  |
|------|------------------|-------|-------|--------|--------|--------|----------------|---------------------------------|--|
| 12   | Chatra<br>Contd. | Z     | ePKP  | 11     | 59     | 52     |                |                                 |  |
|      |                  |       |       |        |        |        |                | 12 03 26                        |  |
|      | Töcklai          | E     | ePKP  | 12     | 00     | 00     |                | Distant                         |  |
|      | Bokaro           | NE    | iPKP  | 12     | 00     | 02     |                | Distant, other phases not clear |  |
|      | Hyderabad        | E     | e     | 12     | 00     | 05     |                |                                 |  |
|      |                  |       |       |        |        |        | 06 39          |                                 |  |
|      |                  |       |       |        |        | M      | 13             | 12                              |  |
|      | Visakhapatnam    | NE    | ePKP  | 12     | 00     | 12     |                |                                 |  |
|      |                  |       |       |        |        |        | 03 29          |                                 |  |
|      |                  |       |       |        |        |        | 05 24          |                                 |  |
|      |                  |       |       |        |        |        | 10 39          |                                 |  |
|      |                  |       |       |        |        |        | 11 36          |                                 |  |
|      | Madras           | E     | ePKP  | 12     | 00     | 16     |                |                                 |  |
|      |                  |       |       |        |        |        | 03 36          |                                 |  |
|      |                  |       |       |        |        |        | 06 12          |                                 |  |
|      |                  |       |       |        |        |        | 14 23          |                                 |  |
|      | Kodaikanal       | E     | i     | 12     | 16     | 14     |                | Distant                         |  |
|      |                  |       |       |        |        |        | 13 07 06       |                                 |  |
| 12   | Shillong         | Z     | iP    | 12     | 43     | 43     |                | Slight, distant rarefaction     |  |
|      |                  |       | i     |        |        | 49 23  |                |                                 |  |
| 12   | Shillong         | Z     | ePg   | 17     | 11     | 26     |                | 70 Slight                       |  |
|      |                  |       | Sg    |        |        | 11 34  |                |                                 |  |
| 12   | Shillong         | Z     | iP    | 17     | 32     | 27     |                | Slight, distant compression     |  |
| 12   | Shillong         | Z     | eP    | 21     | 33     | 54     | 410            | Slight                          |  |
|      |                  |       | S     |        |        | 34 28  |                |                                 |  |
| 12   | Shillong         | Z     | eP    | 22     | 03     | 29     |                | Slight, distant                 |  |
| 12   | Shillong         | Z     | eP    | 23     | 48     | 23     | 110            | Slight                          |  |
|      |                  |       | Sg    |        |        | 48 38  |                |                                 |  |
| 13   | Chatra           | Z     | e     | 00     | 00     | 13     |                | Feeble, near                    |  |
| 13   | Shillong         | Z     | ePg   | 03     | 44     | 35     | 50             | Slight                          |  |
|      |                  |       | Sg    |        |        | 44 41  |                |                                 |  |
| 13   | New Delhi        | Z     | iP    | 09     | 24     | 30     |                | Slight, compression             |  |
|      |                  |       | i?    |        |        | 25 37  |                |                                 |  |
| 13   | Dehra Dun        | NE    | eP    | 09     | 25     | 41     |                | Tremor                          |  |
|      | Shillong         | Z     | eP    | 09     | 23     | 56     |                | Slight, distant                 |  |
| 13   | Shillong         | Z     | iP    | 09     | 41     | 10     |                | Slight, distant compression     |  |
| 13   | Shillong         | Z     | ePg   | 10     | 50     | 07     | 100            | Slight                          |  |
|      |                  |       | Sg    |        |        | 50 19  |                |                                 |  |
| 13   | Shillong         | Z     | eP    | 11     | 37     | 32     |                | Slight, distant                 |  |
|      | New Delhi        | Z     | iP    | 11     | 39     | 09     |                | Tremor, rarefaction             |  |

| DATE | STATION       | COMPT | PHASE       | G<br>h | M<br>m | T<br>s               | Δ<br>km | REMARKS                        |
|------|---------------|-------|-------------|--------|--------|----------------------|---------|--------------------------------|
| 13   | Shillong      | Z     | iP          | 15     | 50     | 59                   |         | Slight, distant<br>compression |
| 13   | New Delhi     | Z     | eP          | 16     | 24     | 01                   |         | Tremor, compression            |
| 13   | Shillong      | Z     | eP          | 16     | 52     | 52                   |         | Slight, near                   |
| 13   | Shillong      | Z     | iP          | 18     | 36     | 43                   |         | Slight, distant<br>compression |
|      | Chatra        | Z     | eP          | 18     | 37     | 23                   |         | Feeble, distant                |
| 13   | New Delhi     | Z     | eP<br>i?    | 20     | 06     | 23<br>07 15          |         | Slight, rarefaction            |
| 13   | Dehra Dun     | NE    | eP          | 20     | 12     | 26                   |         | Tremor                         |
|      | New Delhi     | Z     | i iP        | 20     | 12     | 49                   | 270     | Slight, rarefaction            |
|      |               | EZ    | iPg         |        | 12     | 57                   |         |                                |
|      |               | ENZ   | iSn         |        | 13     | 20                   |         |                                |
|      |               | Z     | S*          |        | 13     | 24                   |         |                                |
|      |               | EN    | iSg         |        | 13     | 27                   |         |                                |
|      | Chatra        | Z     | eP<br>e     | 20     | 13     | 02<br>15 32          |         | Feeble                         |
|      | Shillong      | Z     | iP          | 20     | 14     | 57                   |         | Slight, distant<br>rarefaction |
|      | Bokaro        | E     | e           | 20     | 13     | 55                   |         | Tremor                         |
|      | Visakhapatnam | E     | e<br>i      | 20     | 17     | 45<br>19 04          |         | Slightn                        |
|      | Bombay        | E     | e<br>e<br>e | 20     | 17     | 49<br>18 53<br>19 18 |         | Mild                           |
| 13   | New Delhi     | Z     | eP          | 21     | 37     | 29                   |         | Tremor, rarefaction            |
| 13   | Shillong      | Z     | iP          | 21     | 52     | 24                   |         | Slight, distant<br>compression |
|      | Chatra        | Z     | iP          | 21     | 53     | 02                   |         | Feeble, distant<br>compression |
|      | New Delhi     | Z     | eP          | 21     | 54     | 12                   |         | Slight, rarefaction            |
| 13   | Shillong      | Z     | eP          | 23     | 55     | 22                   |         | Slight, distant                |
| 14   | New Delhi     | Z     | eP          | 00     | 23     | 05                   |         | Slight, rarefaction            |
| 14   | Tocklai       | E     | e<br>i      | 01     | 48     | 27<br>49 00          |         | Slight                         |
|      | Shillong      | Z     | iP<br>iS    | 01     | 48     | 52<br>49 48          | 520     | Slight, rarefaction            |
| 14   | Shillong      | Z     | iP          | 08     | 34     | 35                   |         | Slight, distant<br>compression |
|      | Chatra        | Z     | eP          | 08     | 35     | 11                   |         | Feeble, distant                |

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| DATE | STATION                                                                                               | COMPT    | PHASE     | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | REMARKS                                                     |
|------|-------------------------------------------------------------------------------------------------------|----------|-----------|--------|--------|-------------|----------------|-------------------------------------------------------------|
| 14   | Shillong                                                                                              | Z        | iP<br>Sg  | 19     | 09     | 18<br>09 37 | 150            | Slight, rarefaction                                         |
| 14   | Dehra Dun                                                                                             | Z        | eP        | 19     | 55     | 53          |                | Feeble                                                      |
| 14   | Shillong                                                                                              | Z        | iP        | 20     | 11     | 20          |                | Slight, distant rarefaction                                 |
| 14   | Shillong                                                                                              | Z        | eP        | 20     | 28     | 15          |                | Feeble, distant                                             |
| 14   | Shillong                                                                                              | Z        | iP        | 20     | 39     | 51          |                | Slight, distant compression                                 |
| 14   | Shillong                                                                                              | Z        | iP<br>Sg  | 21     | 4      | 22<br>14 42 | 160            | Slight, rarefaction                                         |
| 14   | Shillong                                                                                              | Z        | iPg<br>Sg | 23     | 14     | 11<br>14 21 | 90             | Slight, rarefaction                                         |
|      | New Delhi                                                                                             | Z        | iP<br>i?  | 23     | 17     | 33<br>17 36 |                | Slight, Compression                                         |
| 15   | Shillong                                                                                              | Z        | iP        | 00     | 47     | 00          |                | Slight, distant compression                                 |
|      | Chatra                                                                                                | Z        | iP        | 00     | 47     | 11          |                | Feeble, distant compression                                 |
|      | New Delhi                                                                                             | Z        | iP        | 00     | 47     | 27          |                | Slight, compression                                         |
| 15   | Epc: 45.70N, 101.30E. Kurile Islands Region<br>- H <sub>0</sub> =01h 51m 19.4s. h about 43 km (USCGS) |          |           |        |        |             |                |                                                             |
|      | Shillong                                                                                              | Z        | iP        | 02     | 00     | 22          |                | Slight, rarefaction                                         |
|      | New Delhi                                                                                             | Z        | iP        | 02     | 01     | 23          |                | Slight, compression                                         |
|      | Poona                                                                                                 | Z        | iP        | 02     | 02     | 21          |                | Tremor, Compression                                         |
| 15   | Shillong                                                                                              | Z        | iPg<br>Sg | 03     | 00     | 15<br>00 25 | 90             | Slight, rarefaction                                         |
| 15   | Shillong                                                                                              | Z        | eP        | 04     | 43     | 30          |                | Slight, distant                                             |
| 15   | Shillong                                                                                              | Z        | eP        | 08     | 38     | 32          |                | Slight, distant                                             |
| 15   | Bombay                                                                                                | NE       | eP        | 14     | 42     | 09          | 3220           | Slight                                                      |
|      |                                                                                                       | E        | eP        |        | 44     | 01          |                |                                                             |
|      |                                                                                                       | NE       | eP        |        | 44     | 08          |                |                                                             |
|      |                                                                                                       |          | eS        |        | 48     | 00          |                |                                                             |
|      |                                                                                                       |          | SS        |        | 49     | 32          |                |                                                             |
|      |                                                                                                       |          | SSS       |        | 49     | 55          |                |                                                             |
|      |                                                                                                       |          | ScS       |        | 53     | 43          |                |                                                             |
|      | New Delhi                                                                                             | NZ<br>EN | eP<br>eS  | 14     | 44     | 42<br>50 34 | 4210           | Slight, initial ground motion towards North and compression |
|      | Shillong                                                                                              | ZE       | eP<br>i   | 14     | 45     | 03<br>51 26 |                | Slight, distant                                             |
|      | Chatra                                                                                                | NE       | e         | 14     | 50     | 22          |                |                                                             |

| DATE   | STATION                                                                                     | COMPT | PHASE     | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | REMARKS                  |
|--------|---------------------------------------------------------------------------------------------|-------|-----------|--------|--------|-------------|----------------|--------------------------|
| 15     | Hyderabad                                                                                   | E     | M         | 14     | 52     | 05          |                | Per=12 sec, Grds=7 $\mu$ |
| Contd. |                                                                                             |       |           |        |        |             |                |                          |
| 15     | Dehra Dun                                                                                   | Z     | eP        | 15     | 18     | 53          |                | Tremor                   |
| 15     | Shillong                                                                                    | Z     | iPg<br>Sg | 18     | 46     | 39<br>46 46 | 50             | Slight, rarefaction      |
| 15     | Epc: 7.1°S, 106.1°E. Near South Coast of Java<br>- H = 21h 13m 04.1s. h about 83 km (USCGS) |       |           |        |        |             |                |                          |
|        | Shillong                                                                                    | Z     | eP        | 21     | 19     | 52          |                | Slight, distant          |
|        | Chatra                                                                                      | Z     | iP<br>e   | 21     | 20     | 19<br>22 36 |                | Feeble, rarefaction      |
|        | New Delhi                                                                                   | Z     | iP<br>i?  | 21     | 21     | 16<br>21 17 |                | Slight, rarefaction      |
|        | Dehra Dun                                                                                   | Z     | eP        | 21     | 21     | 23          |                | Tremor                   |
| 15     | New Delhi                                                                                   | Z     | eP        | 21     | 27     | 50          |                | Slight, compression      |
| 15     | New Delhi                                                                                   | Z     | eP        | 22     | 32     | 32          |                | Tremor, compression      |
| 15     | Chatra                                                                                      | Z     | iP<br>S   | 22     | 54     | 46<br>55 13 | 230            | Feeble, rarefaction      |
| 16     | Shillong                                                                                    | Z     | ePg<br>Sg | 01     | 35     | 26<br>35 36 | 90             | Slight                   |
| 16     | Shillong                                                                                    | Z     | eP        | 04     | 21     | 20          |                | Slight, distant          |
| 16     | Shillong                                                                                    | Z     | eP<br>Sg  | 04     | 52     | 55<br>53 35 | 280            | Slight                   |
| 16     | Dehra Dun                                                                                   | NE    | eP        | 06     | 28     | 02          |                | Tremor                   |
| 16     | Shillong                                                                                    | Z     | eP        | 07     | 19     | 40          |                | Slight, distant          |
| 16     | Shillong                                                                                    | Z     | eP        | 09     | 30     | 30          |                | Slight, distant          |
| 16     | Epc: 23.8°N, 127.2°E. Ryukyu Islands Region<br>- H = 09h 42m 24.7s. h about 176 km (USCGS)  |       |           |        |        |             |                |                          |
|        | Shillong                                                                                    | Z     | eP        | 09     | 48     | 36          |                | Slight, distant          |
|        | New Delhi                                                                                   | Z     | iP        | 09     | 50     | 19          |                | Slight, rarefaction      |
|        | Poona                                                                                       | Z     | iP        | 09     | 51     | 03          |                | Tremor, compression      |
| 16     | Epc: 23.5°N, 92.7°E. - H = 12h 17m 32s (Shillong)                                           |       |           |        |        |             |                |                          |
|        | Shillong                                                                                    | Z     | iP<br>S   | 12     | 18     | 17<br>18 51 | 300            | Slight, compression      |
|        | Tocklai                                                                                     | E     | iP        | 12     | 18     | 50          |                | Slight, near             |
|        | Chatra                                                                                      | Z     | iP<br>S   | 12     | 19     | 15<br>20 35 | 770            | Feeble, rarefaction      |
| 16     | New Delhi                                                                                   | Z     | iP        | 12     | 21     | 17          |                | Slight, compression      |
| 16     | New Delhi                                                                                   | Z     | eP        | 12     | 24     | 02          |                | Slight, compression      |

| DATE | STATION                                                                                       | COMPT   | PHASE                      | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                                                            |
|------|-----------------------------------------------------------------------------------------------|---------|----------------------------|--------|--------|--------|----------------|--------------------------------------------------------------------|
| 16   | Shillong                                                                                      | Z       | eP                         | 13     | 27     | 25     |                | Slight, distant                                                    |
| 16   | New Delhi                                                                                     | Z       | eP                         | 14     | 32     | 09     |                | Slight, compression                                                |
| 16   | Shillong                                                                                      | Z       | eP<br>Sg                   | 15     | 50     | 15     | 120            | Slight                                                             |
|      |                                                                                               |         |                            |        | 50     | 31     |                |                                                                    |
| 16   | Shillong                                                                                      | Z       | iP<br>i                    | 19     | 41     | 00     |                | Slight, distant<br>rarefaction                                     |
|      |                                                                                               |         |                            |        | 42     | 34     |                |                                                                    |
|      | Chatra                                                                                        | Z       | iP                         | 19     | 41     | 40     |                | Feeble, distant<br>compression                                     |
| 16   | Epc: 10.8°S, 165.7°E. Santa Cruz Islands Region<br>- H = 19h 42m 39.2s. h about 25 km (USCGS) |         |                            |        |        |        |                |                                                                    |
|      | Shillong                                                                                      | Z       | iP                         | 19     | 54     | 50     |                | Slight, distant<br>rarefaction                                     |
|      | Chatra                                                                                        | Z       | iP                         | 19     | 55     | 13     |                | Slight, distant<br>rarefaction                                     |
|      | New Delhi                                                                                     | Z       | iP                         | 19     | 55     | 54     |                | Slight, compression                                                |
|      | Madras                                                                                        | E       | e<br>e                     | 19     | 55     | 43     |                | Slight, phases<br>not clear                                        |
|      |                                                                                               |         |                            | 20     | 05     | 55     |                |                                                                    |
|      | Bombay                                                                                        | E       | eP<br>e<br>e<br>e          | 19     | 59     | 57     |                | Feeble                                                             |
|      |                                                                                               |         |                            | 20     | 06     | 39     |                |                                                                    |
|      |                                                                                               |         |                            |        | 07     | 22     |                |                                                                    |
|      |                                                                                               |         |                            |        | 08     | 49     |                |                                                                    |
| 16   | Shillong                                                                                      | Z       | eP                         | 20     | 20     | 51     |                | Feeble, distant                                                    |
| 16   | Shillong                                                                                      | Z       | eP                         | 20     | 45     | 13     |                | Feeble, Distant                                                    |
| 16   | Shillong                                                                                      | Z       | ePg                        | 22     | 07     | 13     |                | Slight, near                                                       |
| 17   | Shillong                                                                                      | Z       | ePg                        | 00     | 00     | 53     |                | Slight, local                                                      |
| 17   | Shillong                                                                                      | Z       | iP                         | 07     | 07     | 07     |                | Slight, distant<br>compression                                     |
| 17   | Epc: 29°N, 96°E. - H = 11h 26m 20s (Shillong)                                                 |         |                            |        |        |        |                |                                                                    |
|      | Tocklai                                                                                       | E       | iP                         | 11     | 27     | 11     |                | Slight                                                             |
|      | Shillong                                                                                      | ZE      | iP<br>P*<br>iS<br>SS<br>Sg | 11     | 27     | 37     | 550            | Slight, initial ground<br>movement towards East<br>and rarefaction |
|      |                                                                                               |         |                            |        | 27     | 50     |                |                                                                    |
|      |                                                                                               |         |                            |        | 28     | 35     |                |                                                                    |
|      |                                                                                               |         |                            |        | 28     | 47     |                |                                                                    |
|      |                                                                                               |         |                            |        | 29     | 17     |                |                                                                    |
|      | Chatra                                                                                        | Z<br>ZN | iP<br>S                    | 11     | 28     | 37     | 920            | Feeble, rarefaction                                                |
|      |                                                                                               |         |                            |        | 30     | 13     |                |                                                                    |
|      | Calcutta                                                                                      | E       | e                          | 11     | 30     | 20     |                | Slight                                                             |
|      | New Delhi                                                                                     | Z       | iP<br>i<br>i<br>iS         | 11     | 30     | 31     | 1800           | Slight, rarefaction                                                |
|      |                                                                                               |         |                            |        | 30     | 34     |                |                                                                    |
|      |                                                                                               |         |                            |        | 30     | 37     |                |                                                                    |
|      |                                                                                               |         |                            |        | 33     | 41     |                |                                                                    |



| DATE | STATION                                                                                   | COMPT         | PHASE                                                                            | G  | M  | T  | Δ     | REMARKS                                                          |
|------|-------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------|----|----|----|-------|------------------------------------------------------------------|
|      |                                                                                           |               |                                                                                  | h  | m  | s  | km    |                                                                  |
| 17   | Poona<br>Contd.                                                                           | Z             | iP                                                                               | 11 | 31 | 31 |       | Slight, compression<br>Other phases not<br>clear                 |
|      | Bombay                                                                                    | NE<br>E<br>NE | eP<br>eS<br>e                                                                    | 11 | 31 | 40 | 2590  | Feeble                                                           |
|      |                                                                                           |               |                                                                                  |    | 35 | 50 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 38 | 58 |       |                                                                  |
| 17   | Shillong                                                                                  | Z             | iP                                                                               | 12 | 39 | 02 |       | Slight, distant                                                  |
| 17   | Epc: 51.4°N, 159.2°E. Kurile Islands Region<br>- H = 17h 58m 38.6s. h about 25 km (USCGS) |               |                                                                                  |    |    |    |       |                                                                  |
|      | Shillong                                                                                  | Z             | iP                                                                               | 18 | 08 | 20 |       | Slight, distant<br>compression                                   |
|      | Chatra                                                                                    | Z             | iP                                                                               | 18 | 08 | 36 |       | Feeble, distant<br>compression                                   |
|      | New Delhi                                                                                 | Z             | iP                                                                               | 18 | 09 | 07 |       | Tremor, compression                                              |
|      | Poona                                                                                     | Z             | iP                                                                               | 18 | 10 | 07 |       | Feeble, compression<br>other phases not<br>clear                 |
| 17   | Shillong                                                                                  | Z             | eP                                                                               | 19 | 03 | 09 |       | Slight, distant                                                  |
| 17   | Dehra Dun                                                                                 | NE            | eP                                                                               | 19 | 37 | 39 |       | Tremor                                                           |
| 17   | Chatra                                                                                    | Z             | iP                                                                               | 19 | 32 | 51 |       | Feeble, distant<br>compression                                   |
| 17   | Shillong                                                                                  | Z             | ePg<br>Sg                                                                        | 20 | 39 | 26 | 50    | Slight                                                           |
|      |                                                                                           |               |                                                                                  |    | 39 | 42 |       |                                                                  |
| 17   | Bombay                                                                                    | E             | er<br>e<br>e                                                                     | 21 | 02 | 09 |       | Slight                                                           |
|      |                                                                                           |               |                                                                                  |    | 05 | 22 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 06 | 23 |       |                                                                  |
|      | New Delhi                                                                                 | EZ            | eP                                                                               | 21 | 02 | 11 |       | Slight, initial ground<br>motion towards East<br>and compression |
| 17   | Epc: 10.6°N, 43.7°W. North Atlantic Ocean<br>- H = 20h 47m 31.7s. h about 25 km (USCGS)   |               |                                                                                  |    |    |    |       |                                                                  |
|      | Bombay                                                                                    | E             | iPKP<br>PP<br>e<br>PPP<br>e<br>e<br>e<br>eS<br>PS<br>PPS<br>SS<br>SSS<br>Lr<br>M | 21 | 05 | 47 | 11950 | Moderate                                                         |
|      |                                                                                           |               |                                                                                  |    | 06 | 18 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 07 | 45 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 08 | 23 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 09 | 10 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 11 | 48 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 12 | 50 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 15 | 02 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 16 | 16 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 16 | 47 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 21 | 20 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 25 | 35 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 38 | 00 |       |                                                                  |
|      |                                                                                           |               |                                                                                  |    | 53 | -  |       | Per=17 sec., Grds=22 μ                                           |
|      | New Delhi                                                                                 | Z<br>NE       | ePKP<br>PP                                                                       | 21 | 05 | 48 | 12330 | Moderate                                                         |
|      |                                                                                           |               |                                                                                  |    | 06 | 30 |       |                                                                  |

| DATE         | STATION             | COMPT         | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS               |
|--------------|---------------------|---------------|-------|--------|--------|--------|----------------|-----------------------|
| 17<br>Contd. | New Delhi<br>Contd. | NE            | PPP   | 21     | 08     | 47     |                |                       |
|              |                     |               | SKS1  |        | 11     | 59     |                |                       |
|              |                     |               | SKS2  |        | 12     | 22     |                |                       |
|              |                     |               | SKKS  |        | 12     | 52     |                |                       |
|              |                     |               | PS    |        | 15     | 56     |                |                       |
|              |                     |               | PPS   |        | 17     | 06     |                |                       |
|              |                     |               | iSS   |        | 22     | 00     |                |                       |
|              |                     |               | SSS   |        | 26     | 12     |                |                       |
|              |                     |               | Lq    |        | 33     | 41     |                |                       |
|              |                     |               | Lr    |        | 42     | 00     |                |                       |
|              |                     | M             |       | 51     | 12     |        |                |                       |
|              | Poona               | Z             | iPKP1 | 21     | 05     | 50     | 12710          | Moderate, compression |
|              |                     |               | PP    |        | 06     | 51     |                |                       |
|              | Dehra Dun           | NE<br>N       | ePKP  | 21     | 06     | 10     | 12500          | Moderate              |
|              |                     |               | PP    |        | 07     | 03     |                |                       |
|              |                     |               | SKKS1 |        | 14     | 03     |                |                       |
|              |                     |               | i     |        | 15     | 34     |                |                       |
|              |                     |               | PS    |        | 16     | 33     |                |                       |
|              |                     |               | SS    |        | 22     | 48     |                |                       |
|              |                     |               | Lq    |        | 35     | 03     |                |                       |
|              |                     |               | Lr    |        | 40     | 25     |                |                       |
|              |                     |               | M     |        | 49     | 56     |                |                       |
|              | Madras              | E             | ePKP  | 21     | 03     | 15     | 12780          | Moderate              |
|              |                     |               | PP    |        | 07     | 41     |                |                       |
|              |                     |               | PPP   |        | 10     | 12     |                |                       |
|              |                     |               | e     |        | 11     | 46     |                |                       |
|              |                     |               | SKS   |        | 13     | 04     |                |                       |
|              |                     |               | SKKKS |        | 14     | 44     |                |                       |
|              |                     |               | PS    |        | 17     | 28     |                |                       |
|              |                     |               | PPS   |        | 18     | 44     |                |                       |
|              |                     |               | SS    |        | 24     | 20     |                |                       |
|              |                     |               | SSS   |        | 28     | 42     |                |                       |
|              |                     |               | Lr    |        | 44     | 40     |                |                       |
|              | Chatra              | Z<br>N        | PKP1  | 21     | 06     | 25     | 13330          | Moderate              |
|              |                     |               | PP    |        | 07     | 53     |                |                       |
|              |                     |               | PKS   |        | 10     | 00     |                |                       |
|              |                     |               | PPP   |        | 10     | 26     |                |                       |
|              |                     |               | SKS   |        | 13     | 22     |                |                       |
|              |                     |               | SKKS  |        | 14     | 46     |                |                       |
|              |                     |               | SKSP  |        | 17     | 44     |                |                       |
|              |                     |               | SS    |        | 24     | 17     |                |                       |
|              |                     |               | SSS   |        | 28     | 45     |                |                       |
|              | Shillong            | Z<br>NE       | ePKP  | 21     | 06     | 33     | 13780          | Slight                |
|              |                     |               | PP    |        | 08     | 13     |                |                       |
|              |                     |               | PPP   |        | 10     | 39     |                |                       |
|              |                     |               | SKS   |        | 13     | 29     |                |                       |
|              |                     |               | i     |        | 13     | 55     |                |                       |
|              |                     |               | e     |        | 16     | 20     |                |                       |
|              |                     |               | PS    |        | 17     | 49     |                |                       |
|              |                     |               | PPS   |        | 19     | 13     |                |                       |
|              |                     |               | SS    |        | 24     | 33     |                |                       |
|              |                     |               | SSP   |        | 25     | 16     |                |                       |
|              |                     |               | SSS   |        | 29     | 33     |                |                       |
|              | Hyderabad           | EN<br>E<br>EN | iPP   | 21     | 07     | 23     | 12990          | Moderate              |
|              |                     |               | PPP   |        | 09     | 33     |                |                       |
|              |                     |               | SKS1  |        | 14     | 25     |                |                       |
|              |                     |               | iPS   |        | 17     | 10     |                |                       |

| DATE                                                                                                                            | STATION                                                                                                 | COMPT     | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km  | REMARKS                                          |                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------|-------|--------|--------|--------|-----------------|--------------------------------------------------|--------------------------------------------------------------------------|
| 17                                                                                                                              | Hyderabad<br>Contd. Contd.                                                                              | EN        | iPPS  | 21     | 18     | 14     |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | SS    |        | 23     | 36     |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | SSS   |        | 27     | 28     |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | Lq    |        | 37     | 07     |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | Lr    |        | 41     | 10     |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         | N         | M     |        | 49     | 07     |                 |                                                  | Per: 21 sec, Grds=33 $\mu$<br>Per: 23 sec, Grds=52 $\mu$                 |
|                                                                                                                                 |                                                                                                         |           | E     | M      |        | 49     | 52              |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         | Bokaro    | E     | ePP    | 21     | 07     | 29              |                                                  | Slight, other phases<br>not well developed<br>Per: 23 sec, Grds=33 $\mu$ |
|                                                                                                                                 |                                                                                                         |           |       | e      |        | 17     | 43              |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           |       | Mn     |        | 50     | 29              |                                                  |                                                                          |
| Calcutta                                                                                                                        | E                                                                                                       | ePP       | 21    | 07     | 35     |        | Moderate        |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         | PPP       |       | 10     | 11     |        |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         | PS        |       | 17     | 25     |        |                 |                                                  |                                                                          |
| Visakhapatnam                                                                                                                   | NE                                                                                                      | e         | 21    | 07     | 36     |        | Slight, distant |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         | eSKSP     |       | 17     | 50     |        |                 |                                                  |                                                                          |
| 17                                                                                                                              | New Delhi                                                                                               | Z         | iP    | 21     | 37     | 30     |                 | Slight, rarefaction                              |                                                                          |
| 13                                                                                                                              | New Delhi                                                                                               | Z         | iP    | 00     | 10     | 13     |                 | Tremor, rarefaction                              |                                                                          |
| 18                                                                                                                              | Shillong                                                                                                | Z         | eP    | 00     | 31     | 33     |                 | Slight, near                                     |                                                                          |
| 18                                                                                                                              | Epc: 16.1°S, 167.2°E. New Hebrides Islands Region<br>- H = 03h 06m 39.4s. h about 200 km (USCGS)        |           |       |        |        |        |                 |                                                  |                                                                          |
|                                                                                                                                 | Shillong                                                                                                | E         | eP    | 03     | 18     | 59     | 9800            | Slight, distant                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | iS    |        | 29     | 22     |                 |                                                  |                                                                          |
|                                                                                                                                 | Chatra                                                                                                  | Z         | e     | 03     | 24     | 32     |                 | Nature uncertain                                 |                                                                          |
|                                                                                                                                 |                                                                                                         |           |       |        |        |        |                 |                                                  |                                                                          |
|                                                                                                                                 | Bombay                                                                                                  | E         | e     | 03     | 26     | 21     |                 | Slight, distant                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | e     |        | 27     | 54     |                 |                                                  |                                                                          |
|                                                                                                                                 |                                                                                                         |           | e     |        | 30     | 41     |                 |                                                  |                                                                          |
|                                                                                                                                 | Bokaro                                                                                                  | NE        | eS    | 03     | 29     | 46     |                 | Slight, distant                                  |                                                                          |
|                                                                                                                                 | Calcutta                                                                                                | E         | i     | 03     | 30     | 04     |                 | Slight                                           |                                                                          |
|                                                                                                                                 | Madras                                                                                                  | E         | e     | 03     | 30     | 09     |                 | Surface waves                                    |                                                                          |
|                                                                                                                                 | Epc: 40.6°N, 142.4°E. Off Coast of Northern Honshu, Japan<br>- H = 05h 28m 21.3s. h about 33 km (USCGS) |           |       |        |        |        |                 |                                                  |                                                                          |
|                                                                                                                                 | Chatra                                                                                                  | Z         | iP    | 05     | 36     | 56     |                 | Feeble, distant<br>compression                   |                                                                          |
|                                                                                                                                 |                                                                                                         |           |       |        |        |        |                 |                                                  |                                                                          |
|                                                                                                                                 | New Delhi                                                                                               | Z         | iP    | 05     | 37     | 44     |                 | Slight, compression                              |                                                                          |
|                                                                                                                                 | Poona                                                                                                   | Z         | iP    | 05     | 38     | 41     |                 | Slight, compression<br>other phases not<br>clear |                                                                          |
|                                                                                                                                 | 18                                                                                                      | New Delhi | Z     | iP     | 06     | 53     | 02              |                                                  | Slight, rarefaction                                                      |
|                                                                                                                                 | 18                                                                                                      | Shillong  | Z     | eP     | 15     | 02     | 04              |                                                  | Slight, distant                                                          |
| Chatra                                                                                                                          | Z                                                                                                       | eP        | 15    | 02     | 42     |        | Feeble, distant |                                                  |                                                                          |
| Epc: 40.6°N, 19.6°E. Southern Albania<br>- H = 15h 30m 31.6s. h about 25 km (USCGS)<br>(15 dead, 154 injured, moderate damage). |                                                                                                         |           |       |        |        |        |                 |                                                  |                                                                          |

| DATE | STATION             | COMPT | PHASE  | G  | M  | T  | Δ    | REMARKS                                |
|------|---------------------|-------|--------|----|----|----|------|----------------------------------------|
|      |                     |       |        | h  | m  | s  | km   |                                        |
| 18   | Dehra Dun<br>Contd. | Z     | eP     | 15 | 39 | 09 | 5250 | Slight                                 |
|      |                     | N     | PP     |    | 41 | 04 |      |                                        |
|      |                     |       | PPP    |    | 41 | 54 |      |                                        |
|      |                     |       | iS     |    | 46 | 03 |      |                                        |
|      |                     |       | SSS    |    | 50 | 18 |      |                                        |
|      |                     |       | M      |    | 56 | 29 |      |                                        |
|      | New Delhi           | EZ    | iP     | 15 | 39 | 10 | 5250 | Slight, initial ground                 |
|      |                     |       | i?     |    | 39 | 14 |      | motion towards South,                  |
|      |                     | EZ    | PP     |    | 41 | 00 |      | East and compression                   |
|      |                     | ENZ   | iS     |    | 46 | 04 |      |                                        |
|      |                     | NZ    | PS     |    | 46 | 08 |      |                                        |
|      |                     |       | PPS    |    | 46 | 13 |      |                                        |
|      | Chatra              | Z     | eP     | 15 | 39 | 13 |      | Slight, compression                    |
|      |                     | ZNE   | e      |    | 48 | 02 |      |                                        |
|      | Bombay              | NE    | eP     | 15 | 39 | 24 | 5610 | Slight                                 |
|      |                     | E     | PcP    |    | 40 | 31 |      |                                        |
|      |                     | NE    | PP     |    | 41 | 26 |      |                                        |
|      |                     | E     | PPP    |    | 42 | 33 |      |                                        |
|      |                     | NE    | eS     |    | 46 | 38 |      |                                        |
|      |                     |       | PPS    |    | 46 | 59 |      |                                        |
|      |                     |       | e      |    | 49 | 17 |      |                                        |
|      |                     |       | SS     |    | 50 | 30 |      |                                        |
|      |                     |       | SSS/Lq |    | 51 | 45 |      |                                        |
|      | Poona               | Z     | iP     | 15 | 39 | 34 |      | Slight, initial ground                 |
|      |                     | N     | i      |    | 47 | 07 |      | motion towards East<br>and compression |
|      | Bokaro              | E     | iP     | 15 | 40 | 17 | 6440 | Slight                                 |
|      |                     |       | iS     |    | 48 | 17 |      |                                        |
|      | Visakhapatnam       | E     | eP     | 15 | 40 | 23 |      | Slight, distant                        |
|      |                     |       | PP     |    | 42 | 43 |      |                                        |
|      |                     |       | e      |    | 49 | 00 |      |                                        |
|      | Madras              | E     | iP     | 15 | 40 | 21 | 6580 | Slight                                 |
|      |                     |       | eS     |    | 48 | 37 |      |                                        |
|      |                     |       | PPS    |    | 49 | 00 |      |                                        |
|      |                     |       | ScS    |    | 50 | 21 |      |                                        |
|      |                     |       | e      |    | 52 | 00 |      |                                        |
|      | Shillong            | ZE    | iP     | 15 | 40 | 41 | 6640 | Slight, initial ground                 |
|      |                     |       | iS     |    | 48 | 52 |      | motion towards East<br>and compression |
|      | Calcutta            | E     | i      | 15 | 40 | 42 |      | Slight                                 |
|      |                     |       | e      |    | 43 | 47 |      |                                        |
| 18   | Hyderabad           | N     | M      | 16 | 03 | 19 |      | Per=15 sec, Grds=3 μ                   |
|      |                     | E     | M      |    | 07 | 18 |      | Per:15 sec, Grds=6 μ                   |
| 18   | Chatra              | Z     | iP     | 17 | 28 | 48 | 160  | Feeble, compression                    |
|      |                     | ZN    | S      |    | 29 | 08 |      |                                        |
|      | Shillong            | E     | eP     | 17 | 29 | 42 |      | Slight, distant                        |

| DATE | STATION                                                                                                                                                                                                        | COMPT              | PHASE                                             | G  | M  | T  | Δ    | REMARKS                                                    |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------|----|----|----|------|------------------------------------------------------------|
|      |                                                                                                                                                                                                                |                    |                                                   | h  | m  | s  | km   |                                                            |
| 18   | Epc: 23.5°N, 115°E. Kwantung Province, China<br>- H = 20h 18m 50s (Shillong)<br>23.7°N, 114.5°E. - H = 20h 18m 54.3s. h about 43 km<br>(Q1 killed, 2 injured in Canton. Felt at Hong Kong and Macao). (USCGS). |                    |                                                   |    |    |    |      |                                                            |
|      | Shillong                                                                                                                                                                                                       | Z<br>E             | iP<br>PP<br>PPP<br>iS<br>Lq<br>SSS<br>Lr<br>M     | 20 | 23 | 34 | 2310 | Slight, initial ground motion towards East and rarefaction |
|      | Calcutta                                                                                                                                                                                                       | E                  | eP<br>iS<br>M                                     | 20 | 24 | 13 | 2720 | Slight                                                     |
|      | Port Blair                                                                                                                                                                                                     | N                  | iP<br>PP<br>iS<br>SS<br>M                         | 20 | 24 | 17 | 2820 | Slight                                                     |
|      | Chatra                                                                                                                                                                                                         | Z<br>ZNE           | iP<br>PP<br>PPP<br>S<br>Lq<br>SS<br>SSS<br>PcS    | 20 | 24 | 18 | 2970 | Slight, rarefaction                                        |
|      | Bokaro                                                                                                                                                                                                         | E                  | iP<br>PPP<br>e<br>eS<br>SS<br>SSS<br>e<br>Lr<br>M | 20 | 24 | 29 | 3010 | Slight, initial ground motion towards East                 |
|      | Visakhapatnam                                                                                                                                                                                                  | NE                 | iP<br>e                                           | 20 | 25 | 03 |      | Moderate, initial ground motion towards East               |
|      | Dehra Dun                                                                                                                                                                                                      | Z<br>N             | eP<br>iS<br>SSS<br>Lr<br>M                        | 20 | 25 | 31 | 3670 | Slight                                                     |
|      | New Delhi                                                                                                                                                                                                      | E<br>EN<br>E<br>EN | iP<br>iS<br>SS, Lq<br>i?<br>Lr                    | 20 | 25 | 34 | 3770 | Slight, initial ground motion towards East                 |
|      | Madras                                                                                                                                                                                                         | E                  | eP<br>PP                                          | 20 | 25 | 40 | 3920 | Slight                                                     |

| DATE          | STATION                                                                                                                   | COMP | PHASE   | G<br>h | M<br>m | T<br>s                   | $\Delta$<br>km                                         | REMARKS |
|---------------|---------------------------------------------------------------------------------------------------------------------------|------|---------|--------|--------|--------------------------|--------------------------------------------------------|---------|
| 18            | Madras<br>Cont'd. Cont'd.                                                                                                 | E    | PPP     | 20     | 27     | 22                       |                                                        |         |
|               |                                                                                                                           |      | eS      |        | 31     | 14                       |                                                        |         |
|               |                                                                                                                           |      | PcS/ScP |        | 31     | 53                       |                                                        |         |
|               |                                                                                                                           |      | e       |        | 32     | 44                       |                                                        |         |
|               |                                                                                                                           |      | Lq      |        | 33     | 34                       |                                                        |         |
|               |                                                                                                                           | Lr   |         | 35     | 11     |                          |                                                        |         |
| Poona         | Z                                                                                                                         | iP   | 20      | 26     | 14     | 4250                     | Moderate, rarefaction                                  |         |
|               |                                                                                                                           | PP   |         | 27     | 46     |                          |                                                        |         |
|               |                                                                                                                           | PcS  |         | 31     | 59     |                          |                                                        |         |
|               |                                                                                                                           | iS   |         | 32     | 09     |                          |                                                        |         |
|               |                                                                                                                           | Lq   |         | 34     | 59     |                          |                                                        |         |
|               |                                                                                                                           | SSS  |         | 35     | 14     |                          |                                                        |         |
|               |                                                                                                                           | Lr   |         | 37     | 04     |                          |                                                        |         |
|               | M                                                                                                                         |      | 40      | 15     |        |                          |                                                        |         |
| Bombay        | E                                                                                                                         | PPP  | 20      | 28     | 00     | 4250                     |                                                        |         |
|               |                                                                                                                           | e    |         | 30     | 13     |                          |                                                        |         |
|               |                                                                                                                           | NE   | eS      |        | 32     | 16                       |                                                        |         |
|               |                                                                                                                           | E    | e       |        | 33     | 59                       |                                                        |         |
|               |                                                                                                                           | NE   | eSSS    |        | 35     | 26                       |                                                        |         |
|               |                                                                                                                           |      | e       |        | 36     | 31                       |                                                        |         |
|               |                                                                                                                           | E    | e       |        | 37     | 07                       |                                                        |         |
|               |                                                                                                                           | N    | e       |        | 37     | 17                       |                                                        |         |
|               |                                                                                                                           |      | e       |        | 38     | 04                       |                                                        |         |
|               |                                                                                                                           | NE   | e       |        | 39     | 02                       |                                                        |         |
|               | N                                                                                                                         | M    |         | 42     | -      | Per=12 sec, Grds=3 $\mu$ |                                                        |         |
|               | E                                                                                                                         | M    |         | 43     | -      | Per=13 sec, Grds=3 $\mu$ |                                                        |         |
| Hyderabad     | EN                                                                                                                        | e    | 20      | 31     | 08     |                          |                                                        |         |
|               |                                                                                                                           | M    |         | 39     | 10     |                          | Per=15 sec, Grds=10 $\mu$                              |         |
|               |                                                                                                                           | M    |         | 39     | 22     |                          | Per=15 sec, Grds= 8 $\mu$                              |         |
| 18            | Shillong                                                                                                                  | Z    | iP      | 22     | 24     | 39                       | Slight, distant compression                            |         |
| 18            | Shillong                                                                                                                  | Z    | iP      | 23     | 31     | 48                       | Slight, distant rarefaction                            |         |
| 19            | Epic: 0.5°N, 121.6°E. Near South Coast of Minahossa Peninsula, Cebbes Islands. - H = 05h 54m 24.4s. h about 53 km (USCGS) |      |         |        |        |                          |                                                        |         |
| Port Blair    | N                                                                                                                         | iP   | 06      | 01     | 03     |                          | Slight                                                 |         |
|               |                                                                                                                           | i    |         | 02     | 49     |                          |                                                        |         |
|               |                                                                                                                           | i    |         | 11     | 15     |                          |                                                        |         |
| Tocklai       | E                                                                                                                         | eP   | 06      | 01     | 52     |                          | Slight, distant                                        |         |
| Shillong      | NE                                                                                                                        | iP   | 06      | 01     | 59     | 4120                     | Slight, initial ground movement towards North and West |         |
|               |                                                                                                                           | PP   |         | 03     | 25     |                          |                                                        |         |
|               |                                                                                                                           | PPP  |         | 03     | 46     |                          |                                                        |         |
|               |                                                                                                                           | PcP  |         | 04     | 01     |                          |                                                        |         |
|               |                                                                                                                           | iS   |         | 07     | 46     |                          |                                                        |         |
| Bokaro        | NE                                                                                                                        | iP   | 06      | 02     | 28     |                          | Slight, initial ground motion towards North and West   |         |
|               |                                                                                                                           | i    |         | 06     | 47     |                          |                                                        |         |
|               |                                                                                                                           | i    |         | 07     | 35     |                          |                                                        |         |
| Visakhapatnam | NE                                                                                                                        | iP   | 06      | 02     | 28     | 4620                     | Initial ground motion towards South and East           |         |
|               |                                                                                                                           | PP   |         | 04     | 13     |                          |                                                        |         |
|               |                                                                                                                           | PPP  |         | 04     | 52     |                          |                                                        |         |
|               |                                                                                                                           | iS   |         | 08     | 45     |                          |                                                        |         |
|               |                                                                                                                           | e    |         | 08     | 53     |                          |                                                        |         |
|               |                                                                                                                           | e    |         | 08     | 58     |                          |                                                        |         |
| SSS           |                                                                                                                           | 12   | 40      |        |        |                          |                                                        |         |

| DATE         | STATION   | COMPT | PHASE   | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | REMARKS                                                           |
|--------------|-----------|-------|---------|--------|--------|--------|----------------|-------------------------------------------------------------------|
| 19<br>Contd. | Chatra    | ZNE   | iP      | 06     | 02     | 38     |                | Feeble, rarefaction                                               |
|              |           | NE    | e       |        | 04     | 15     |                |                                                                   |
|              | Madras    | E     | iP      | 06     | 02     | 38     | 4950           | Moderate, initial ground motion towards West                      |
|              |           |       | e       |        | 03     | 10     |                |                                                                   |
|              |           |       | e       |        | 03     | 25     |                |                                                                   |
|              |           |       | e       |        | 04     | 09     |                |                                                                   |
|              |           |       | PcP     |        | 04     | 29     |                |                                                                   |
|              |           |       | e       |        | 05     | 11     |                |                                                                   |
|              |           |       | iS      |        | 09     | 08     |                |                                                                   |
|              |           |       | e       |        | 10     | 09     |                |                                                                   |
|              |           |       | e       |        | 12     | 21     |                |                                                                   |
|              |           |       | Lq      |        | 12     | 38     |                |                                                                   |
|              | Hyderabad | EN    | iP      | 03     | 03     | 58     | 5100           | Slight, initial ground motion towards South and East              |
|              |           | E     | e       |        | 03     | 49     |                |                                                                   |
|              |           | N     | PP      |        | 04     | 58     |                |                                                                   |
|              |           | EN    | iS      |        | 09     | 42     |                |                                                                   |
|              |           |       | PPS     |        | 10     | 19     |                |                                                                   |
|              |           |       | e       |        | 12     | 37     |                |                                                                   |
|              |           |       | e       |        | 13     | 43     |                |                                                                   |
|              |           |       | Lq      |        | 13     | 50     |                |                                                                   |
|              |           | N     | Lr      |        | 16     | 28     |                |                                                                   |
|              |           | E     | M       |        | 20     | 38     |                | Per=8 sec, Grds=1 $\mu$<br>Per=9 sec, Grds=1 $\mu$                |
|              |           |       | M       |        | 21     | 19     |                |                                                                   |
|              | Calcutta  | E     | eP      | 06     | 03     | 05     | 5280           | Slight                                                            |
|              |           |       | iS      |        | 09     | 58     |                |                                                                   |
|              | Poona     | Z     | iP      | 06     | 03     | 33     | 5610           | Initial ground motion towards West and compression                |
|              |           |       | PcP     |        | 04     | 46     |                |                                                                   |
|              |           |       | PPP     |        | 06     | 25     |                |                                                                   |
|              |           |       | iS      |        | 10     | 47     |                |                                                                   |
|              |           |       | PS      |        | 10     | 52     |                |                                                                   |
|              |           |       | PPS     |        | 11     | 09     |                |                                                                   |
|              |           |       | SS      |        | 14     | 18     |                |                                                                   |
|              |           |       | SSS, Lq |        | 15     | 51     |                |                                                                   |
|              |           |       | Lr      |        | 18     | 20     |                |                                                                   |
|              |           |       | M       |        | 22     | 34     |                |                                                                   |
|              | New Delhi | ENZ   | iP      | 06     | 03     | 36     | 5630           | Slight, initial ground motion towards North, West and compression |
|              |           | EN    | iS      |        | 10     | 51     |                |                                                                   |
|              |           |       | i?      |        | 11     | 42     |                |                                                                   |
|              |           | E     | e       |        | 13     | 03     |                |                                                                   |
|              | Bombay    | NE    | iP      | 06     | 03     | 40     | 5740           | Slight, initial ground motion towards West                        |
|              |           | E     | PP      |        | 04     | 14     |                |                                                                   |
|              |           |       | sp      |        | 04     | 29     |                |                                                                   |
|              |           |       | PcP     |        | 04     | 48     |                |                                                                   |
|              |           |       | PP      |        | 05     | 35     |                |                                                                   |
|              |           |       | PPP     |        | 06     | 35     |                |                                                                   |
|              |           |       | e       |        | 07     | 40     |                |                                                                   |
|              |           | NE    | iS      |        | 11     | 01     |                |                                                                   |
|              |           |       | FPS     |        | 11     | 14     |                |                                                                   |
|              |           |       | SS      |        | 11     | 53     |                |                                                                   |
|              |           |       | i       |        | 12     | 40     |                |                                                                   |
|              |           |       | ScS     |        | 13     | 13     |                |                                                                   |
|              |           |       | e       |        | 14     | 09     |                |                                                                   |
|              |           |       | e       |        | 14     | 48     |                |                                                                   |
| 19           | Sehore    | NE    | iP      | 08     | 03     | 27     |                | Slight, initial ground motion towards South                       |

| DATE | STATION                                                                                       | COMPT | PHASE | G<br>h | M<br>m | T<br>s | Δ<br>km | REMARKS                                       |
|------|-----------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|---------|-----------------------------------------------|
| 19   | Chatra                                                                                        | Z     | iP    | 08     | 07     | 42     |         | Feeble, distant rarefaction                   |
| 19   | Chatra                                                                                        | Z     | iP    | 14     | 19     | 55     |         | Feeble, distant rarefaction                   |
| 19   | Dehra Dun                                                                                     | Z     | eP    | 18     | 08     | 54     |         | Tremor                                        |
| 19   | New Delhi                                                                                     | Z     | iP    | 19     | 27     | 14     |         | Slight, compression                           |
| 19   | Epc: 4.3°S, 103.19E. Near South Coast of Sumatra<br>H = 20h 37m 24.2s. h about 100 km (USCGS) |       |       |        |        |        |         |                                               |
|      |                                                                                               |       | iP    | 21     | 01     | 04     |         | Distant                                       |
|      |                                                                                               |       | i     |        | 03     | 30     |         |                                               |
|      | New Delhi                                                                                     | Z     | iP    | 21     | 04     | 58     |         | Slight                                        |
|      | Dehra Dun                                                                                     | Z     | eP    | 21     | 05     | 02     |         | Tremor                                        |
| 19   | New Delhi                                                                                     | Z     | iP    | 21     | 11     | 06     |         | Slight, rarefaction                           |
| 19   | Dehra Dun                                                                                     | Z     | eP    | 21     | 36     | 22     |         | Tremor                                        |
| 19   | New Delhi                                                                                     | Z     | iP    | 23     | 09     | 51     |         | Slight, compression                           |
|      | Chatra                                                                                        | Z     | iP    | 23     | 11     | 14     |         | Feeble, distant compression                   |
| 20   | Bokaro                                                                                        | NF    | iP    | 08     | 11     | 05     |         | Slight, tremor                                |
| 20   | Shillong                                                                                      | Z     | iP    | 09     | 20     | 48     | 110     | Slight                                        |
|      |                                                                                               |       | Sg    |        | 21     | 02     |         |                                               |
| 20   | Dehra Dun                                                                                     | Z     | eP    | 11     | 19     | 01     |         | Tremor                                        |
|      | New Delhi                                                                                     | Z     | eP    | 11     | 19     | 17     |         | Slight, rarefaction                           |
| 20   | Poona                                                                                         | Z     | iP    | 11     | 19     | 04     |         | Feeble, compression<br>other phases not clear |
| 20   | Shillong                                                                                      | Z     | ePg   | 12     | 00     | 12     |         | Slight, near                                  |
| 20   | Chatra                                                                                        | Z     | iPg   | 12     | 59     | 53     | 110     | Feeble, compression                           |
|      |                                                                                               |       | Sg    | 13     | 00     | 06     |         |                                               |
| 20   | Shillong                                                                                      | Z     | eP    | 13     | 12     | 54     |         | Slight, near                                  |
| 20   | Epc: 23.5°N, 93°E. - H = 15h 41m 22s (Shillong)                                               |       |       |        |        |        |         |                                               |
|      | Shillong                                                                                      | Z     | iP    | 15     | 42     | 08     | 300     | Slight, compression                           |
|      |                                                                                               |       | iS    |        | 42     | 42     |         |                                               |
|      | Tocklai                                                                                       | E     | eP    | 15     | 42     | 19     |         | Slight                                        |
|      |                                                                                               |       | e     |        | 42     | 28     |         |                                               |
|      | Chatra                                                                                        | Z     | iP    | 15     | 43     | 08     | 730     | Feeble, rarefaction                           |
|      |                                                                                               |       | S     |        | 44     | 28     |         |                                               |
| 20   | Shillong                                                                                      | Z     | eP    | 16     | 44     | 21     | 130     | Slight                                        |
|      |                                                                                               |       | Sg    |        | 44     | 38     |         |                                               |
|      | Chatra                                                                                        | Z     | eP    | 16     | 45     | 00     | 340     | Feeble                                        |
|      |                                                                                               |       | S     |        | 45     | 38     |         |                                               |



| DATE | STATION                                                                                    | COMPT | PHASE | G  | M  | T  | Δ    | REMARKS                                                                            |
|------|--------------------------------------------------------------------------------------------|-------|-------|----|----|----|------|------------------------------------------------------------------------------------|
|      |                                                                                            |       |       | h  | m  | s  | km   |                                                                                    |
| 20   | Epc: 22.8°N, 143.2°E. Mariana Islands Region<br>- H = 18h 42m 55.8s. h about 98 km (USCGS) |       |       |    |    |    |      |                                                                                    |
|      | Shillong                                                                                   | Z     | iP    | 19 | 01 | 22 |      | Slight, distant rarefaction                                                        |
|      | Dehra Dun                                                                                  | Z     | eP    | 19 | 02 | 49 |      | Tremor                                                                             |
|      | New Delhi                                                                                  | Z     | iP    | 19 | 02 | 53 |      | Slight, compression                                                                |
| 20   | Dehra Dun                                                                                  | Z     | eP    | 21 | 13 | 23 |      | Tremor                                                                             |
| 20   | Epc: 32°N, 94.6°E. Tibet. - H = 23h 10m 38.1s.<br>h about 25 km (USCGS)                    |       |       |    |    |    |      |                                                                                    |
|      | Shillong                                                                                   | Z     | iP    | 23 | 12 | 20 | 780  | Slight, rarefaction                                                                |
|      |                                                                                            | E     | iS    |    | 13 | 41 |      |                                                                                    |
|      |                                                                                            |       | S*    |    | 14 | 02 |      |                                                                                    |
|      |                                                                                            |       | Sg    |    | 14 | 20 |      |                                                                                    |
|      | Tocklai                                                                                    | E     | eP    | 23 | 12 | 22 |      | Slight, distant                                                                    |
|      |                                                                                            |       | i     |    | 14 | 28 |      |                                                                                    |
|      | Chatra                                                                                     | Z     | iP    | 23 | 12 | 44 | 940  | Feeble, compression                                                                |
|      |                                                                                            |       | S     |    | 14 | 22 |      |                                                                                    |
|      | Bokaro                                                                                     | N     | eP    | 23 | 13 | 20 | 1270 | Slight                                                                             |
|      |                                                                                            |       | PPP   |    | 13 | 49 |      |                                                                                    |
|      |                                                                                            |       | eS    |    | 15 | 29 |      |                                                                                    |
|      |                                                                                            |       | e     |    | 16 | 54 |      |                                                                                    |
|      | Dehra Dun                                                                                  | Z     | eP    | 23 | 14 | 02 |      |                                                                                    |
|      |                                                                                            |       | e     |    | 18 | 34 |      |                                                                                    |
|      | New Delhi                                                                                  | Z     | iP    | 23 | 14 | 14 |      | Slight, compression                                                                |
|      | Port Blair                                                                                 | N     | iP    | 23 | 15 | 16 |      |                                                                                    |
|      | Calcutta                                                                                   | E     | e     | 23 | 15 | 17 | 1270 | Slight                                                                             |
|      |                                                                                            |       | iS    |    | 15 | 36 |      |                                                                                    |
|      |                                                                                            |       | i     |    | 16 | 31 |      |                                                                                    |
|      |                                                                                            |       | M     |    | 18 | 16 |      |                                                                                    |
|      |                                                                                            |       | PcP   |    | 19 | 19 |      |                                                                                    |
|      | Madras                                                                                     | E     | eP    | 23 | 15 | 44 |      | Slight                                                                             |
|      |                                                                                            |       | e     |    | 20 | 06 |      |                                                                                    |
|      |                                                                                            |       | Lq    |    | 20 | 42 |      |                                                                                    |
|      |                                                                                            |       | M     |    | 24 | 10 |      |                                                                                    |
|      | Poona                                                                                      | Z     | iP    | 23 | 15 | 45 |      | Slight, other phases not clear. Initial ground motion towards East and rarefaction |
|      | Bombay                                                                                     | NE    | eS    | 23 | 20 | 13 |      | Slight                                                                             |
|      |                                                                                            |       | i     |    | 20 | 28 |      |                                                                                    |
|      |                                                                                            |       | e     |    | 21 | 14 |      |                                                                                    |
|      |                                                                                            |       | M     |    | 22 | 58 |      |                                                                                    |
|      | Hyderabad                                                                                  | N     | M     | 23 | 21 | 15 |      | Per=15 sec, Grds=4 μ                                                               |
|      | Shillong                                                                                   | Z     | iP    | 23 | 54 | 20 |      | Slight, distant rarefaction                                                        |

| DATE | STATION                                                                                                                                                    | COMPT | PHASE                                                                   | G  | M  | T  | Δ    | REMARKS                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------|----|----|----|------|-----------------------------------------------------------------------|
|      |                                                                                                                                                            |       |                                                                         | h  | m  | s  | km   |                                                                       |
| 21   | Shillong                                                                                                                                                   | Z     | iP                                                                      | 02 | 43 | 16 |      | Slight, distant rarefaction                                           |
| 21   | Chatra                                                                                                                                                     | Z     | eP                                                                      | 08 | 00 | 30 |      | Feeble, distant                                                       |
| 21   | Chatra                                                                                                                                                     | Z     | iP                                                                      | 13 | 17 | 29 |      | Feeble, other phases not clear                                        |
| 21   | Chatra                                                                                                                                                     | Z     | eP<br>eS                                                                | 15 | 50 | 24 | 140  | Feeble                                                                |
|      |                                                                                                                                                            |       |                                                                         |    | 50 | 42 |      |                                                                       |
| 21   | Chatra                                                                                                                                                     | Z     | iP<br>S                                                                 | 20 | 02 | 46 | 800  | Feeble, rarefaction                                                   |
|      |                                                                                                                                                            |       |                                                                         |    | 04 | 09 |      |                                                                       |
| 21   | Epc: 3°S, 115°E. South of Borneo. - H = 22h 58m 06s<br>h about 600 km (Shillong)<br>5.9°S, 113°E. Java Sea. - H = 22h 57m 51.2s.<br>h about 631 km (USCGS) |       |                                                                         |    |    |    |      |                                                                       |
|      | Port Blair                                                                                                                                                 | N     | iP<br>iS<br>i                                                           | 23 | 02 | 46 | 2900 | Slight, initial ground movement towards South, other phases not clear |
|      |                                                                                                                                                            |       |                                                                         |    | 06 | 37 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 12 | 24 |      |                                                                       |
|      | Shillong                                                                                                                                                   | NEZ   | iP<br>PP<br>pP<br>PPP<br>sP<br>ScP<br>iS<br>SS<br>sS<br>ScS<br>SSS<br>i | 23 | 04 | 17 | 4000 | Slight, initial ground motion towards South, East and rarefaction     |
|      |                                                                                                                                                            |       |                                                                         |    | 05 | 57 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 06 | 03 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 06 | 45 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 07 | 05 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 11 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 15 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 12 | 15 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 12 | 21 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 13 | 24 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 13 | 29 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 21 | 27 |      |                                                                       |
|      | Calcutta                                                                                                                                                   | E     | iP<br>iS                                                                | 23 | 04 | 18 | 4100 | Moderate                                                              |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 22 |      |                                                                       |
|      | Madras                                                                                                                                                     | E     | iP<br>pP<br>PeP<br>e<br>iS<br>sS<br>SeS<br>Lq                           | 23 | 04 | 18 | 4120 | Moderate, initial ground motion towards East                          |
|      |                                                                                                                                                            |       |                                                                         |    | 06 | 01 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 06 | 23 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 08 | 11 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 25 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 12 | 29 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 13 | 21 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 13 | 34 |      |                                                                       |
|      | Visakhapatnam                                                                                                                                              | NE    | iP<br>iS                                                                | 23 | 04 | 19 | 4120 | Moderate, initial ground movement towards South and East              |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 23 |      |                                                                       |
|      | Tocklai                                                                                                                                                    | E     | eP<br>i                                                                 | 23 | 04 | 19 |      | Slight                                                                |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 20 |      |                                                                       |
|      | Bokaro                                                                                                                                                     | NE    | iP<br>PP<br>e<br>e<br>S<br>sS<br>e<br>M                                 | 23 | 04 | 37 | 4390 | Slight, initial ground motion towards South and East                  |
|      |                                                                                                                                                            |       |                                                                         |    | 07 | 21 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 07 | 31 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 08 | 58 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 09 | 58 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 13 | 12 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 13 | 34 |      |                                                                       |
|      |                                                                                                                                                            |       |                                                                         |    | 17 | 38 |      |                                                                       |

| DATE | STATION                                                                      | COMPT  | PHASE | G  | M  | T  | $\Delta$ | REMARKS           |
|------|------------------------------------------------------------------------------|--------|-------|----|----|----|----------|-------------------|
|      |                                                                              |        |       | h  | m  | s  | km       |                   |
| 21   | Chatra<br>Contd.                                                             | ZNE    | iP    | 23 | 04 | 47 | 4700     | Slight            |
|      |                                                                              |        | PP    |    | 06 | 02 |          |                   |
|      |                                                                              |        | PcP   |    | 07 | 26 |          |                   |
|      |                                                                              |        | S     |    | 10 | 19 |          |                   |
|      |                                                                              |        | PcS   |    | 11 | 21 |          |                   |
|      |                                                                              |        | Lq    |    | 12 | 20 |          |                   |
|      |                                                                              |        | SS    |    | 12 | 26 |          |                   |
|      |                                                                              |        | SSS   |    | 12 | 45 |          |                   |
|      |                                                                              |        | Lr    |    | 13 | 51 |          |                   |
|      |                                                                              | M      |       | 16 | -  |    |          |                   |
|      | Poona                                                                        | Z      | iP    | 23 | 05 | 21 | 4990     | Moderate, initial |
|      |                                                                              |        | PP    |    | 06 | 53 |          | ground motion     |
|      |                                                                              |        | PPP   |    | 07 | 12 |          | towards South,    |
|      |                                                                              |        | iS    |    | 11 | 17 |          | East and          |
|      |                                                                              |        | PcS   |    | 11 | 25 |          | rarefaction       |
|      |                                                                              |        | Lq    |    | 14 | 07 |          |                   |
|      |                                                                              |        | sS    |    | 14 | 33 |          |                   |
|      |                                                                              |        | M     |    | 19 | 06 |          |                   |
|      | Sohore                                                                       | NE     | iP    | 23 | 05 | 23 | 5000     | Slight, other     |
|      |                                                                              |        | e     |    | 10 | 42 |          | phases not clear  |
|      |                                                                              |        | eS    |    | 11 | 20 |          |                   |
|      | Bombay                                                                       | NE     | iP    | 23 | 05 | 29 | 5170     | Moderate          |
|      |                                                                              |        | pP    |    | 07 | 19 |          |                   |
|      |                                                                              |        | PP    |    | 07 | 28 |          |                   |
|      |                                                                              |        | sP    |    | 08 | 18 |          |                   |
|      |                                                                              |        | ScP   |    | 10 | 21 |          |                   |
|      |                                                                              |        | sPP   |    | 10 | 46 |          |                   |
|      |                                                                              |        | iS    |    | 11 | 34 |          |                   |
|      |                                                                              |        | e     |    | 11 | 57 |          |                   |
|      |                                                                              |        | e     |    | 12 | 54 |          |                   |
|      |                                                                              |        | e     |    | 13 | 59 |          |                   |
|      |                                                                              |        | ScS   |    | 14 | 15 |          |                   |
| sS   |                                                                              | 14     | 48    |    |    |    |          |                   |
| SS   |                                                                              | 15     | 16    |    |    |    |          |                   |
|      | New Delhi                                                                    | ENZ    | iP    | 23 | 05 | 44 | 5410     | Slight, initial   |
|      |                                                                              |        | i     |    | 06 | 57 |          | ground motion     |
|      |                                                                              |        | PP    |    | 07 | 34 |          | towards South,    |
|      |                                                                              |        | i     |    | 08 | 38 |          | East and          |
|      |                                                                              |        | i     |    | 10 | 28 |          | rarefaction       |
|      |                                                                              |        | i     |    | 11 | 59 |          |                   |
|      |                                                                              |        | iS    |    | 12 | 04 |          |                   |
|      |                                                                              |        | i     |    | 14 | 27 |          |                   |
| Lq   |                                                                              | 16     | 20    |    |    |    |          |                   |
|      | Dehra Dun                                                                    | Z<br>N | eP    | 23 | 05 | 48 | 5430     | Moderate          |
|      |                                                                              |        | PPP   |    | 07 | 57 |          |                   |
|      |                                                                              |        | iS    |    | 12 | 07 |          |                   |
|      |                                                                              |        | SS    |    | 14 | 32 |          |                   |
|      |                                                                              |        | SSS   |    | 15 | 45 |          |                   |
|      |                                                                              |        | M     |    | 21 | 19 |          |                   |
|      | Hyderabad                                                                    | E      | e     | 23 | 10 | 08 |          |                   |
| 21   | Chatra                                                                       | Z      | iP    | 23 | 17 | 16 |          | Feeble, distant   |
| 22   | Epc: 5.9°S, 112.9°E. Java Sea. - H = 00h 19m 43.1s<br>h about 611 km (USCGS) |        |       |    |    |    |          |                   |
|      | Port Blair                                                                   | N      | iP    | 00 | 24 | 39 | 2920     |                   |

| DATE | STATION                     | COMPT    | PHASE                                                                   | G<br>h | M<br>m | T<br>s                                                                                               | Δ<br>km | REMARKS                                                           |
|------|-----------------------------|----------|-------------------------------------------------------------------------|--------|--------|------------------------------------------------------------------------------------------------------|---------|-------------------------------------------------------------------|
| 22   | Port Blair<br>Contd. Contd. | N        | pP<br>iS                                                                | 00     | 25     | 54<br>28 32                                                                                          |         |                                                                   |
|      | Shillong                    | ZNE<br>E | iP<br>PP<br>pP<br>PcP<br>sP<br>ScP<br>iS<br>SS<br>sS<br>ScS<br>SSS<br>i | 00     | 23     | 10<br>27 51<br>27 57<br>28 33<br>28 59<br>21 03<br>31 11<br>24 11<br>34 26<br>35 24<br>35 45<br>2 40 | 4050    | Slight, initial ground motion towards North, West and compression |
|      | Madras                      | E        | iP<br>pP<br>PcP<br>e<br>iS<br>sS<br>ScS                                 | 00     | 26     | 10<br>27 50<br>23 14<br>30 05<br>31 17<br>34 21<br>35 12                                             | 4140    | Moderate, initial ground motion towards East                      |
|      | Tocklai                     | E        | eP<br>iS<br>i                                                           | 00     | 23     | 12<br>31 15<br>31 54                                                                                 | 4080    | Slight                                                            |
|      | Visakhapatnam               | NE       | eP<br>i                                                                 | 00     | 23     | 12<br>31 13                                                                                          |         |                                                                   |
|      | Calcutta                    | E        | eP<br>iS                                                                | 00     | 26     | 13<br>31 17                                                                                          | 4120    | Slight                                                            |
|      | Bokaro                      | NE       | eP<br>pP<br>iS<br>e<br>e<br>sS                                          | 00     | 26     | 31<br>28 12<br>31 51<br>33 12<br>33 48<br>35 02                                                      | 4190    | Slight, initial ground motion towards North, West.                |
|      | Chitra                      | NE       | iP<br>PcP<br>S<br>Lq<br>SS<br>SSS<br>Lr<br>ScS<br>M                     | 00     | 24     | 43<br>23 17<br>32 10<br>34 26<br>34 33<br>34 52<br>35 58<br>36 58<br>38 -                            | 4270    | Feeble, rarefaction                                               |
|      | Poona                       | Z        | iP<br>PP<br>PPP<br>iS<br>PcS<br>SS<br>Lq<br>SSS<br>M                    | 00     | 27     | 15<br>23 53<br>29 19<br>23 12<br>33 18<br>35 43<br>36 19<br>36 19<br>40 58                           | 4990    | Moderate, initial ground motion towards East and rarefaction      |
|      | Bombay                      | NE       | iP<br>pP                                                                | 00     | 27     | 22<br>29 10                                                                                          | 5170    | Moderate                                                          |

| DATE | STATION                                                    | COMPT  | PHASE                                     | G  | M  | T                                                                                      | Δ    | REMARKS                                                           |
|------|------------------------------------------------------------|--------|-------------------------------------------|----|----|----------------------------------------------------------------------------------------|------|-------------------------------------------------------------------|
|      |                                                            |        |                                           | h  | m  | s                                                                                      | km   |                                                                   |
| 22   | Bombay<br>Contd. Contd.                                    | NE     | iS<br>e<br>ScS<br>sS                      | 00 | 33 | 27<br>35<br>46<br>36<br>08<br>36<br>41                                                 |      |                                                                   |
|      | New Delhi                                                  | ENZ    | iP<br>pP<br>i<br>iS<br>PS<br>i<br>i<br>sS | 00 | 27 | 37<br>29<br>25<br>31<br>51<br>33<br>53<br>34<br>01<br>34<br>19<br>26<br>23<br>37<br>13 | 5370 | Slight, initial ground motion towards North, West and compression |
|      | Dehra Dun                                                  | Z<br>N | eP<br>pP<br>iS<br>SS<br>sS<br>Lr<br>M     | 00 | 27 | 43<br>29<br>30<br>34<br>00<br>36<br>58<br>37<br>23<br>39<br>43<br>43<br>00             | 5380 | Moderate                                                          |
|      | Sehore                                                     | NE     | i<br>i                                    | 00 | 29 | 02<br>33<br>15                                                                         |      | Slight, phases not clear                                          |
| 22   | Port Blair                                                 | N      | iP                                        | 00 | 46 | 24                                                                                     |      |                                                                   |
| 22   | Chatra                                                     | Z      | iP                                        | 04 | 48 | 45                                                                                     |      | Feeble, distant rarefaction                                       |
| 22   | Shillong                                                   | Z      | iP                                        | 05 | 33 | 46                                                                                     |      | Slight                                                            |
| 22   | Shillong                                                   | Z      | eP                                        | 07 | 24 | 54                                                                                     |      | Slight, distant                                                   |
|      | Dehra Dun                                                  | Z      | eP                                        | 07 | 25 | 58                                                                                     |      | Tremor                                                            |
|      | New Delhi                                                  | Z      | iP                                        | 07 | 26 | 12                                                                                     |      | Slight, rarefaction                                               |
| 22   | Epc: 36°N, 72°E. Hindukush. - H = 08h 57m 30s (Shillong)   |        |                                           |    |    |                                                                                        |      |                                                                   |
|      | Dehra Dun                                                  | Z      | eP<br>eS                                  | 08 | 59 | 17<br>09<br>01<br>06                                                                   | 790  | Tremor                                                            |
|      | New Delhi                                                  | Z      | eP<br>iS                                  | 08 | 59 | 32<br>09<br>01<br>06                                                                   | 910  | Slight                                                            |
|      | Chatra                                                     | Z      | iP                                        | 09 | 01 | 10                                                                                     |      | Slight                                                            |
| 22   | New Delhi                                                  | Z      | iP                                        | 10 | 05 | 49                                                                                     |      | Slight, compression                                               |
| 22   | Epc: 35°N, 69.5°E. Hindukush. - H = 10h 33m 18s (Shillong) |        |                                           |    |    |                                                                                        |      |                                                                   |
|      | Dehra Dun                                                  | Z      | eP<br>iS                                  | 10 | 35 | 22<br>36<br>57                                                                         | 920  | Feeble                                                            |
|      | New Delhi                                                  | Z      | iP<br>iS                                  | 10 | 35 | 30<br>37<br>11                                                                         | 930  | Slight, rarefaction                                               |
|      | Chatra                                                     | Z      | eP                                        | 10 | 37 | 09                                                                                     |      | Feeble, distant                                                   |
|      | Shillong                                                   | Z      | iP                                        | 10 | 37 | 58                                                                                     |      | Slight, distant compression                                       |

| DATE | STATION                                                                                                                                                   | COMPT    | PHASE | G  | M  | T  | Δ    | REMARKS                                                                 |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|----|----|----|------|-------------------------------------------------------------------------|
|      |                                                                                                                                                           |          |       | h  | m  | s  | km   |                                                                         |
| 22   | Epc: 32.2°S, 66.9°W. San Luis Province, Argentina<br>- H=12h 07m 05.5s. h abo, t 249 km (USCGS)                                                           |          |       |    |    |    |      |                                                                         |
|      | Poona                                                                                                                                                     | Z        | iPKP  | 12 | 26 | 45 |      | Slight, compression<br>other phases not clear                           |
|      | New Delhi                                                                                                                                                 | Z        | ePKP  | 12 | 27 | 00 |      | Slight, compression                                                     |
|      | Behra Dun                                                                                                                                                 | Z        | ePKP  | 12 | 27 | 08 |      | Tremor                                                                  |
|      | 109.1°E, New Guinea Region<br>1.1°S, 152.00°E. (Shillong)<br>3.2 m, 158.3°E. Near North Coast of New Guinea<br>- H = 1h 13m 08.0s. h abo, t 25 km (USCGS) |          |       |    |    |    |      |                                                                         |
|      | Tocklai                                                                                                                                                   | E        | eP    | 15 | 22 | 45 |      | Slight, distant, initial<br>ground motion towards East.                 |
|      | Shillong                                                                                                                                                  | NSE<br>N | iP    | 15 | 22 | 53 | 6290 | Slight, initial ground<br>motion towards North,<br>West and compression |
|      |                                                                                                                                                           |          | eCP   | 23 | 47 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PP    | 25 | 51 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PPP   | 27 | 08 |    |      |                                                                         |
|      |                                                                                                                                                           |          | iS    | 31 | 14 |    |      |                                                                         |
|      |                                                                                                                                                           |          | ScS   | 33 | 32 |    |      |                                                                         |
|      |                                                                                                                                                           |          | SS    | 34 | 20 |    |      |                                                                         |
|      |                                                                                                                                                           |          | Lr    | 39 | 12 |    |      |                                                                         |
|      |                                                                                                                                                           |          | M     | 44 | 16 |    |      |                                                                         |
|      | Calcutta                                                                                                                                                  | E        | eP    | 15 | 23 | 09 |      | Slight                                                                  |
|      |                                                                                                                                                           |          | i     | 27 | 55 |    |      |                                                                         |
|      | Chatra                                                                                                                                                    | Z        | iP    | 15 | 23 | 20 | 6360 | Feeble, rarefaction                                                     |
|      |                                                                                                                                                           |          | PcP   | 23 | 53 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PP    | 24 | 59 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PPP   | 26 | 36 |    |      |                                                                         |
|      |                                                                                                                                                           |          | S     | 31 | 42 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PS    | 31 | 52 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PPS   | 32 | 02 |    |      |                                                                         |
|      |                                                                                                                                                           |          | SS    | 33 | 21 |    |      |                                                                         |
|      |                                                                                                                                                           |          | SSS   | 35 | 32 |    |      |                                                                         |
|      |                                                                                                                                                           |          | Lq    | 39 | 05 |    |      |                                                                         |
|      |                                                                                                                                                           |          | Lr    | 42 | 02 |    |      |                                                                         |
|      |                                                                                                                                                           |          | M     | 43 | -  |    |      |                                                                         |
|      | Bokaro                                                                                                                                                    | NE       | eP    | 15 | 23 | 23 | 6860 | Slight, initial ground<br>motion towards North<br>and West              |
|      |                                                                                                                                                           |          | PP    | 25 | 37 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PPP   | 27 | 11 |    |      |                                                                         |
|      |                                                                                                                                                           |          | S     | 31 | 45 |    |      |                                                                         |
|      |                                                                                                                                                           |          | ScS   | 32 | 53 |    |      |                                                                         |
|      |                                                                                                                                                           |          | SSS   | 38 | 23 |    |      |                                                                         |
|      |                                                                                                                                                           |          | Lq    | 39 | 09 |    |      |                                                                         |
|      |                                                                                                                                                           |          | M     | 47 | 17 |    |      |                                                                         |
|      | Visakhapatnam                                                                                                                                             | NE       | iP    | 15 | 23 | 25 | 6950 | Moderate, initial<br>ground motion<br>towards South and<br>East         |
|      |                                                                                                                                                           |          | PcP   | 24 | 05 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PP    | 25 | 44 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PPP   | 27 | 18 |    |      |                                                                         |
|      |                                                                                                                                                           |          | iS    | 31 | 52 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PS    | 32 | 07 |    |      |                                                                         |
|      |                                                                                                                                                           |          | PPS   | 32 | 18 |    |      |                                                                         |
|      |                                                                                                                                                           |          | SS    | 35 | 54 |    |      |                                                                         |
|      |                                                                                                                                                           |          | SSS   | 38 | 47 |    |      |                                                                         |
|      | Das                                                                                                                                                       | E        | eP    | 15 | 23 | 37 | 7130 | Moderate                                                                |

| DATE | STATION                 | COMPT   | PHASE       | G  | M  | T  | $\Delta$ | REMARKS                    |
|------|-------------------------|---------|-------------|----|----|----|----------|----------------------------|
| 22   |                         |         |             | h  | m  | s  | km       |                            |
| 22   | Madras<br>Contd. Contd. | E       | PcP         | 15 | 24 | 17 |          |                            |
|      |                         |         | PP          |    | 25 | 53 |          |                            |
|      |                         |         | PPP         |    | 27 | 32 |          |                            |
|      |                         |         | iS          |    | 32 | 14 |          |                            |
|      |                         |         | PS          |    | 32 | 33 |          |                            |
|      |                         |         | PPS         |    | 32 | 42 |          |                            |
|      |                         |         | SkS         |    | 33 | 28 |          |                            |
|      |                         |         | Lq          |    | 39 | 52 |          |                            |
|      |                         |         | Lr          |    | 42 | 53 |          |                            |
|      |                         |         | M           |    | 48 | 15 |          |                            |
|      | Kodaikanal              | E       | iP          | 15 | 23 | 51 | 7290     | Slight, distant            |
|      |                         |         | i           |    | 26 | 12 |          |                            |
|      |                         |         | iS          |    | 32 | 45 |          |                            |
|      | Hyderabad               | E       | iP          | 15 | 23 | 55 | 7400     | Moderate, initial          |
|      |                         |         | e           |    | 25 | 27 |          | ground motion              |
|      |                         |         | PP          |    | 26 | 27 |          | towards West               |
|      |                         |         | PPP         |    | 27 | 57 |          |                            |
|      |                         |         | iS          |    | 32 | 46 |          |                            |
|      |                         |         | PPS         |    | 33 | 51 |          |                            |
|      |                         |         | Lq          |    | 40 | 33 |          |                            |
|      |                         |         | Lr          |    | 45 | 30 |          |                            |
|      |                         |         | M           |    | 50 | 21 |          | Per: 23 sec, Grds=10 $\mu$ |
|      | Dehra Dun               | Z<br>N  | eP          | 15 | 24 | 18 | 7340     | Moderate                   |
|      |                         |         | PP          |    | 27 | 02 |          |                            |
|      |                         |         | PPP         |    | 23 | 00 |          |                            |
|      |                         |         | iS          |    | 33 | 31 |          |                            |
|      |                         |         | SSS         |    | 40 | 08 |          |                            |
|      |                         |         | Lr          |    | 46 | 23 |          |                            |
|      |                         |         | M           |    | 51 | 57 |          |                            |
|      | New Delhi               | ENZ     | iP          | 15 | 24 | 18 | 7800     | Moderate, initial          |
|      |                         |         | PcP         |    | 24 | 38 |          | ground motion              |
|      |                         |         | PP          |    | 26 | 53 |          | towards North,             |
|      |                         |         | PPP         |    | 28 | 49 |          | West and compression       |
|      |                         |         | iS          |    | 33 | 29 |          |                            |
|      |                         |         | i           |    | 33 | 39 |          |                            |
|      |                         |         | PS          |    | 34 | 09 |          |                            |
|      |                         |         | PPS/ScS/SKS |    | 34 | 16 |          |                            |
|      |                         |         | i           |    | 34 | 59 |          |                            |
|      |                         |         | Lq          |    | 43 | 17 |          |                            |
|      | Poona                   | Z       | iP          | 15 | 24 | 23 | 7840     | Moderate, initial          |
|      |                         |         | PcP         |    | 24 | 43 |          | ground motion              |
|      |                         |         | PP          |    | 27 | 00 |          | towards North,             |
|      |                         |         | PPP/PcS     |    | 28 | 40 |          | West and compression       |
|      |                         |         | iS          |    | 33 | 37 |          |                            |
|      |                         |         | PS          |    | 34 | 01 |          |                            |
|      |                         |         | PPS         |    | 34 | 14 |          |                            |
|      |                         |         | SS          |    | 38 | 06 |          |                            |
|      |                         |         | SSS         |    | 41 | 20 |          |                            |
|      |                         |         | Lq          |    | 42 | 44 |          |                            |
|      |                         |         | PkkP1       |    | 43 | 44 |          |                            |
|      |                         |         | Lr          |    | 46 | 10 |          |                            |
|      |                         |         | PkkS1       |    | 47 | 17 |          |                            |
|      |                         |         | SkkS2       |    | 50 | 52 |          |                            |
|      |                         |         | M           |    | 51 | 51 |          |                            |
|      | Bombay                  | NE<br>E | eP          | 15 | 24 | 30 | 8000     |                            |
|      |                         |         | PcP         |    | 24 | 45 |          |                            |
|      |                         |         | e           |    | 25 | 36 |          |                            |

| DATE         | STATION                                                                                           | COMPT | PHASE | G M T |    |    | Δ                                                                   | REMARKS |
|--------------|---------------------------------------------------------------------------------------------------|-------|-------|-------|----|----|---------------------------------------------------------------------|---------|
|              |                                                                                                   |       |       | h     | m  | s  |                                                                     |         |
| 22<br>Contd. | Bombay<br>Contd.                                                                                  | E     | PP    | 15    | 26 | 59 |                                                                     |         |
|              |                                                                                                   |       | PPP   |       | 28 | 51 |                                                                     |         |
|              |                                                                                                   |       | IS    |       | 32 | 51 |                                                                     |         |
|              |                                                                                                   |       | SKS   |       | 34 | 15 |                                                                     |         |
|              |                                                                                                   |       | SCS   |       | 34 | 22 |                                                                     |         |
|              |                                                                                                   |       | PS    |       | 34 | 25 |                                                                     |         |
|              |                                                                                                   |       | PPS   |       | 34 | 43 |                                                                     |         |
|              |                                                                                                   |       | e     |       | 35 | 22 |                                                                     |         |
|              |                                                                                                   |       | e     |       | 36 | 07 |                                                                     |         |
|              |                                                                                                   |       | SS    |       | 38 | 24 |                                                                     |         |
|              |                                                                                                   | Lr    | 46    | 38    |    |    |                                                                     |         |
|              |                                                                                                   | FN    | M     | 16    | 10 | -  | Per=16 sec, Grds=2 μ                                                |         |
| 22           | Epic: 2.4°S, 130.3°E, Near North Coast of New Guinea<br>H = 16h 16m 26.4s. h about 44 km (USCGS)  |       |       |       |    |    |                                                                     |         |
|              | New Delhi                                                                                         | Z     | iP    | 16    | 27 | 15 | Slight, compression                                                 |         |
|              | Dehra Dun                                                                                         | Z     | eP    | 16    | 27 | 16 | Tremor                                                              |         |
|              | Poona                                                                                             | Z     | iP    | 16    | 27 | 20 | Tremor, compression                                                 |         |
| 22           | Epic: 22.1°S, 67.5°W, Catamarca Province, Argentina.<br>H = 12h 59m 00.8s. h about 217 km (USCGS) |       |       |       |    |    |                                                                     |         |
|              | Dehra Dun                                                                                         | Z     | ePKP  | 19    | 13 | 20 | Feeble                                                              |         |
|              |                                                                                                   |       | e     |       | 13 | 33 |                                                                     |         |
|              | New Delhi                                                                                         | Z     | i     | 19    | 13 | 40 | Slight, compression                                                 |         |
|              |                                                                                                   |       | i     |       | 13 | 20 |                                                                     |         |
|              |                                                                                                   |       | i     |       | 13 | 30 |                                                                     |         |
|              | Poona                                                                                             | Z     | i     | 19    | 13 | 15 | Tremor                                                              |         |
|              | Chatra                                                                                            | Z     | i     | 19    | 13 | 18 | Feeble                                                              |         |
| 22           | New Delhi                                                                                         | Z     | iP    | 21    | 10 | 02 | Slight, rarefaction                                                 |         |
| 22           | Chatra                                                                                            | Z     | eP    | 22    | 37 | 33 | 440 Feeble                                                          |         |
|              |                                                                                                   |       | eS    |       | 38 | 26 |                                                                     |         |
| 22           | Chatra                                                                                            | Z     | eP    | 00    | 33 | 57 | Feeble, distant                                                     |         |
| 23           | Chatra                                                                                            | Z     | iP    | 02    | 04 | 32 | rarefaction                                                         |         |
| 23           | Chatra                                                                                            | Z     | iP    | 03    | 35 | 07 | Rarefaction                                                         |         |
| 23           | Chatra                                                                                            | Z     | iP    | 04    | 04 | 34 | Compression, motion of uncertain nature probably due near landslide |         |
| 23           | Madras                                                                                            | E     | eP    | 04    | 05 | 25 | Feeble, waves                                                       |         |
|              |                                                                                                   |       | eM    |       | 11 | 00 |                                                                     |         |
| 23           | Chatra                                                                                            | Z     | iP    | 04    | 31 | 07 | Feeble, distant rarefaction                                         |         |
|              | New Delhi                                                                                         | Z     | iP    | 04    | 31 | 42 | Slight, compression                                                 |         |
| 23           | Poona                                                                                             | Z     | iP    | 05    | 54 | 15 | Tremor, compression                                                 |         |
| 23           | Tocklai                                                                                           | E     | eP    | 06    | 12 | 55 | Slight, distant                                                     |         |



| DATE | STATION          | COMPT   | PHASE                 | G<br>h | M<br>m | T<br>s                        | $\Delta$<br>km | REMARKS                                                     |
|------|------------------|---------|-----------------------|--------|--------|-------------------------------|----------------|-------------------------------------------------------------|
| 23   | Chatra<br>Contd. | Z       | iP<br>e               | 06     | 14     | 09<br>16 13                   |                | Feeble, compression                                         |
|      | Shillong         | ZN<br>N | iP<br>Lq<br>iS<br>SSS | 06     | 14     | 37<br>15 43<br>15 57<br>16 23 | 770            | Slight, initial ground motion towards North and compression |
|      | Calcutta         | E       | eP                    | 06     | 14     | 40                            |                | Slight                                                      |
|      | Dehra Dun        | Z       | eP<br>e               | 06     | 15     | 50<br>19 37                   |                | Feeble                                                      |
|      | New Delhi        | Z       | iP                    | 06     | 15     | 58                            |                | Slight, compression                                         |
|      | Bombay           | E       | e<br>e<br>e<br>e      | 06     | 20     | 16<br>21 23<br>21 37<br>25 43 |                | Feeble                                                      |
| 23   | Chatra           | Z       | iP                    | 07     | 33     | 41                            |                | Compression, feeble probably local land slide               |
| 23   | New Delhi        | Z       | iP                    | 09     | 27     | 46                            |                | Slight, rarefaction                                         |
| 23   | Chatra           | Z       | eP                    | 12     | 48     | 55                            |                | Feeble, distant                                             |
| 23   | Chatra           | Z       | iP<br>S               | 20     | 00     | 42<br>01 20                   | 340            | Feeble, rarefaction                                         |
| 24   | Tocklai          | E       | eP<br>i               | 00     | 27     | 18<br>28 30                   |                | Slight, distant                                             |
|      | Chatra           | Z       | iP<br>e               | 00     | 28     | 38<br>30 41                   |                | Feeble, rarefaction                                         |
|      | Shillong         | ZN<br>N | eP<br>iS              | 00     | 29     | 06<br>30 25                   | 730            | Slight                                                      |
|      | New Delhi        | Z       | iP                    | 00     | 30     | 30                            |                | Slight, rarefaction                                         |
|      | Calcutta         | E       | e                     | 00     | 32     | 23                            |                | Feeble                                                      |
|      | Bombay           | E       | e<br>e<br>e           | 00     | 36     | 19<br>39 57<br>40 17          |                | Feeble                                                      |
| 24   | New Delhi        | Z       | iP                    | 01     | 56     | 33                            |                | Slight, rarefaction                                         |
| 24   | New Delhi        | Z       | iP<br>i               | 07     | 27     | 05<br>27 08                   |                | Slight, compression                                         |
| 24   | Shillong         | Z       | eP                    | 09     | 39     | 08                            |                | Slight, distant                                             |
| 24   | Shillong         | Z       | eP                    | 12     | 22     | 52                            |                | Slight, distant                                             |
| 24   | Madras           | E       | iP<br>eS<br>M         | 13     | 01     | 16<br>01 42<br>01 47          | 220            | Slight, initial ground motion towards West                  |
| 24   | Poona            | Z       | iP                    | 13     | 04     | 10                            |                | Tremor                                                      |

| DATE | STATION                                                                                                                                                      | COMP     | PHASE                                                                         | G M T                                                                                                               | Δ    | REMARKS                                                          |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------|
|      |                                                                                                                                                              |          |                                                                               | h m s                                                                                                               | km   |                                                                  |
| 24   | Epc: 4°S, 144°E. New Guinea Region.<br>- H = 12h 59m 27s (Shillong)<br>5.7°S, 145°E. Near Coast of New Guinea<br>- H = 12h 59m 30.9s. h about 111 km (USCGS) |          |                                                                               |                                                                                                                     |      |                                                                  |
|      | Port Blair                                                                                                                                                   | N        | eP<br>iS                                                                      | 13 08 57<br>16 31                                                                                                   | 5920 | Slight                                                           |
|      | Tocklai                                                                                                                                                      | E        | eP                                                                            | 13 09 25                                                                                                            |      | Slight, distant                                                  |
|      | Shillong                                                                                                                                                     | NEZ<br>E | iP<br>pP<br>PP<br>PPP<br>iS<br>PS<br>sP<br>ScS                                | 13 09 35<br>10 10<br>11 37<br>13 11<br>17 39<br>17 54<br>18 34<br>19 05                                             | 6520 | Slight, initial ground motion towards South East and rarefaction |
|      | Calcutta                                                                                                                                                     | E        | iP<br>iS                                                                      | 13 09 45<br>18 13                                                                                                   | 6950 | Moderate                                                         |
|      | Bokaro                                                                                                                                                       | NE       | iP<br>PcP<br>PP<br>PcS<br>S<br>ScS<br>SS<br>M                                 | 13 10 03<br>10 32<br>12 26<br>14 32<br>18 40<br>19 47<br>22 32<br>24 35                                             | 7130 | Slight                                                           |
|      | Chatra                                                                                                                                                       | Z        | iP<br>PcP<br>FP<br>PPP<br>PcS<br>S<br>PS<br>PPS<br>SS<br>SSS<br>Lq<br>Lr<br>M | 13 10 04<br>10 38<br>12 19<br>13 57<br>14 44<br>18 36<br>18 51<br>19 05<br>22 49<br>25 27<br>26 05<br>28 59<br>24 - | 7040 | Feeble, rarefaction                                              |
|      | Visakhapatnam                                                                                                                                                | NE       | iP<br>PP<br>PPP<br>iS<br>PS<br>PPS                                            | 13 10 11<br>12 30<br>14 06<br>18 49<br>19 06<br>19 21                                                               | 7140 | Moderate, initial ground motion towards South, East              |
|      | Madras                                                                                                                                                       | E        | iP<br>e<br>PcP<br>e<br>e<br>iS<br>PS<br>PPS<br>SKS<br>SS<br>Lr                | 13 10 21<br>10 47<br>10 56<br>11 10<br>13 53<br>19 06<br>19 27<br>19 36<br>20 14<br>23 14<br>30 17                  | 7290 | Moderate, initial ground motion towards East                     |

| DATE      | STATION             | COMPT | PHASE | G  | M  | T  | Δ                    | REMARKS                                                                         |
|-----------|---------------------|-------|-------|----|----|----|----------------------|---------------------------------------------------------------------------------|
|           |                     |       |       | h  | m  | s  | km                   |                                                                                 |
| 24        | Hyderabad<br>Contd. | E     | iP    | 13 | 10 | 34 | 7570                 | Slight, initial<br>ground motion<br>towards East                                |
|           |                     |       | PcP   |    | 10 | 52 |                      |                                                                                 |
|           |                     |       | PP    |    | 13 | 25 |                      |                                                                                 |
|           |                     |       | iS    |    | 19 | 34 |                      |                                                                                 |
|           |                     |       | PPS   |    | 20 | 21 |                      |                                                                                 |
|           |                     |       | SSS   |    | 27 | 21 |                      |                                                                                 |
|           |                     |       | Lq    |    | 28 | 53 |                      |                                                                                 |
|           |                     | M     |       | 33 | 46 |    | Per=12 sec, Grds=2 μ |                                                                                 |
| Dehra Dun | Z<br>N              |       | eP    | 13 | 10 | 53 | 8000                 | Moderate                                                                        |
|           |                     |       | PPP   |    | 15 | 30 |                      |                                                                                 |
|           |                     |       | iS    |    | 20 | 17 |                      |                                                                                 |
|           |                     |       | SS    |    | 24 | 23 |                      |                                                                                 |
|           |                     |       | Lr    |    | 33 | 33 |                      |                                                                                 |
|           |                     |       | M     |    | 39 | 51 |                      |                                                                                 |
| New Delhi | ENZ                 |       | iP    | 13 | 10 | 59 | 8220                 | Moderate, initial<br>ground motion<br>towards South,<br>East and<br>rarefaction |
|           |                     |       | PcP   |    | 11 | 03 |                      |                                                                                 |
|           |                     |       | pP    |    | 11 | 25 |                      |                                                                                 |
|           |                     |       | sP    |    | 11 | 27 |                      |                                                                                 |
|           |                     |       | PPP   |    | 16 | 04 |                      |                                                                                 |
|           |                     |       | iS    |    | 20 | 19 |                      |                                                                                 |
|           |                     |       | ScS   |    | 20 | 55 |                      |                                                                                 |
|           |                     |       | sS    |    | 21 | 07 |                      |                                                                                 |
|           |                     |       | PS    |    | 21 | 41 |                      |                                                                                 |
|           |                     |       | PPS   |    | 21 | 56 |                      |                                                                                 |
|           |                     | i?    |       | 24 | 13 |    |                      |                                                                                 |
|           |                     | SS    |       | 25 | 57 |    |                      |                                                                                 |
| Poona     | Z<br>N              |       | iP    | 13 | 11 | 01 | 8390                 | Moderate, initial<br>ground motion<br>towards South,<br>East and<br>rarefaction |
|           |                     |       | PcP   |    | 11 | 12 |                      |                                                                                 |
|           |                     |       | iS    |    | 20 | 29 |                      |                                                                                 |
|           |                     |       | PS    |    | 21 | 00 |                      |                                                                                 |
|           |                     |       | PPS   |    | 21 | 10 |                      |                                                                                 |
|           |                     |       | SS    |    | 25 | 10 |                      |                                                                                 |
|           |                     |       | SSS   |    | 28 | 22 |                      |                                                                                 |
|           |                     |       | PKKP1 |    | 30 | 00 |                      |                                                                                 |
|           |                     |       | Lq    |    | 30 | 14 |                      |                                                                                 |
|           |                     |       | Lr    |    | 33 | 41 |                      |                                                                                 |
|           |                     | M     |       | 39 | 49 |    |                      |                                                                                 |
| Bombay    | NE                  |       | iP    | 13 | 11 | 05 | 8550                 | Slight                                                                          |
|           |                     |       | PP    |    | 11 | 53 |                      |                                                                                 |
|           |                     |       | e     |    | 12 | 07 |                      |                                                                                 |
|           |                     |       | PPP   |    | 14 | 34 |                      |                                                                                 |
|           |                     |       | e     |    | 18 | 19 |                      |                                                                                 |
|           |                     |       | iS    |    | 20 | 33 |                      |                                                                                 |
|           |                     |       | PPS   |    | 21 | 13 |                      |                                                                                 |
|           |                     |       | sS    |    | 22 | 00 |                      |                                                                                 |
|           |                     | e     |       | 26 | 11 |    |                      |                                                                                 |
| 24        | Chatra              | Z     | eP    | 13 | 38 | 47 |                      | Feeble, distant<br>other phases not<br>clear                                    |
| 24        | Shillong            | Z     | iP    | 15 | 34 | 27 |                      | Slight, distant<br>rarefaction                                                  |
| 24        | Chatra              | Z     | iP    | 17 | 20 | 30 | 80                   | Feeble, compression                                                             |
|           |                     |       | iS    |    | 20 | 41 |                      |                                                                                 |
|           | Shillong            | Z     | eP    | 17 | 21 | 29 |                      | Slight, near                                                                    |

| DATE | STATION   | COMPT | PHASE     | G  | M  | T     | Δ   | REMARKS                     |
|------|-----------|-------|-----------|----|----|-------|-----|-----------------------------|
|      |           |       |           | h  | m  | s     | km  |                             |
| 24   | Chatra    | Z     | eP<br>S   | 19 | 18 | 22    | 150 | Feeble                      |
|      |           |       |           |    |    | 18 40 |     |                             |
| 24   | Dehra Dun | Z     | eP        | 19 | 58 | 18    |     | Tremor                      |
|      | New Delhi | Z     | iP<br>i   | 19 | 53 | 45    |     | Slight, compression         |
|      |           |       |           |    |    | 54 13 |     |                             |
| 24   | Itanagar  | E     | eP        | 20 | 17 | 39    |     | Slight                      |
|      | Shillong  | Z     | eP        | 20 | 18 | 01    |     | Slight, near                |
|      | Chatra    | Z     | iP        | 20 | 19 | 00    |     | Feeble, rarefaction         |
| 24   | Shillong  | Z     | iP        | 20 | 27 | 20    |     | Slight, distant rarefaction |
| 24   | Shillong  | Z     | iP        | 20 | 53 | 52    |     | Slight, distant rarefaction |
|      | New Delhi | Z     | iP        | 20 | 55 | 07    |     | Tremor, rarefaction         |
| 24   | Shillong  | Z     | ePg<br>Sg | 22 | 13 | 32    | 130 | Slight                      |
|      |           |       |           |    |    | 13 51 |     |                             |
| 25   | Shillong  | Z     | iP<br>i   | 00 | 15 | 18    |     | Slight, distant rarefaction |
|      |           |       |           |    |    | 13 13 |     |                             |
| 25   | Shillong  | Z     | eP<br>i   | 00 | 27 | 55    |     | Slight, near                |
|      |           |       |           |    |    | 28 50 |     |                             |
| 25   | Shillong  | Z     | eP        | 00 | 39 | 27    |     | Slight, near                |
| 25   | New Delhi | Z     | iP        | 02 | 39 | 43    |     | Slight, rarefaction         |
| 25   | Shillong  | Z     | iP        | 04 | 28 | 51    |     | Slight, distant rarefaction |
| 25   | Shillong  | Z     | eP        | 04 | 43 | 13    |     | Slight, distant             |
| 25   | Shillong  | Z     | iP        | 05 | 27 | 17    |     | Slight, distant compression |
|      | New Delhi | Z     | iP        | 05 | 33 | 48    |     | Slight, compression         |
| 25   | New Delhi | Z     | iP        | 03 | 29 | 43    |     | Slight, compression         |
| 25   | Shillong  | Z     | eP        | 07 | 23 | 10    |     | Slight, distant             |
|      | Dehra Dun | Z     | eP        | 07 | 24 | 57    |     | Tremor                      |
| 25   | Shillong  | Z     | iP        | 03 | 13 | 30    |     | Slight, distant rarefaction |
| 25   | Shillong  | Z     | eP        | 08 | 23 | 37    |     | Slight, distant             |
|      | Dehra Dun | Z     | eP        | 08 | 24 | 42    |     | Tremor                      |
| 25   | Dehra Dun | Z     | eP        | 08 | 49 | 36    |     | Tremor                      |
| 25   | Shillong  | Z     | eP        | 11 | 15 | 59    |     | Slight, distant             |

| DATE | STATION                                                                                              | COMPT | PHASE | G M T |    |    | $\Delta$<br>km | REMARKS                                    |
|------|------------------------------------------------------------------------------------------------------|-------|-------|-------|----|----|----------------|--------------------------------------------|
|      |                                                                                                      |       |       | h     | m  | s  |                |                                            |
| 25   | Epc: 28.2°N, 93.1°E. Eastern India-Tibet Border Region<br>- H = 13h 38m 56.3s. h about 25 km (USCGS) |       |       |       |    |    |                |                                            |
|      | Shillong                                                                                             | Z     | iP    | 13    | 40 | 04 | 780            | Slight, rarefaction                        |
|      |                                                                                                      | E     | Pg    |       | 40 | 38 |                |                                            |
|      |                                                                                                      |       | iS    |       | 41 | 26 |                |                                            |
|      |                                                                                                      |       | Sg    |       | 42 | 05 |                |                                            |
|      | Tocklai                                                                                              | E     | i     | 13    | 40 | 10 |                | Slight                                     |
|      | Chatra                                                                                               | Z     | eP    | 13    | 40 | 56 | 1320           | Feeble                                     |
|      |                                                                                                      | NE    | S     |       | 43 | 11 |                |                                            |
|      | Calcutta                                                                                             | E     | i     | 13    | 44 | 25 |                | Slight                                     |
| 25   | Shillong                                                                                             | Z     | iP    | 14    | 33 | 02 |                | Slight, distant<br>compression             |
| 25   | Shillong                                                                                             | Z     | eP    | 15    | 48 | 08 |                | Slight, near<br>compression                |
| 25   | Shillong                                                                                             | Z     | iPg   | 15    | 59 | 49 |                | Slight, near<br>compression                |
| 25   | Shillong                                                                                             | Z     | ePg   | 19    | 12 | 49 |                | Slight, near                               |
| 25   | Shillong                                                                                             | Z     | iP    | 19    | 28 | 01 |                | Slight, distant<br>compression             |
| 25   | Epc: 27.8°N, 99.6°E. Sikang Province, China<br>- H = 20h 49m 09.0s. h about 25 km (USCGS)            |       |       |       |    |    |                |                                            |
|      | Tocklai                                                                                              | E     | eP    | 20    | 50 | 26 |                | Slight, near                               |
|      | Shillong                                                                                             | Z     | iP    | 20    | 50 | 52 | 760            | Slight, compression                        |
|      |                                                                                                      | E     | Pg    |       | 51 | 22 |                |                                            |
|      |                                                                                                      |       | iS    |       | 52 | 35 |                |                                            |
|      |                                                                                                      |       | S*    |       | 52 | 35 |                |                                            |
|      |                                                                                                      |       | Sg    |       | 52 | 51 |                |                                            |
|      | Chatra                                                                                               | Z     | iP    | 20    | 51 | 37 | 1370           | Feeble, rarefaction                        |
|      |                                                                                                      | NZE   | S     |       | 53 | 57 |                |                                            |
|      | Bokaro                                                                                               | NE    | eP    | 20    | 52 | 14 |                | Slight, distant, other<br>phases not clear |
|      | Dehra Dun                                                                                            | Z     | eP    | 20    | 53 | 31 | 2220           | Feeble                                     |
|      |                                                                                                      |       | eS    |       | 57 | 11 |                |                                            |
|      | Madras                                                                                               | E     | eP    | 20    | 54 | 20 | 2350           | Slight                                     |
|      |                                                                                                      |       | eS    |       | 58 | 34 |                |                                            |
|      | Calcutta                                                                                             | E     | i     | 20    | 54 | 23 |                | Slight                                     |
|      | Poona                                                                                                | Z     | iP    | 20    | 54 | 36 | 2960           | Slight, compression                        |
|      |                                                                                                      | N     | iS    |       | 59 | 10 |                |                                            |
|      | Bombay                                                                                               | NE    | eS    | 20    | 59 | 16 |                | Feeble                                     |
|      |                                                                                                      |       | e     |       | 21 | 01 | 59             |                                            |
|      |                                                                                                      |       | i     |       | 02 | 56 |                |                                            |
| 25   | Shillong                                                                                             | Z     | eP    | 21    | 32 | 58 |                | Slight, near                               |

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| DATE | STATION                                                                                         | COMPT | PHASE               | G<br>h | M<br>m | T<br>s                        | $\Delta$<br>km | REMARKS                                            |
|------|-------------------------------------------------------------------------------------------------|-------|---------------------|--------|--------|-------------------------------|----------------|----------------------------------------------------|
| 25   | Shillong                                                                                        | Z     | eP                  | 21     | 49     | 30                            |                | Slight, near                                       |
| 25   | Shillong                                                                                        | Z     | iP                  | 21     | 53     | 21                            |                | Slight, distant<br>rarefaction                     |
| 25   | Tocklai                                                                                         | E     | eP                  | 22     | 13     | 11                            |                | Slight,                                            |
|      | Shillong                                                                                        | Z     | iP<br>i             | 22     | 13     | 38<br>14 58                   |                | Slight, near<br>compression                        |
|      | Chatra                                                                                          | Z     | iP<br>eS            | 22     | 14     | 35<br>16 33                   | 1150           | Feeble, rarefaction                                |
|      | Dehra Dun                                                                                       | Z     | eP                  | 22     | 16     | 17                            |                | Tremor                                             |
| 26   | Shillong                                                                                        | Z     | ePg                 | 01     | 16     | 23                            |                | Slight, near                                       |
| 26   | Shillong                                                                                        | Z     | eP<br>i             | 03     | 14     | 31<br>18 55                   |                | Slight, distant                                    |
| 26   | New Delhi                                                                                       | Z     | eP                  | 09     | 30     | 40                            |                | Slight, rarefaction                                |
| 26   | Bokaro                                                                                          | NE    | iP                  | 11     | 38     | 57                            |                | Slight, rarefaction                                |
| 26   | Dehra Dun                                                                                       | Z     | eP                  | 12     | 18     | 28                            |                | Tremor                                             |
| 26   | Dehra Dun                                                                                       | Z     | eP                  | 14     | 42     | 36                            |                | Tremor                                             |
|      | New Delhi                                                                                       | Z     | iP<br>i             | 14     | 43     | 08<br>43 38                   |                | Slight, compression                                |
| 26   | Shillong                                                                                        | Z     | iP                  | 15     | 24     | 47                            |                | Slight, distant<br>compression                     |
|      | Dehra Dun                                                                                       | Z     | eP<br>e             | 16     | 45     | 17<br>52 37                   |                | Feeble                                             |
|      | New Delhi                                                                                       | Z     | iP                  | 16     | 45     | 18                            |                | Slight, rarefaction                                |
|      | Chatra                                                                                          | Z     | iP                  | 16     | 46     | 32                            |                | Feeble, distant<br>rarefaction                     |
|      | Shillong                                                                                        | Z     | iP                  | 16     | 47     | 07                            |                | Slight, distant<br>rarefaction                     |
| 26   | Epc: 40.6°S, 73.3°W. Near coast of Southern Chile<br>- H = 16h 32m 43.6s. h about 32 km (USCGS) |       |                     |        |        |                               |                |                                                    |
|      | Poona                                                                                           | Z     | iPKP                | 16     | 52     | 17                            |                | Moderate, compression, other<br>phases not clear   |
|      | Madras                                                                                          | E     | ePKP                | 16     | 52     | 19                            |                | Slight, very distant, other<br>phases not recorded |
|      | New Delhi                                                                                       | Z     | iPKP<br>i<br>e<br>e | 16     | 52     | 33<br>52 41<br>52 58<br>53 40 |                | Slight, compression                                |
|      | Visakhapatnam                                                                                   | NE    | ePKP<br>i           | 16     | 52     | 33<br>53 23                   |                | Slight                                             |
|      | Chatra                                                                                          | Z     | iPKP                | 16     | 52     | 40                            |                | Slight, distant<br>compression                     |

| DATE | STATION                                                                                      | COMPT | PHASE             | G<br>h   | M<br>m               | T<br>s               | $\Delta$<br>km | REMARKS                                                                                     |
|------|----------------------------------------------------------------------------------------------|-------|-------------------|----------|----------------------|----------------------|----------------|---------------------------------------------------------------------------------------------|
| 26   | Shillong<br>Contd.                                                                           | Z     | iPKP<br>i         | 16       | 52<br>53             | 43<br>23             |                | Slight, distant<br>compression                                                              |
| 26   | Shillong                                                                                     | Z     | ePg               | 19       | 34                   | 34                   |                | Slight, near                                                                                |
| 26   | Shillong                                                                                     | Z     | eP                | 19       | 38                   | 38                   |                | Feeble, distant                                                                             |
| 26   | Chatra                                                                                       | Z     | iP                | 21       | 21                   | 26                   |                | Feeble, distant<br>rarefaction                                                              |
| 26   | Shillong                                                                                     | Z     | eP                | 22       | 25                   | 34                   |                | Slight, near                                                                                |
| 27   | Shillong                                                                                     | Z     | ePg<br>Sg         | 00       | 08<br>08             | 33<br>47             | 120            | Slight                                                                                      |
| 27   | Hyderabad                                                                                    | N     | iP<br>e<br>i<br>e | 00<br>01 | 53<br>56<br>00<br>02 | 24<br>58<br>08<br>30 |                | Slight, initial<br>ground motion<br>towards North                                           |
|      |                                                                                              | E     | M                 |          | 04                   | 17                   |                | Per=9 sec, Grds=2 $\mu$                                                                     |
| 27   | Shillong                                                                                     | Z     | eP<br>Sg          | 04       | 05<br>06             | 51<br>16             | 160            | Slight                                                                                      |
| 27   | Epc: 3.9°S, 129.1°E. Ceram Region. - H = 05h 22m 32s<br>h about 96 km (USCGS)                |       |                   |          |                      |                      |                |                                                                                             |
|      | Shillong                                                                                     | Z     | iP                | 05       | 30                   | 52                   |                | Slight, distant<br>rarefaction                                                              |
|      | Chatra                                                                                       | Z     | iP                | 05       | 31                   | 26                   |                | Feeble, distant<br>rarefaction                                                              |
|      | Madras                                                                                       | E     | iP<br>eS          | 05       | 31<br>33             | 31<br>42             | 5550           | Slight                                                                                      |
|      | Poona                                                                                        | Z     | iP                | 05       | 32                   | 21                   |                | Slight, other phases not<br>clear, initial ground<br>motion towards East and<br>rarefaction |
|      | New Delhi                                                                                    | NE    | iP<br>i?          | 05       | 32<br>42             | 22<br>02             |                | Slight, initial ground<br>motion towards North,<br>East and compression                     |
|      | Dehra Dun                                                                                    | Z     | eP<br>e<br>eS     | 05       | 32<br>33<br>40       | 27<br>32<br>26       | 6450           | Feeble                                                                                      |
|      | Bombay                                                                                       | NE    | e<br>e            | 06       | 32<br>40             | 50<br>29             |                | Feeble                                                                                      |
|      | Port Blair                                                                                   | N     | iS<br>i           | 05       | 35<br>39             | 48<br>52             |                |                                                                                             |
| 27   | Epc: 39.2°N, 77.3°E. Sinkiang Province, China<br>- H = 06h 15m 13, 4s h about 235 km (USCGS) |       |                   |          |                      |                      |                |                                                                                             |
|      | Dehra Dun                                                                                    | Z     | eP<br>iS          | 06       | 17<br>19             | 17<br>02             | 1020           | Feeble                                                                                      |
|      | Chatra                                                                                       | Z     | eP                | 06       | 18                   | 27                   |                | Feeble, rarefaction                                                                         |

| DATE   | STATION                                                      | COMPT | PHASE | G<br>h | M<br>m | T<br>s | Δ<br>km | REMARKS                                                                |
|--------|--------------------------------------------------------------|-------|-------|--------|--------|--------|---------|------------------------------------------------------------------------|
| 27     | Shillong                                                     | Z     | eP    | 06     | 19     | 14     |         | Slight, distant                                                        |
| Contd. |                                                              |       |       |        |        |        |         |                                                                        |
| 27     | New Delhi                                                    | E     | eP    | 06     | 29     | 35     |         | Slight                                                                 |
| 27     | Shillong                                                     | Z     | iP    | 10     | 19     | 07     |         | Slight, distant<br>compression                                         |
| 27     | Shillong                                                     | Z     | iP    | 11     | 29     | 23     | 20      | Slight                                                                 |
|        |                                                              |       | Sg    |        | 29     | 30     |         |                                                                        |
| 27     | Shillong                                                     | E     | iP    | 22     | 28     | 23     | 270     | Slight                                                                 |
|        |                                                              |       | Sg    |        | 28     | 01     |         |                                                                        |
| 28     | Epc: 83.8°N, 72.5°E. Hindukush. - H = 00h 51m 48s (Shillong) |       |       |        |        |        |         |                                                                        |
|        | 83.6°N, 71.6°E. - H = 00h 51m 54.7s. h about 108 km (USCGS)  |       |       |        |        |        |         |                                                                        |
|        | Dehra Dun                                                    | Z     | eP    | 00     | 53     | 52     | 840     | Slight                                                                 |
|        |                                                              | N     | PP    |        | 54     | 03     |         |                                                                        |
|        |                                                              |       | PPP   |        | 54     | 08     |         |                                                                        |
|        |                                                              |       | iS    |        | 55     | 19     |         |                                                                        |
|        |                                                              |       | SS    |        | 55     | 30     |         |                                                                        |
|        |                                                              |       | SSS   |        | 55     | 43     |         |                                                                        |
|        |                                                              |       | M     |        | 56     | 06     |         |                                                                        |
|        | New Delhi                                                    | NEZ   | iP    | 00     | 54     | 02     | 980     | Slight, initial ground<br>motion towards North<br>West and rarefaction |
|        |                                                              | NE    | iS    |        | 55     | 43     |         |                                                                        |
|        | Sehore                                                       | NE    | eP    | 00     | 55     | 07     | 1550    | Slight, distant                                                        |
|        |                                                              |       | i     |        | 55     | 40     |         |                                                                        |
|        |                                                              |       | iS    |        | 57     | 43     |         |                                                                        |
|        | Chatra                                                       | Z     | iP    | 00     | 55     | 38     |         | Feeble, compression                                                    |
|        |                                                              | ZNE   | i     |        | 58     | 30     |         |                                                                        |
|        | Bokaro                                                       | NE    | iP    | 00     | 55     | 53     | 1830    | Slight, initial ground<br>motion towards North<br>and West             |
|        |                                                              | E     | iS    |        | 58     | 55     |         |                                                                        |
|        | Bombay                                                       |       | iP    | 00     | 55     | 53     | 2010    | Feeble                                                                 |
|        |                                                              |       | PP    |        | 56     | 07     |         |                                                                        |
|        |                                                              | N     | sP    |        | 56     | 23     |         |                                                                        |
|        |                                                              | E     | eS    |        | 59     | 13     |         |                                                                        |
|        |                                                              |       | e     |        | 59     | 27     |         |                                                                        |
|        |                                                              | N     | e     |        | 59     | 53     |         |                                                                        |
|        |                                                              | E     | e     | 01     | 00     | 59     |         |                                                                        |
|        |                                                              |       | e     |        | 01     | 48     |         |                                                                        |
|        | Poona                                                        | Z     | iP    | 00     | 56     | 00     | 2010    | Slight                                                                 |
|        |                                                              | N     | PPP   |        | 56     | 24     |         |                                                                        |
|        |                                                              |       | iS    |        | 59     | 20     |         |                                                                        |
|        |                                                              |       | SS    |        | 59     | 37     |         |                                                                        |
|        |                                                              |       | SSS   |        | 59     | 54     |         |                                                                        |
|        |                                                              |       | Lr    | 01     | 00     | 11     |         |                                                                        |
|        |                                                              |       | M     |        | 01     | 39     |         |                                                                        |
|        |                                                              |       | PcS   |        | 04     | 06     |         |                                                                        |
|        | Shillong                                                     | ZE    | iP    | 00     | 53     | 27     | 2320    | Slight, initial ground<br>motion towards West<br>and rarefaction       |
|        |                                                              | E     | PPP   |        | 56     | 56     |         |                                                                        |
|        |                                                              |       | i     |        | 57     | 05     |         |                                                                        |
|        |                                                              |       | iS    | 01     | 00     | 15     |         |                                                                        |
|        |                                                              |       | PcP   |        | 00     | 20     |         |                                                                        |
|        |                                                              |       | Lq    |        | 00     | 35     |         |                                                                        |
|        |                                                              |       | SS    |        | 00     | 51     |         |                                                                        |



| DATE          | STATION            | COMPT                                                                                         | PHASE | G<br>h | M<br>m | T<br>s | $\Delta$<br>km                                               | REMARKS                                                        |
|---------------|--------------------|-----------------------------------------------------------------------------------------------|-------|--------|--------|--------|--------------------------------------------------------------|----------------------------------------------------------------|
| 28<br>Contd.  | Shillong<br>Contd. | E                                                                                             | SSS   | 01     | 01     | 08     |                                                              |                                                                |
|               |                    |                                                                                               | Lr    |        | 01     | 29     |                                                              |                                                                |
|               | Visakhapatnam      | NE<br>p                                                                                       | iP    | 00     | 56     | 40     | 2720                                                         | Moderate initial<br>ground motion<br>towards South<br>and East |
|               |                    |                                                                                               | PPP   |        | 57     | 16     |                                                              |                                                                |
|               |                    |                                                                                               | PcP   | 01     | 00     | 28     |                                                              |                                                                |
|               |                    |                                                                                               | iS    |        | 00     | 35     |                                                              |                                                                |
|               | Madras             | E                                                                                             | e     | 00     | 57     | 42     |                                                              | Slight                                                         |
|               |                    |                                                                                               | eS    | 01     | 01     | 46     |                                                              |                                                                |
|               |                    |                                                                                               | e     |        | 05     | 21     |                                                              |                                                                |
|               | 28                 | Epc: 1.4°N, 97.5°E. Near South Coast of Sumatra<br>- H = 04h 05m 24.8s, h about 74 km (USCGS) |       |        |        |        |                                                              |                                                                |
| Port Blair    |                    | N                                                                                             | eP    | 04     | 08     | 17     | 870                                                          | Slight                                                         |
|               |                    |                                                                                               | eS    |        | 09     | 46     |                                                              |                                                                |
| Calcutta      |                    | E                                                                                             | eP    | 04     | 09     | 43     |                                                              | Slight                                                         |
|               |                    |                                                                                               | i     |        | 14     | 29     |                                                              |                                                                |
|               |                    |                                                                                               | M     |        | 17     | 41     |                                                              |                                                                |
| Madras        |                    | E                                                                                             | eP    | 04     | 10     | 01     | 2810                                                         | Moderate                                                       |
|               |                    |                                                                                               | PP    |        | 10     | 25     |                                                              |                                                                |
|               |                    |                                                                                               | eS    |        | 13     | 49     |                                                              |                                                                |
|               |                    |                                                                                               | Lr    |        | 15     | 05     |                                                              |                                                                |
| Visakhapatnam | NE                 | iP                                                                                            | 04    | 10     | 07     | 2450   | Moderate, initial<br>ground motion towards<br>South and East |                                                                |
|               |                    | PP                                                                                            |       | 10     | 37     |        |                                                              |                                                                |
|               |                    | PPP                                                                                           |       | 10     | 41     |        |                                                              |                                                                |
|               |                    | PcP                                                                                           |       | 13     | 53     |        |                                                              |                                                                |
|               |                    | eS                                                                                            |       | 14     | 03     |        |                                                              |                                                                |
|               |                    | Lq                                                                                            |       | 14     | 35     |        |                                                              |                                                                |
|               |                    | SS                                                                                            |       | 14     | 51     |        |                                                              |                                                                |
|               |                    | SSS                                                                                           |       | 15     | 06     |        |                                                              |                                                                |
| Shillong      | ZE<br>E<br>Z<br>E  | iP                                                                                            | 04    | 10     | 38     | 2770   | Slight, initial ground<br>motion towards South,<br>and East  |                                                                |
|               |                    | PP                                                                                            |       | 11     | 08     |        |                                                              |                                                                |
|               |                    | iS                                                                                            |       | 14     | 59     |        |                                                              |                                                                |
|               |                    | SSS                                                                                           |       | 16     | 03     |        |                                                              |                                                                |
|               |                    | Lr                                                                                            |       | 16     | 39     |        |                                                              |                                                                |
|               |                    | M                                                                                             |       | 18     | 37     |        |                                                              |                                                                |
| Hyderabad     | EN                 | iP                                                                                            | 04    | 10     | 40     | 2740   | Slight, initial ground<br>motion towards South<br>and East   |                                                                |
|               |                    | PPP                                                                                           |       | 11     | 39     |        |                                                              |                                                                |
|               |                    | iS                                                                                            |       | 15     | 00     |        |                                                              |                                                                |
|               |                    | Lq                                                                                            |       | 15     | 30     |        |                                                              |                                                                |
|               | N<br>E<br>N<br>E   | SS                                                                                            |       | 15     | 49     |        | Per=16 sec, Grds=3 $\mu$<br>Per=16 sec, Grds=4 $\mu$         |                                                                |
|               |                    | SSS                                                                                           |       | 16     | 09     |        |                                                              |                                                                |
|               |                    | M                                                                                             |       | 13     | 19     |        |                                                              |                                                                |
|               | E                  | M                                                                                             |       | 18     | 54     |        |                                                              |                                                                |
|               |                    |                                                                                               |       |        |        |        |                                                              |                                                                |
|               | Bokaro             | NE                                                                                            | iP    | 04     | 10     | 42     | 2810                                                         | Slight, initial ground<br>motion towards North<br>and West     |
| iS            |                    |                                                                                               |       | 15     | 06     |        |                                                              |                                                                |
| i             |                    |                                                                                               |       | 15     | 13     |        |                                                              |                                                                |
| i             |                    |                                                                                               |       | 15     | 26     |        |                                                              |                                                                |
| Lq            |                    |                                                                                               |       | 15     | 54     |        |                                                              |                                                                |
| SS            |                    |                                                                                               |       | 16     | 10     |        |                                                              |                                                                |
| SSS           |                    |                                                                                               |       | 16     | 29     |        |                                                              |                                                                |
| Lr            |                    | 17                                                                                            | 11    |        |        |        |                                                              |                                                                |
| Tocklai       | E                  | eP                                                                                            | 04    | 10     | 48     |        | Slight, distant                                              |                                                                |
| Chatra        | Z<br>NE            | iP                                                                                            | 04    | 11     | 03     | 2980   | Feeble, compression                                          |                                                                |
|               |                    | S                                                                                             |       | 15     | 39     |        |                                                              |                                                                |

| DATE | STATION                                    | COMPT | PHASE   | G  | M  | T  | Δ    | REMARKS                                                           |
|------|--------------------------------------------|-------|---------|----|----|----|------|-------------------------------------------------------------------|
|      |                                            |       |         | h  | m  | s  | km   |                                                                   |
| 28   | Poona                                      | Z     | eP      | 04 | 11 | 24 |      | Slight, other phases not clear                                    |
|      | Contd.                                     |       |         |    |    |    |      |                                                                   |
|      | Bombay                                     | NE    | eP      | 04 | 11 | 23 | 3210 | Slight                                                            |
|      |                                            |       | PP      |    | 12 | 23 |      |                                                                   |
|      |                                            | NE    | eS      |    | 16 | 16 |      |                                                                   |
|      |                                            |       | e       |    | 17 | 00 |      |                                                                   |
|      |                                            | N     | e       |    | 17 | 24 |      |                                                                   |
|      |                                            | NE    | SS      |    | 17 | 59 |      |                                                                   |
|      |                                            |       | SSS     |    | 18 | 24 |      |                                                                   |
|      |                                            |       | e       |    | 20 | 00 |      |                                                                   |
|      | New Delhi                                  | ENZ   | iP      | 04 | 11 | 55 | 3630 | Slight, initial ground motion towards North, West and compression |
|      |                                            | EN    | iS      |    | 17 | 12 |      |                                                                   |
|      |                                            | E     | PoS/ScP |    | 19 | 13 |      |                                                                   |
|      |                                            | EN    | SSS     |    | 18 | 27 |      |                                                                   |
|      | Dehra Dun                                  | Z     | eP      | 04 | 12 | 04 | 3780 | Slight                                                            |
|      |                                            |       | eS      |    | 17 | 29 |      |                                                                   |
| 28   | Dehra Dun                                  | Z     | eP      | 04 | 59 | 42 |      | Tremor                                                            |
|      | New Delhi                                  | Z     | eP      | 05 | 00 | 08 |      | Slight, compression                                               |
| 28   | Epc: 45.7°N. 83.1°E. Kazakh, USSR          |       |         |    |    |    |      |                                                                   |
|      | - H = 13h 26m 19.5s. h about 25 km (USCGS) |       |         |    |    |    |      |                                                                   |
|      | Dehra Dun                                  | Z     | eP      | 13 | 30 | 02 |      | Feeble                                                            |
|      |                                            |       | i       |    | 32 | 59 |      |                                                                   |
|      | New Delhi                                  | NZ    | iP      | 13 | 30 | 25 |      | Slight, rarefaction                                               |
|      |                                            | Z     | i?      |    | 33 | 32 |      |                                                                   |
|      | Chatra                                     | Z     | iP      | 13 | 30 | 47 |      | Feeble, distant, compression                                      |
|      | Shillong                                   | Z     | iP      | 13 | 31 | 04 |      | Slight, distant, compression                                      |
|      | Sokaro                                     | E     | ePP     | 13 | 31 | 24 |      | Slight                                                            |
|      | Bombay                                     | E     | e       | 13 | 41 | 09 |      | Feeble                                                            |
| 28   | Chatra                                     | Z     | iP      | 13 | 55 | 39 | 160  | Feeble, rarefaction                                               |
|      |                                            |       | iS      |    | 55 | 59 |      |                                                                   |
| 28   | Shillong                                   | Z     | iP      | 18 | 55 | 03 |      | Slight, distant, rarefaction                                      |
|      | Chatra                                     | Z     | iP      | 18 | 55 | 41 |      | Feeble, distant, rarefaction                                      |
|      | New Delhi                                  | Z     | iP      | 18 | 56 | 43 |      | Tremor, rarefaction                                               |
| 29   | New Delhi                                  | Z     | eP      | 00 | 27 | 11 |      | Slight, compression                                               |
| 29   | Shillong                                   | Z     | iP      | 03 | 01 | 07 |      | Slight, near, rarefaction                                         |
|      |                                            | E     | i       |    | 02 | 28 |      |                                                                   |
|      | Chatra                                     | ZNE   | eP      | 03 | 02 | 11 |      | Feeble, distant, other phases not clear                           |
| 29   | New Delhi                                  | Z     | eP      | 03 | 10 | 40 |      | Slight, rarefaction                                               |
| 29   | New Delhi                                  | Z     | eP      | 03 | 49 | 25 |      | Slight, compression                                               |
|      | Shillong                                   | Z     | iP      | 03 | 51 | 29 |      | Slight, distant, compression                                      |

| DATE | STATION                                      | COMPT | PHASE | G  | M  | T  | $\Delta$ | REMARKS                                                      |
|------|----------------------------------------------|-------|-------|----|----|----|----------|--------------------------------------------------------------|
|      |                                              |       |       | h  | m  | s  | km       |                                                              |
| 29   | Shillong                                     | Z     | eP    | 03 | 53 | 02 | 370      | Slight                                                       |
|      |                                              |       | S     |    | 53 | 42 |          |                                                              |
|      |                                              |       | Sg    |    | 53 | 48 |          |                                                              |
| 29   | New Delhi                                    | Z     | eP    | 04 | 36 | 33 |          | Slight, rarefaction                                          |
| 29   | Madras                                       | E     | e     | 05 | 52 | 48 |          | Presemably near,<br>feeble, tremor                           |
| 29   | Port Blair                                   | NE    | iPg   | 06 | 00 | 54 |          | Slight, local                                                |
| 29   | Port Blair                                   | N     | iPg   | 10 | 05 | 29 |          | Slight, local                                                |
| 29   | Port Blair                                   | N     | eP    | 10 | 32 | 30 |          | Slight, near, beginning<br>not clear                         |
| 29   | Port Blair                                   | N     | eP    | 10 | 37 | 16 |          | Slight, near                                                 |
| 29   | New Delhi                                    | Z     | iP    | 15 | 23 | 20 |          | Tremor, rarefaction                                          |
| 29   | Chatra                                       | Z     | iP    | 19 | 42 | 37 |          | Feeble, distant, rarefaction                                 |
| 29   | Madras                                       | E     | iP    | 19 | 57 | 49 |          | Slight, very near, initial<br>ground motion towards West     |
|      |                                              |       | M     |    | 58 | 21 |          |                                                              |
| 29   | Epc: 1°S, 129°E. Muluccas Region (Indonesia) |       |       |    |    |    |          |                                                              |
|      | - H = 20h 09m 05s. - h = 200 km (Shillong)   |       |       |    |    |    |          |                                                              |
|      | 0.5°S, 127.4°E. Halamarra Region             |       |       |    |    |    |          |                                                              |
|      | - H = 20h 09m 01.9s, h about 25 km (USCGS)   |       |       |    |    |    |          |                                                              |
|      | Shillong                                     | Z     | iP    | 20 | 17 | 00 | 4670     | Slight, compression                                          |
|      |                                              | E     | PcP   |    | 18 | 45 |          |                                                              |
|      |                                              |       | iS    |    | 23 | 20 |          |                                                              |
|      | Calcutta                                     | E     | iP    | 20 | 17 | 17 | 4900     | Slight                                                       |
|      |                                              |       | iS    |    | 23 | 51 |          |                                                              |
|      | Bokaro                                       | E     | iP    | 20 | 17 | 33 | 5270     | Slight, initial ground<br>motion towards East                |
|      |                                              |       | eS    |    | 24 | 23 |          |                                                              |
|      | Visakhapatnam                                | NE    | iP    | 20 | 17 | 36 | 5240     | Moderate, initial ground<br>motion towards North and<br>East |
|      |                                              | E     | PP    |    | 19 | 27 |          |                                                              |
|      |                                              |       | PPP   |    | 20 | 14 |          |                                                              |
|      |                                              | NE    | iS    |    | 24 | 29 |          |                                                              |
|      |                                              |       | PS    |    | 24 | 36 |          |                                                              |
|      |                                              |       | PPS   |    | 24 | 41 |          |                                                              |
|      | Madras                                       | E     | iP    | 20 | 17 | 42 | 5450     | Moderate, initial ground<br>motion towards East              |
|      |                                              |       | e     |    | 19 | 03 |          |                                                              |
|      |                                              |       | PP    |    | 19 | 44 |          |                                                              |
|      |                                              |       | iS    |    | 24 | 53 |          |                                                              |
|      |                                              |       | e     |    | 23 | 35 |          |                                                              |
|      |                                              |       | Lq    |    | 29 | 34 |          |                                                              |
|      | Hyderabad                                    | EN    | iP    | 20 | 18 | 08 | 5580     | Slight, initial ground<br>motion towards North<br>and West   |
|      |                                              | N     | PcP   |    | 19 | 21 |          |                                                              |
|      |                                              | E     | PPP   |    | 21 | 17 |          |                                                              |
|      |                                              |       | PcS   |    | 23 | 19 |          |                                                              |
|      |                                              |       | PPS   |    | 25 | 12 |          |                                                              |
|      |                                              | EN    | iS    |    | 25 | 21 |          |                                                              |
|      |                                              | E     | ScS   |    | 27 | 48 |          |                                                              |
|      |                                              |       | SS    |    | 29 | 11 |          |                                                              |
|      |                                              |       | M     |    | 33 | 11 |          | Per=15 sec, Grds= 2 $\mu$                                    |
|      |                                              | N     | M     |    | 36 | 24 |          | Per=12 sec, Grds= 1 $\mu$                                    |

| DATE | STATION                                                                                              | COMPT | PHASE | G  | M  | T  | $\Delta$ | REMARKS                                                    |
|------|------------------------------------------------------------------------------------------------------|-------|-------|----|----|----|----------|------------------------------------------------------------|
|      |                                                                                                      |       |       | h  | m  | s  | km       |                                                            |
| 29   | New Delhi<br>Contd.                                                                                  | ENZ   | eP    | 20 | 18 | 39 | 6190     | Slight, initial ground motion towards East and rarefaction |
|      |                                                                                                      | Z     | i?    |    | 13 | 40 |          |                                                            |
|      |                                                                                                      | ENZ   | iS    |    | 26 | 26 |          |                                                            |
|      |                                                                                                      | N     | PS    |    | 26 | 34 |          |                                                            |
|      |                                                                                                      |       | PPS   |    | 26 | 40 |          |                                                            |
|      | Poona                                                                                                | Z     | iP    | 20 | 18 | 39 | 6250     | Slight, compression                                        |
|      |                                                                                                      | N     | iS    |    | 26 | 23 |          |                                                            |
|      | Dehra Dun                                                                                            | Z     | eP    | 20 | 18 | 42 | 6220     | Slight                                                     |
|      |                                                                                                      |       | eS    |    | 26 | 30 |          |                                                            |
|      | Bombay                                                                                               | NE    | iP    | 20 | 18 | 49 | 6330     | Slight                                                     |
|      |                                                                                                      | E     | PcP   |    | 19 | 45 |          |                                                            |
|      |                                                                                                      |       | pP    |    | 20 | 17 |          |                                                            |
|      |                                                                                                      |       | PP    |    | 20 | 54 |          |                                                            |
|      |                                                                                                      |       | PPP   |    | 22 | 28 |          |                                                            |
|      |                                                                                                      |       | PcS   |    | 23 | 35 |          |                                                            |
|      |                                                                                                      |       | e     |    | 24 | 50 |          |                                                            |
|      |                                                                                                      |       | e     |    | 26 | 33 |          |                                                            |
|      |                                                                                                      |       | iS    |    | 28 | 42 |          |                                                            |
|      |                                                                                                      |       | ScS   |    | 28 | 04 |          |                                                            |
|      |                                                                                                      |       | SS    |    | 29 | 40 |          |                                                            |
|      |                                                                                                      |       |       |    | e  | 33 |          |                                                            |
| 29   | Epc: 20.7°N, 120.6°E. North of Luzon, Philippine Islands<br>- H = 21h 15m 16s. h about 94 km (USCGS) |       |       |    |    |    |          |                                                            |
|      | Shillong                                                                                             | Z     | eP    | 21 | 20 | 54 |          | Slight, distant                                            |
|      | Chatra                                                                                               | Z     | eP    | 21 | 21 | 34 |          | Feeble, distant, rarefaction                               |
| 29   | Shillong                                                                                             | Z     | iP    | 22 | 42 | 33 |          | Slight, distant, compression                               |
|      | Dehra Dun                                                                                            | Z     | eP    | 22 | 44 | 19 |          | Tremor                                                     |
|      | New Delhi                                                                                            | Z     | iP    | 22 | 44 | 39 |          | Tremor, rarefaction                                        |
| 29   | Shillong                                                                                             | Z     | iPg   | 23 | 28 | 15 | 50       | Slight, compression                                        |
|      |                                                                                                      |       | iSg   |    | 23 | 20 |          |                                                            |
| 30   | Epc: 12.9°N, 143°E. Mariana Islands<br>- H = 00h 05m 53.1s. h about 134 km (USCGS)                   |       |       |    |    |    |          |                                                            |
|      | Shillong                                                                                             | Z     | iP    | 00 | 14 | 36 |          | Slight, distant, rarefaction                               |
|      | Dehra Dun                                                                                            | Z     | eP    | 00 | 16 | 05 |          | Tremor                                                     |
|      | New Delhi                                                                                            | Z     | iP    | 00 | 16 | 03 |          | Tremor, rarefaction                                        |
| 30   | Chatra                                                                                               | Z     | eP    | 03 | 11 | 56 |          | Feeble, distant                                            |
| 30   | Chatra                                                                                               | Z     | eP    | 07 | 13 | 04 | 310      | Feeble                                                     |
|      |                                                                                                      |       | S     |    | 13 | 39 |          |                                                            |
| 30   | New Delhi                                                                                            | Z     | iP    | 07 | 24 | 58 |          | Tremor, rarefaction                                        |
| 30   | Chatra                                                                                               | Z     | iP    | 07 | 55 | 22 |          | Feeble, near, rarefaction                                  |
| 30   | Epc: 36°N, 71°E. Hindukush. - H = 10h 01m 28s (Shillong)                                             |       |       |    |    |    |          |                                                            |
|      | Dehra Dun                                                                                            | Z     | eP    | 10 | 03 | 27 | 880      | Feeble                                                     |
|      |                                                                                                      |       | eS    |    | 04 | 58 |          |                                                            |

| DATE         | STATION                                                                                       | COMPT     | PHASE                 | G<br>h | M<br>m | T<br>s                  | $\Delta$<br>km | REMARKS                                              |
|--------------|-----------------------------------------------------------------------------------------------|-----------|-----------------------|--------|--------|-------------------------|----------------|------------------------------------------------------|
| 30<br>Contd. | New Delhi                                                                                     | Z         | iP<br>iS              | 10     | 03     | 39<br>05 19             | 970            | Slight, rarefaction                                  |
|              | Chatra                                                                                        | Z         | iP                    | 10     | 05     | 16                      |                | Feeble, distant, rarefaction                         |
| 30           | New Delhi                                                                                     | Z         | iP<br>i               | 10     | 41     | 32<br>41 38             |                | Slight, rarefaction                                  |
| 30           | New Delhi                                                                                     | Z         | iP<br>iS              | 14     | 16     | 12<br>17 57             | 1020           | Slight, rarefaction                                  |
|              | Dehra Dun                                                                                     | Z         | e                     | 14     | 16     | 31                      |                | Feeble                                               |
|              | Shillong                                                                                      | Z         | iP                    | 14     | 16     | 49                      |                | Slight, distant, rarefaction                         |
| 30           | Shillong                                                                                      | Z         | iP <sub>2</sub><br>Sg | 18     | 00     | 06<br>00 11             | 50             | Slight, compression                                  |
| 30           | Shillong                                                                                      | Z         | iP                    | 18     | 25     | 49                      |                | Slight, distant, rarefaction                         |
| 30           | Shillong                                                                                      | Z         | iP                    | 19     | 19     | 52                      |                | Slight, distant, compression                         |
| 30           | Shillong                                                                                      | Z         | iP                    | 22     | 33     | 17                      |                | Slight, distant, rarefaction                         |
| 30           | Shillong                                                                                      | Z         | iP                    | 22     | 48     | 51                      |                | Slight, distant, compression                         |
|              | Chatra                                                                                        | Z         | iP                    | 22     | 49     | 31                      |                | Feeble, distant, rarefaction                         |
| 31           | Shillong                                                                                      | Z         | iP                    | 02     | 18     | 23                      |                | Slight, distant, compression                         |
|              | Chatra                                                                                        | Z         | iP                    | 02     | 19     | 22                      |                | Feeble, distant, compression                         |
|              | New Delhi                                                                                     | Z         | iP<br>i'              | 02     | 20     | 15<br>20 29             |                | Slight, rarefaction                                  |
| 31           | New Delhi                                                                                     | Z         | iP                    | 07     | 43     | 47                      |                | Tremor, compression                                  |
| 31           | Epc: 9.8°N, 121.6°E. Negros Island, P.I. Region<br>- H = 07h 44m 36s. h about 156 kms (USCGS) |           |                       |        |        |                         |                |                                                      |
|              | Bokaro                                                                                        | E         | e                     | 07     | 51     | 24                      |                | Slight, distant                                      |
|              | Visakhapatnam                                                                                 | E         | eP                    | 07     | 51     | 38                      |                | Moderate, distant,<br>phases not clear               |
|              | Dehra Dun                                                                                     | Z         | eP<br>e<br>e          | 07     | 52     | 07<br>53 54<br>59 14    |                | Feeble, phases not clear                             |
|              | New Delhi                                                                                     | ENZ<br>EZ | e<br>i                | 07     | 53     | 36<br>55 21             |                | Slight                                               |
|              | Bombay                                                                                        | NE<br>E   | eP<br>e<br>e          | 07     | 53     | 58<br>57 22<br>08 00 20 | 5020           | Slight                                               |
|              |                                                                                               | NE        | eS                    |        |        | 00 38                   |                |                                                      |
|              | Hyderabad                                                                                     | N<br>E    | M<br>M                | 08     | 13     | 22<br>13 25             |                | Per=15 sec, Grds=2 $\mu$<br>Per=12 sec, Grds=2 $\mu$ |
| 31           | Shillong                                                                                      | Z         | iP                    | 11     | 06     | 40                      |                | Slight, distant, compression                         |
| 31           | Chatra                                                                                        | Z         | iP<br>iS              | 12     | 14     | 03<br>14 12             | 80             | Feeble, rarefaction                                  |

| DATE | STATION    | COMPT | PHASE      | G<br>h | M<br>m | T<br>s   | A<br>km | REMARKS                       |
|------|------------|-------|------------|--------|--------|----------|---------|-------------------------------|
| 31   | Port Blair | NE    | eP         | 16     | 26     | 35       |         | Slight, near                  |
| 31   | Shillong   | Z     | eP         | 16     | 45     | 01       |         | Slight, distant               |
| 31   | Port Blair | NE    | ePg<br>iSg | 16     | 56     | 15<br>56 | 70      | Slight                        |
| 31   | Shillong   | Z     | ePg<br>Sg  | 20     | 07     | 08<br>32 |         |                               |
| 31   | Shillong   |       | ePg<br>Sg  | 23     | 32     | 45<br>32 | 90      | Slight                        |
| 31   | Shillong   | Z     | iP         | 23     | 44     | 07       |         | Slight, distant, rarefaction. |

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MICROSEISMIC TABULATION

Date	Hour	K	Mean Ampli- tude in mm	Mean Period in secs	Date	Hour	K	Mean Ampli- tude in mm	Mean Period in secs
Station: Shillong					Station: Shillong				
Compt. E-W.					Compt. E-W.				
01	00	3	0.3	5.8	09	00	1	0.3	5.0
	06	3	0.3	5.8		06	3	0.3	5.2
	12	3	0.3	5.4		12	3	0.3	5.0
	18	3	0.3	5.4		18	3	0.3	5.2
02	00	...	-	-	10	00	3	0.3	5.2
	06	3	0.3	4.2		06	3	0.3	5.8
	12	3	0.3	5.4		12	3	0.3	5.8
	18	3	0.3	5.2		18	3	0.3	5.0
03	00 to 18	...	-	-	11	00	3	0.3	5.0
						06	3	0.3	4.9
						12	3	0.3	4.83
						18	3	0.3	4.6
04	00	1	0.3	5.4	12	00	3	0.3	4.6
	06	3	0.3	4.8		06	3	0.3	5.0
	12	3	0.3	4.8		12	3	0.3	5.0
	18	3	0.3	4.3		18	3	0.3	4.7
05	00	3	0.3	5.0	13	00	3	0.3	4.8
	06	3	0.3	5.0		06	3	0.3	5.0
	12	3	0.3	5.0		12	3	0.3	5.3
	18	3	0.3	5.4		18	3	0.3	5.0
06	00	3	0.3	5.0	14	00	3	0.3	5.0
	06	3	0.3	5.0		06	3	0.3	5.6
	12	3	0.3	5.0		12	3	0.3	5.2
	18	1	0.3	5.4		18	3	0.3	5.0
07	00	3	0.3	5.2	15	00	3	0.3	5.3
	06	3	0.3	5.6		06	3	0.3	5.2
	12	...	-	-		12	3	0.3	5.0
	18	3	0.3	5.4		18	3	0.3	5.0
08	00	3	0.3	5.6	16	00	3	0.3	5.0
	06	3	0.3	5.0		06	3	0.3	5.0
	12	3	0.3	5.2					
	18	3	0.3	5.4					

Date Hour K Mean Amplitude Mean Period  
 GMT in mm in sec  
 Station: Shillong Compt. E-W

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
16	12	3	0.3	5.0
Contd. 16	18	3	0.3	5.0
17	00	3	0.3	5.2
	06	3	0.3	5.0
	12	3	0.3	5.0
	18	3	0.3	5.3
18	00	3	0.3	5.6
	06	...	-	-
	12	3	0.3	5.4
	18	3	0.3	5.0
19	00	3	0.3	5.0
	06	3	0.3	5.0
	12	3	0.3	5.2
	18	3	0.3	5.0
20	00	3	0.3	5.2
	06	...	-	-
	12	...	-	-
	18	3	0.3	5.5
21	00	3	0.3	5.0
	06	to	-	-
	18	...	-	-
22	00	...	-	-
	06	3	0.3	5.0
	12	3	0.3	5.0
	18	...	-	-
23	00	to	-	-
	18	...	-	-
24	00	...	-	-
	06	...	-	-
	12	3	0.3	4.8
	18	3	0.3	5.0
25	00	3	0.3	5.0
	06	3	0.3	5.0
	12	3	0.3	5.0
	18	3	0.3	5.4
26	00	3	0.3	5.2
	06	3	0.3	4.9
	12	3	0.3	5.0
	18	3	0.3	4.8
27	00	3	0.3	5.0
	06	3	0.3	5.2
	12	3	0.3	5.2
	18	3	0.3	5.2
28	00	3	0.3	5.0
	06	3	0.3	5.0
	12	3	0.3	5.2
	18	3	0.3	5.3

Date Hour K Mean Amplitude Mean Period  
 GMT in mm in sec  
 Station: Madras Compt. E.W.

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
29	00	3	0.3	5.2
	06	3	0.3	5.4
	12	3	0.3	5.2
	18	3	0.3	5.0
30	00	3	0.3	5.0
	06	...	-	-
	12	3	0.3	5.0
	18	3	0.3	5.0
31	00	to	-	-
	18	3	0.3	5.0
01	00	2	0.2	3.9
	03	2	0.2	3.8
	06	2	0.2	3.9
	12	...	-	-
	18	2	0.4	4.9
02	00	...	-	-
	03	2	0.3	4.9
		3	0.1	1.7
	06	2	0.3	4.5
		3	0.1	1.7
	12	...	-	-
	18	2	0.4	4.7
		3	0.2	2.3
03	00	2	0.4	4.8
		3	0.2	2.5
	03	2	0.4	4.6
		3	0.2	2.5
	06	2	0.3	4.3
		3	0.2	2.4
	12	...	-	-
	18	...	-	-
04	00	...	-	-
	03	2	0.4	4.5
		3	0.2	2.5
	06	...	-	-
	12	...	-	-
	18	2	0.4	4.4
		3	0.2	2.7
05	00	2	0.4	4.4
		3	0.2	2.6
	03	2	0.3	4.5
		3	0.2	2.4
	06	2	0.2	2.4
	12	2	0.3	4.3
	18	2	0.4	4.6
		3	0.2	2.2
06	00	2	0.4	4.5
		3	0.2	2.3

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
Station: Madras Compt. E.W.									
06	03	2	0.4	4.4	14	12	3	0.2	2.7
Contd.	06	2	-	-	Contd.	18	3	0.2	2.7
	12	2	0.3	4.3					
	18	2	0.5	4.7	15	00	3	0.2	2.7
		2	0.2	2.4		03	3	0.2	2.8
		2				06	3	0.2	2.7
07	00	2	0.5	4.8		12	3	0.2	2.7
		2	0.2	2.3		18	3	0.2	2.7
	03	2	0.3	4.3					
	06	2	0.3	4.7	16	00	3	0.2	2.7
		2	0.2	2.6		03	3	0.2	4.6
	12	2	-	-		06	3	0.2	2.4
	18	2	0.4	5.1		06	3	0.1	4.5
08	00	2	0.4	5.2		12	3	0.1	2.4
	03	2	0.3	4.7		18	3	0.2	4.3
	06	2	0.3	4.8					
	12	2	0.3	4.4		18	3	0.1	2.6
	18	2	0.4	5.0					
09	00	2	0.3	4.9	17	00	2	0.3	5.1
	03	2	0.1	1.6		03	2	0.3	4.8
	06	2	0.3	4.9		06	2	0.3	4.9
	12	2	0.3	4.9		12	2	0.3	5.0
	18	2	0.4	5.0		18	2	0.3	5.0
10	00	2	0.3	5.1	18	00	2	0.3	4.8
	03	2	-	-		03	2	0.3	4.5
	06	2	0.3	5.0		06	2	0.3	2.5
	12	2	0.3	5.1		06	2	0.3	4.5
	18	2	0.3	4.8		12	2	0.2	2.6
11	00	2	0.3	4.8		18	2	0.2	2.7
		2	0.1	2.2	19	00	2	0.2	2.7
	03	2	0.2	4.8		03	2	0.2	2.7
		2	0.1	2.3					
	06	2	0.3	4.7		06	2	0.3	4.5
		2	0.1	2.5					
	12	2	0.3	4.8		12	2	0.2	2.7
	18	2	0.1	2.3		18	2	0.2	2.7
		2	0.3	5.1					
		2	0.2	2.4					
12	00	2	0.3	4.6	20	00	2	0.4	5.6
		2	0.2	2.6		03	2	0.2	2.5
	03	2	0.2	2.7		06	2	0.3	5.5
	06	2	0.2	2.7		06	2	0.1	1.7
	12	2	-	-		12	2	0.3	5.2
	18	2	0.2	2.5		18	2	0.1	1.3
13	00	2	0.2	2.6					
	03	2	0.2	2.5		12	2	-	-
	06	2	0.2	2.6		18	2	0.3	5.4
	12	2	0.2	2.6	21	00	2	0.3	5.3
	18	2	0.2	2.6		03	2	0.1	1.5
14	00	3	0.2	2.8		06	2	0.1	1.3
	03	3	0.2	2.7		06	2	0.1	1.4
	06	3	0.2	2.7		12	2	0.1	1.3
		3				18	2	0.2	4.9
		3					3	0.1	1.2



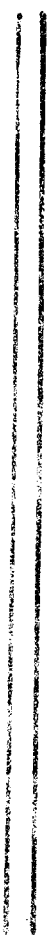
Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
Station: Madras					Station: Bombay (Colaba)				
Compt. E.W.					Compt. E.W.				
22	00	3	0.1	1.3	01	00	3	0.5	5.2
	03	to				06	3	0.5	5.0
	12	0,0	-	-		12	3	0.4	5.2
	18	2	0.2	4.5		18	3	0.6	5.4
23	00	2	0.2	4.5	02	00	...	-	-
	03	2	0.3	4.8		06	3	0.5	5.0
	06	2	0.2	4.6		12	3	0.5	5.0
	12	2	0.2	4.3		18	3	0.5	5.1
	18	2	0.2	4.6	03	00	3	0.5	5.1
24	00	2	0.2	5.0		06	3	0.5	5.1
	03	2	0.2	4.6		12	3	0.5	5.0
	06	2	0.2	4.5		18	3	0.5	5.4
	12	2	0.2	4.8	04	00	3	0.5	5.1
	18	3	0.2	2.7		06	3	0.4	2.1
25	00	2	0.2	4.9		06	3	0.5	5.0
	03	2	0.2	5.2		12	3	0.6	2.1
	06	2	0.3	5.1		12	3	0.5	5.1
	12	2	0.3	5.1		18	3	0.4	2.0
	18	2	0.3	5.0		18	3	0.5	5.1
26	00	2	0.3	5.3				0.3	2.0
	03	2	0.3	4.9	05	00	3	0.5	5.0
	06	2	0.3	4.8		03	1	0.3	1.9
	12	2	0.2	4.7		06	1	0.5	2.2
	18	2	0.2	4.5		09	1	0.6	2.3
27	00	2	0.3	4.8		12	1	0.6	2.3
	03	...	-	-		12	1	0.6	2.5
	06	2	0.2	5.0		15	1	0.5	2.5
	12	2	0.2	4.9		18	3	0.5	5.2
	18	2	0.3	4.7				0.5	2.8
28	00	...	-	-	06	00	3	0.5	5.0
	03	2	0.2	4.4				0.4	2.5
	03	3	0.2	3.2		06	...	-	-
	06	3	0.2	4.0		12	3	0.4	5.1
	06	3	0.2	3.1				0.4	2.0
	12	3	0.2	4.3		18	3	0.5	5.5
	12	3	0.2	2.8				0.4	2.0
	18	3	0.3	3.3	07	00	3	0.5	5.0
29	00	3	0.3	3.5				0.4	2.0
	03	3	0.3	3.8		06	3	0.5	5.1
	06	3	0.3	3.6				0.4	2.0
	12	3	0.3	3.9		12	...	-	-
	18	1	0.4	4.3		18	3	0.6	5.8
30	00	1	0.4	4.6				0.4	2.2
	03	1	0.4	4.5	08	00	3	0.6	5.7
	06	1	0.4	4.4				0.4	2.3
	12	1	0.4	4.4		06	3	0.5	5.8
	18	1	0.4	4.5				0.4	2.2
31	00	1	0.3	4.4		12	3	0.5	6.2
	03	1	0.4	4.4				0.3	2.0
	06	1	0.3	4.4		18	3	0.5	5.4
	12	1	0.3	4.3				0.3	2.1
	18	1	0.4	4.2	09	00	3	0.5	5.4
								0.4	2.2

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
Station: Bombay (Colaba)					Compt. E.W.				
09	03	3	0.5	5.5	16	00	3	0.5	5.6
Contd.	12	3	0.3	1.9		03	3	0.4	2.0
			0.5	5.7				0.5	5.4
			0.8	1.8				0.5	4.0
10	00	3	0.6	6.2		12	3	0.3	2.0
			0.2	1.8				0.5	5.3
			0.5	2.0				0.4	2.0
	09	3	0.5	2.0		18	3	0.5	5.2
			0.4	2.3				0.4	2.0
			0.5	5.3				0.5	5.2
	12	3	0.4	2.0		03	3	0.5	5.7
			0.4	2.0				0.5	2.3
			0.5	5.9				-	-
	18	3	0.5	2.0		12	...	-	-
			0.5	2.0				0.5	5.4
			0.5	2.0				0.4	2.3
11	00	3	0.5	5.9		18	00	0.5	5.4
			0.6	2.2				0.4	2.1
			0.4	5.9				0.5	3.2
	06	3	0.6	2.5		03	1	0.6	2.5
			0.4	5.9				0.7	2.5
			0.6	2.5				0.7	2.4
	12	3	0.5	5.9		12	1	0.7	2.5
			0.5	2.5				0.7	2.4
			0.5	2.5				0.6	2.4
12	00	3	0.5	5.8		18	1	0.6	2.4
			0.4	2.2				0.6	2.4
			0.4	6.1				0.5	2.5
	06	3	0.5	2.3		03	1	0.3	2.6
			-	-				0.3	2.5
			0.4	6.0				0.5	2.4
	12	3	0.4	2.4		09	1	0.5	2.4
			0.4	2.4				0.6	2.1
			0.4	2.4				0.5	2.3
13	00	3	0.4	5.7		15	1	0.6	2.1
			0.3	2.2				0.5	2.3
			0.4	5.3				0.6	2.4
	06	3	0.4	2.2		18	1	0.5	2.3
			0.4	2.2				0.6	2.4
			0.5	5.9				0.5	2.3
	09	3	0.4	2.3		21	1	0.5	2.3
			0.4	2.3				0.5	2.3
			0.5	5.9				0.5	2.3
	18	3	0.3	2.3		00	3	0.5	5.9
			0.5	5.9				0.4	2.4
			0.3	2.3				0.4	2.4
14	00	3	0.5	5.9		03	1	0.4	5.3
			0.4	2.4				0.3	2.4
			0.4	2.4				0.5	5.8
	06	3	0.4	5.3		06	3	0.4	2.2
			0.3	2.4				0.4	2.2
			0.5	5.8				0.4	2.3
	12	3	0.4	2.5		09	1	0.4	2.3
			0.4	2.5				0.4	2.3
			0.4	5.9				0.4	2.4
	18	3	0.3	2.2		12	1	0.4	2.3
			0.3	2.2				0.4	2.4
			0.3	2.2				0.4	2.4
15	00	3	0.5	5.6		15	1	0.4	2.4
			0.3	2.3				0.4	2.5
			0.5	5.7				0.5	2.3
	06	3	0.5	4.0		18	1	0.4	2.5
			0.3	2.3				0.5	2.3
			0.3	2.3				-	-
	12	3	0.4	6.0		00	...	-	-
			0.4	1.3				0.5	2.4
			0.4	1.3				0.5	2.5
	18	3	0.5	5.5		09	1	0.5	2.5
			0.5	1.9				0.4	2.3
			0.5	1.9				0.4	2.2
	15	3	0.5	1.9		12	1	0.4	2.3
			0.5	1.9				0.4	2.2
			0.5	1.9				0.4	2.2

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# SEISMOLOGICAL BULLETIN



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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

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DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and Constants

Station	Latitude	Longitude	Height a. s. l. (Metres)	Lithographic foundation	Instrument	Compt	Period in secs	Static Magnifi- cation	Damping ratio	Paper speed mm/min			
Agra					Columbia	E	To=15	Tg=100		15			
					Long Period								
					- do -	N	To=15	Tg=85		15			
					- do -	Z	To=15	Tg=70		15			
Bombay	18.54°N	72.40°E	6	Deccan Trap	Milne-Shaw	N	12	350	13:1	16			
					Milne-Shaw	E	12	350	23:1	8			
					Sprengnether	E	To=	Tg=7	secs		30		
Bokaro	23.50°N	85.48°E		Rock	Milne-Shaw	N	12	250	20:1	16			
					Milne-Shaw	E	12	250	20:1	16			
					Wood-Anderson	E	0.9	950	h=0.8	60			
					Wood-Anderson	N	0.9	1000	h=0.8	50			
Calcutta	22.32°N,	88.22°E	(1)	7	Milne-Shaw	E	12	250	20:1	8			
					(2)	6	Omori-Ewing	Wood-Anderson	N	2	870	Critical	30
						Alluvium	Omori-Ewing	N	16	32		25.4	
						Omori-Ewing	E	21	30		25.4		
Chatra	25.50°N,	87.10°E	161	Sand Stone	Milne-Shaw	E	12	250	20:1	16			
					Wood-Anderson	N	1	1000	30:1	60			
					Benioff	Z	To=0	Tg=0.45	Critical	60			
						secs							
				Wenner-	Accelerograph	ZNE							
Colombo	06.54°N	79.52°E	7	Beach Sand	Milne-Shaw	E	12	250	20:1	-			
Dehra Dun	30.10°N	78.02°E	582	Gravel	Wood-Anderson	N	0.9	950	Critical	60			
					Wood-Anderson	E	0.9	850	Critical	60			
					Milne-Shaw	N	12	250	20:1	8			
					Milne-Shaw	E	12	250	20:1	8			
Hyderabad	17.26°N,	78.27°E	536	Granite	Milne-Shaw	E	12	250	20:1	8			
					Milne-Shaw	N	12	250	20:1	8			
Kodaikanal	10.14°N,	77.28°E	2345	Rock	Milne-Shaw	E	10	250	20:1	8			
Madras	13.00°N,	80.11°E	15	-	Sprengnether	E	To=	Tg=72	secs	Critical	30		
New Delhi	28.35°N,	77.12°E	207	Massive Quartzite									
Poona	18.32°N	73.51°E	560	Deccan Trap	Sprengnether	Z	To=	Tg=1.4	Critical	30			
					Wood-Anderson	E	4	1000	20:1	16			
					Milne-Shaw	N	12	280	20:1	8			
Port Blair	11.49°N	92.43°E			Wood-Anderson	N	2	1000	20:1	30			
					Wood-Anderson	E	0.9	1000	65:1	30			
					Milne-Shaw	N	12	350	20:1	8			
Sehore					Wood-Anderson	N	0.9	990	Critical	30			
Shillong	25.34°N,	91.53°E	1600	Quartzite	Wood-Anderson	N	0.9	1000	h=0.8	30			
					Wood-Anderson	E	0.9	1000	h=0.8	30			
					(Shillong	Milne-Shaw	N	12	250	20:1	8		
					Quartzite)	Benioff	Z	To=1.0	Tg=18		40		
						Sprengnether	E	To=	Tg=6.3	Critical	30		
				Wenner Accelerograph	ZNE								
Tocklai	28.45°N	94.45°E		Alluvium	Wood-Anderson	E	0.9	970	h=0.8	60			
Vizianagram	18.07°N,	83.27°E			Wood-Anderson	E	0.9	1000	h=0.9	30			
					Wood-Anderson	N	2	1000	20:1	30			



From the ISC collection scanned by SISMOS

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Station	Latitude	Longitude	Height a. s. l. (Metres)	Lithographic foundation	Instrument	Compt	Period in secs	Static Magnif cation	Damping ratio	Paper speed mm/min
Bombay	18.54°N,	72.40°E		Deccan Trap	Milne-Shaw	N	12	350	21:1	8
					Milne-Shaw	E	12	250	21:1	8
					Sprengnether	E	To= 7.3 Tg= 7.3	5000	2.39:1	30
					Benioff	Z	-	-	-	50 for S.P. 30 for L.P.
Bokaro	23.50°N,	85.48°E		Rock	Sprengnether	E	To=Tg=5.5	5200	2.33:1	30
					Wood-Anderson	N	0.8	930	Critical	50
					Wood-Anderson	F	0.8	830	Critical	50
					Milne-Shaw	E	12	270	20:1	15
Calcutta	22.32°N,	88.22°E (1) 7 (2) 5		Milne-Shaw Omori-Ewing Alluvium	Milne-Shaw	E	12	300	20:1	8
					Wood-Anderson	N	2	1000	Critical	30
					Omori-Ewing	E	10	30	-	25.4
					Omori-Ewing	N	15	32	-	25.4
Chatra	25.50°N,	87.10°E	161	Sand Stone	Milne-Shaw	N	10	250	20:1	15
					Milne-Shaw	E	10	250	20:1	15
					Wood-Anderson	N	0.8	940	Critical	30
					Wood-Anderson	N	0.8	970	Critical	30
Delhi	28.41°N,	77.13°E	207	Quartzite Sand Stone	Sprengnether	E	To=Tg=7.5	5000	Critical	30
					Milne-Shaw	N	12	250	20:1	8
					Wood-Anderson	N	0.8	1000	Critical	30
					Wood-Anderson	N	0.8	1000	Critical	30
Dehra Dun	30.19°N,	78.02°E	582	Gravel	Wilson Lamson	Z	To=Tg=1.5	-	-	50
					Wood-Anderson	N	0.8	1000	Critical	30
					Wood-Anderson	E	0.8	1000	Critical	30
					Milne-Shaw	N	12	250	20:1	8
Hyderabad	17.25°N,	78.27°E	536	Granite	Milne-Shaw	E	12	250	20:1	8
					Milne-Shaw	N	12	250	20:1	8
Kodakamal	10.14°N,	77.29°E	2345	Rock	Milne-Shaw	E	10	250	20:1	8
Madras	13.00°N,	80.11°E	15		Sprengnether	E	To=Tg=7.5	5000	23:1	30
Poona	18.32°N,	73.51°E	550	Deccan Trap	Milne-Shaw	N	12	280	20:1	8
					Wood-Anderson	E	4.0	1000	20:1	15
					Sprengnether	Z	1.5	3000	2.1:1	30
Port Blair	11.49°N,	92.43°E			Milne-Shaw	F	12	290	20:1	8
					Wood-Anderson	N	2.0	950	Critical	30
					Wood-Anderson	E	0.8	970	Critical	30
					Benioff	Z	To= 1.0 Tg=1.5	-	-	30
Shore	23.10°N,	77.08°E			Wood-Anderson	E	0.8	840	Critical	30
					Wood-Anderson	N	0.8	900	Critical	30
Shillong	25.34°N,	91.53°E		Quartzite Sand Stone	Milne-Shaw	N	12	250	20:1	8
					Benioff	Z	To= 1.0 Tg=1.0	-	-	50
					Wood-Anderson	E	0.8	900	Critical	30
					Wood-Anderson	N	0.8	970	Critical	30
Tocklai	28.45°N,	94.45°E		Alluvium	Sprengnether	E	To=5.5 Tg=6.5	3900	2.4:1	30
					Wood-Anderson	F	0.8	970	h=0.9	50
Visakhapatnam	18.07°N,	83.27°E			Sprengnether	E	To=Tg=5.9	5000	1.2:1	30
					Wood-Anderson	N	To= 2.0	970	Critical	30
					Wood-Anderson	E	To= 0.8	970	Critical	30

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
01	Epc: 33°N, 59°E. Iran. - H = 00h 45m 00s (Shillong)							
	33.6°N, 59°E. East Iran. - H = 00h 45m 14.6s							
	h about 33 kms (USCGS)							
	Two killed and 3 injured at Tajkough and Mousavieh and damage to many houses.							
	New Delhi	EN	iP	00	49	00	1970	Moderate, initial ground motion towards South and East
			PP		49	03		
			PPP		49	10		
			iS		52	16		
			SS		52	18		
			Lr/SSS		52	52		
			i		53	03		
			i		5	04		
			M		-	-		Per=13 sec, Amp=25.7 mms
	Dehra Dun	Z	eP	00	49	02	1960	Slight
			PPP		49	23		
			iS		52	17		
			SSS		52	59		
			M		54	22		
	Bombay	NE E	iP	00	49	34	2270	Moderate
			PP		49	57		
			PPP		50	10		
			e		53	09		
			eS		53	12		
			e		53	33		
			SS		53	52		
			SSS		54	17		
			Lr		54	29		
			PcS		57	19		
	Poona	Z N	iP	00	49	44	2320	Slight, initial ground movement towards South, West and rarefaction
			PP		50	11		
			PPP		50	22		
			iS		53	33		
			PcP, Lq		53	50		
			SSS		54	26		
			Lr		54	50		
			M		56	31		
			PcS		57	23		
			ScS	01	01	01		
	Bokaro	E	eP	00	50	40		Slight, distant
			e		53	52		
	Visakhapatnam	E	eP	00	50	54	3190	Moderate
			eS		55	43		
	Madras	E	eP	00	51	02		Moderate, 'S' lost in power failure
			Lr		58	05		
			M	01	00	46		
	Shillong	Z	eP	00	51	15		
	Calcutta	E	e	00	55	34		Slight
	Port Blair	E	Mn	01	12	-		Per=13 secs, Grds=4 μ
01	Epc: 41.9°N, 143.4°E. Near Coast of Hokkaido, Japan							
	- H = 05h 01m 53s. h about 55 kms (USCGS)							
	Shillong	Z	iP	05	10	12		Slight, distant, compression

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				hh	m	s	km	
001	Chatra	Z	iP	05	10	37		Feeble, distant, compression
	Contd.							
	Dehra Dun	Z	eP	05	11	18		Tremor
	New Delhi	Z	iP	05	11	23		Slight, compression
	Poona	Z	iP	05	12	20		Tremor, compression
01	New Delhi	Z	eP	05	28	23		Tremor, compression
01	Chatra	Z	iP	06	01	47		Rarefaction, probably of non-seismic origin
01	Shillong	Z	iP	09	36	21		Slight, distant, rarefaction
01	Tocklai	E	eP	10	18	36		Very slight, near
01	Shillong	Z	iP	10	18	39		Slight, distant, rarefaction
			i		19	57		
01	Shillong	Z	iP	10	34	40	240	Slight, compression
			Sg		35	14		
01	Epc: 53.4°N, 164.5°W. Fox Islands, Aleutian Islands - H = 12h 00m 04.1s. - h about 80 kms (USCGS)							
	Shillong	Z	iP	12	12	00		Slight, distant, compression
	New Delhi	Z	iP	12	12	27		Slight, compression
01	Epc: 4.2°S, 143.6°E. Near North Coast of New Guinea. Felt. - H = 12h 11m 09.2s. - h about 80 kms (USCGS)							
	Tocklai	E	eP	12	20	48		Slight, distant
	Shillong	Z	eP	12	20	55	6370	Slight
		E	i		21	27		
			iS		28	51		
	Chatra	ZNE	eP	12	21	25	6820	Slight
		NE	eS		29	45		
	Bokaro	E	iP	12	21	29	6820	Slight, initial ground movement towards West.
		NE	PcP		21	56		
		E	PP		23	49		
			PPP		25	09		
		NE	iS		29	49		
		E	PS		30	05		
		NE	RPS		30	24		
	Visakhapatnam	E	eP	12	21	34	6920	Moderate
		NE	PcP		22	03		
			iS		30	00		
		E	PS		30	22		
		NE	RPS		30	33		
	Madras	E	eP	12	21	44	7090	Feeble, moderate, initial ground movement towards West
			i		22	11		
			e		24	48		
			eS		30	19		
			e		30	51		
	Dehra Dun	Z	eP	12	22	21	7800	Slight, other phases not clear
			iS		31	32		



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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
01	New Delhi Contd.	Z	iP	12	22	21	7800	Slight, compression
		EN	PcP		22	52		
			iS		31	32		
			PS		31	52		
			PPS		32	08		
	Poona	Z	iP	12	22	25	7810	Slight
		N	iS		31	37		
	Bombay	E	eP	12	22	34	8240	Slight
			pP		23	03		
			PP		25	26		
			e		30	48		
			eS		31	55		
			e		32	13		
			sS		32	59		
			SS		36	29		
01	Shillong	Z	eP Sg	13	51	02 51 20	150	Slight
01	New Delhi	Z	eP	14	05	37		Tremor, rarefaction
01	New Delhi	Z	iP	14	52	34		Tremor, rarefaction
01	Shillong	Z	iP	15	39	38		Slight, distant, compression
01	Dehra Dun	Z	eP	18	18	54		Tremor
	New Delhi	Z	eP i	18	19	16 20 00		Slight
01	Dehra Dun	Z	eP	20	18	49		Tremor
01	New Delhi Shillong	Z	iP	20	19	19	500	Slight, compression Slight, compression
		Z	iP	20	43	05		
			Pg		43	26		
			S		43	57		
			Sg		44	23		
01	Shillong	Z	eP Sg	21	14	18 14 34	130	Slight
01	Chatra	Z	iPg eSg	21	28	27 28 41	120	Very feeble, compression
01	Shillong	Z	eP	21	59	26		Slight, distant
01	Shillong	Z	iP	22	06	11		Slight, distant, rarefaction
	Chatra	Z	iP	22	06	39		Feeble, distant, rarefaction
	New Delhi	Z	iP	22	07	33		Slight, rarefaction
02	Epc: 18.6°N, 145.5°E. Mariana Islands. - H = 00h 14m 50.4s. h about 205 kms (USCGS)							
	Shillong	Z	iP	00	23	23	5580	Slight, distant rarefaction
		E	pP		25	04		
			iS		30	18		
			sS		31	24		
	Chatra	Z	iP	00	23	54	6190	Slight, rarefaction
			pP		24	34		
		NE	eS		31	20		

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
02	Bokaro Contd.	E	iP	00	24	08	6330	Slight, initial ground movement towards West.
			pP		24	49		
			i		25	10		
			i		25	35		
		NE	iS		31	40		
			sS		32	54		
			i		33	03		
			i		33	36		
	Dehra Dun	Z	eP	00	24	49	6980	Slight
		N	iS		32	53		
			sS		34	15		
	New Delhi	ZNE	eP	00	24	56	7000	Slight, compression
		ZE	pP		25	46		
		ZNE	iS		33	10		
			sS		34	27		
	Poona	Z	iP	00	25	27		Slight, compression
	Port Blair	N	eS	00	30	43		
			i		33	06		
	Bombay	E	eS	00	34	18		Slight
			sS		35	14		
			e		35	39		
02	Shillong	Z	iP	01	16	42		Slight, distant, compression
02	Shillong	Z	iP	11	08	48		Slight, distant, compression
02	Shillong	Z	iP	12	12	10		Slight, distant, compression
02	Shillong	Z	eP	15	34	49		Slight, distant
02	New Delhi	Z	iP	15	45	26		Tremor, rarefaction
02	Epc: 6.1°S, 146.7°E. Near North Coast of New Guinea - H = 18h 33m 52.4s. h about 60 kms (USCGS)							
	Shillong	Z	eP	18	44	10		Slight
	New Delhi	Z	eP	18	45	31		Slight
02	Chatra	Z	eP	20	02	48		Very feeble, uncertain nature
02	Shillong	Z	iP	21	31	13	230	Slight, rarefaction
			S		31	41		
			Sg		32	14		
02	New Delhi	Z	eP	23	09	32		Slight, rarefaction
	Chatra	Z	eP	23	10	53		Very feeble, distant
03	Dehra Dun	Z	eP	00	09	19		Tremor
03	Chatra	Z	iP	06	02	58		Feeble, distant, rarefaction
03	Port Blair	NE	iP	12	07	53		Slight, local
03	Shillong	Z	iP	15	49	59		Slight, distant, rarefaction
03	Epc: 10.6°S, 164.9°E. Santacruz Islands Region. h about 36 kms - H = 16h 24m 55.6s (USCGS). Mag: 5½ (Pal).							

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
02	Shillong Contd.	Z	iP	16	37	03	8860	Rarefaction
		E	iS		47	05		
			SKS		47	23		
	Bokaro	E	iP	16	37	26	9290	
		NE	iS		47	43		
	Chatra	Z	iP	16	37	26	9310	Rarefaction
		NE	eS		47	49		
	Visakhapatnam	E	eP	16	37	37	9670	Distant
			e		40	35		
			SKS		48	06		
			iS		49	16		
			ScS		48	26		
	Dehra Dun	Z	eP	16	38	05		
	New Delhi	Z	iP	16	38	05	10000	Compression
		E	SKS		48	35		
		Z	PS		50	31		
	Poona	Z	iP	16	38	13		Compression
	Madras	E	eS	16	48	09		
	Bombay	E	e	16	48	46	10670	Distant
			eSKS		48	56		
			e		49	26		
		NE	e		49	32		
		E	e		50	55		
			PS		51	00		
03	Shillong	Z	iP	18	40	35		Slight, distant, rarefaction
03	Shillong	Z	eP	22	14	15		Slight, distant
04	Chatra	Z	eP	02	55	41		Feeble, nature uncertain
04	Chatra	Z	iP	03	38	01		Feeble, distant, rarefaction
	New Delhi	Z	iP	03	39	06		Slight, compression
04	Shillong	Z	iP	03	47	25		Slight, distant, rarefaction
04	Port Blair	NE	iPg	08	43	17		Slight, local
04	Chatra	Z	eP	09	56	21	410	Feeble
			i		56	29		
			eS		57	07		
	Shillong	Z	iP	09	57	00	510	Slight, rarefaction
			Pg		57	02		
			Sg		57	20		
04	Epc: 22°N, 93.5°E. - H = 10h 51m 15s (Shillong)							
	Tocklai	E	iP	10	52	38	590	Initial ground movement towards East
			iS		53	36		
			iS*		53	51		
	Shillong	Z	iP	10	53	05	760	Slight, rarefaction
					54	23		
			S*		54	45		
			Sg		55	03		

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DATE	STATION	COMPT	PPHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
04	Chatra	ZNE	iP	10	53	58	1270	Feeble, compression
	Contd.		S		56	08		
	Dehra Dun	Z	e	10	55	40		Tremor
	New Delhi	Z	eP	10	55	53		Slight, compression
			e		59	27		
	Calcutta	E	e	10	56	30		Slight
04	Dehra Dun	Z	eP	12	13	25		Tremor
04	New Delhi	Z	iP	12	14	49		Tremor, compression
04	Epc: 8°N, 83°W. Near South Coasts of Panama and Costa Rica - H = 14h 02m 32.2s. h about 23 kms. (USCGS)							
	New Delhi	Z	ePKP	14	22	04		
	Chatra	Z	ePKP	14	22	08		
	Poona	Z	i	14	22	12		Feeble
	Shillong	Z	iPKP	14	22	13		Slight, compression
04	Shillong	Z	iP	15	30	54		Slight, distant, compression
	New Delhi	Z	iP	15	31	59		Tremor, compression
04	Shillong	Z	eP	15	35	48		Slight, distant
04	Shillong	Z	iPg	18	42	15	80	Slight, compression
	Chatra	Z	eP	18	43	01	600	Feeble
			eS		44	04		
04	Epc: 35°N, 25.6°E. Crete. - H = 19h 55m 12.8s h about 27 kms (USCGS)							
	New Delhi	Z	eP	20	03	21		Slight, rarefaction
	Shillong	Z	eP	20	04	59		Slight, distant
04	Shillong	Z	iP	20	54	25		Slight, distant, compression
04	Epc: 34.7°N, 25.5°E. Crete. - H = 20h 51m 05.2s h about 21 kms (USCGS)							
	Dehra Dun	Z	eP	20	59	16		Tremor
	New Delhi	Z	ir	20	59	16		Slight, rarefaction
	Chatra	Z	eP	21	00	21		Feeble, distant
	Shillong	Z	iP	21	00	52		Slight, distant, rarefaction
04	Epc: 34.6°N, 25.5°E. Crete. - H = 20h 59m 36.1s h about 25 kms (USCGS)							
	New Delhi	Z	iP	21	07	43		Slight, rarefaction
	Shillong	Z	iP	21	09	24		Slight, distant, rarefaction

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
04	Shillong	Z	eP	21	31	12		Slight, distant
04	Shillong	Z	ePg Sg	22	18	44 18 57	110	Slight
	Chatra	Z	eP	22	20	16		Feeble, distant
05	Epc: 35°N, 81.5°E. - H = 00h 28m 05s (Shillong)							
	Dehra Dun	Z	eP PPP Lq iS SS SSS Sg	00	29	30 29 44 30 27 30 35 30 46 30 53 31 08	610	Slight
	New Delhi	ZE ZNE	iP iS	00	29	52 31 21	810	Slight, compression
	Chatra	Z	iP eS	00	30	29 32 05	1030	Feeble, compression
	Shillong	Z	iP	00	31	16		Slight, distant, compression
05	Shillong	Z	eP	03	27	24		Slight, distant
05	Epc: 53.7°N, 163.6°W. Unimak Island Region - H = 03h 40m 08.9s. h about 65 kms (USCGS)							
	Shillong	Z	iP	03	52	04		Slight, distant, rarefaction
	Chatra	Z	iP	03	52	13		Feeble, compression
	New Delhi	Z	iP i	03	52	29 53 24		Slight, compression
05	New Delhi	Z	iP	09	45	23		Tremor, compression
05	Shillong	Z	iP	12	01	58		Slight, distant, compression
05	Epc: 44.9°S, 75.3°W, Near Coast of Southern Chile - H = 12h 24m 34.5s. h about 25 kms (USCGS)							
	Dehra Dun	Z	ePKP	12	44	28		Tremor
	New Delhi	Z	ePKP	12	44	27		Slight, compression
	Shillong	Z	ePKP	12	44	46		Slight, distant
05	Shillong	Z	eP	13	14	55		Slight, distant
05	Shillong	Z	eP	13	58	45		Slight, distant
05	Epc: 5.2°S, 102.1°E. Off Coast of Sumatra - H = 18h 10m 23.9s. h about 126 kms (USCGS)							
	Shillong	Z	iP	18	16	52		Slight, distant, compression
	Chatra	Z	iP	18	17	17		Feeble, distant, rarefaction
	New Delhi	Z	iP	18	13	10		Slight, rarefaction

DATE	STATION	COMPT	PHASE	G h	M m	T s	Δ km	REMARKS
05	Shillong	Z	iP	19	09	51		Slight, distant, compression
05	Shillong	Z	iP	19	53	31		Slight, distant, compression
05	Shillong	Z	iP	20	16	35		Slight, distant
06	Shillong	Z	iP	07	00	41		Slight, distant, compression
06	Epc: 26.7°S, 113.2°W, Easter Island Region - H = 16h 50m 14.2s. h about 33 kms (USCGS)							
	Port Blair	N	iPKP	17	10	11		
	Shillong	Z	iPKP	17	10	12		Slight
	New Delhi	Z	ePKP	17	10	21		Slight, compression
	Poona	Z	iPKP	17	10	23		Feeble, compression
	Chatra	Z	e	17	11	53		Slight
06	Chatra	Z	iP	18	57	40		Feeble, distant, rarefaction
	Shillong	Z	iP	18	58	09		Slight, distant, rarefaction
06	Shillong	Z	eP	20	45	16		Slight, distant
06	Shillong	Z	iP	21	21	05		Slight, distant, rarefaction
07	Shillong	Z	iP	03	48	53	200	Slight, compression
			Sg		49	20		
07	New Delhi	Z	iP	05	03	08		Slight, rarefaction
07	Epc: 10°N, 144.4°E, Caroline Islands Region - H = 06h 21m 38.4s. h about 50 kms (USCGS) Mag: 6 (Päs)							
	Port Blair	N	eP	06	30	40		Distant
	Shillong	Z	iP	06	30	46	5920	Compression
		E	iS		38	17		
		N	ScS		40	48		
	Chatra	Z	iP	06	31	19		Distant, rarefaction
	Visakhapatnam	E	iP	06	31	51	6220	Initial ground movement towards East
			PPP		34	44		
	Madras	E	iP	06	32	13	6890	Initial ground movement towards East
			PcP		32	51		
			PP		34	33		
			PPP		35	55		
			iS		40	37		
			PS		40	51		
			PPS		41	01		
			e		42	27		
	Dehra Dun	Z	iP	06	32	16	7130	
		N	iS		40	53		
	New Delhi	Z	eP	06	32	19	7140	Compression
		ZNE	i		32	27		
		NE	iS		40	57		
			PS		41	09		

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DATE	STATION	COMPT	PHASE	C h	M m	T s	$\Delta$ km	REMARKS
07	Poona	Z	eP	06	32	40		Compression
	Contd.							
	Bombay	NE	eP eS	06	32	51	7470	
						41 45		
07	Chatra	Z	iP iSg	15	11	22	130	Feeble
						11 37		
	Shillong	Z	eP	15	12	49		Slight, distant
07	Shillong	Z	iP	17	41	11		Slight, distant, rarefaction
07	Dehra Dun	Z	eP iS i	18	22	41	970	Slight
						24 21		
						25 46		
	New Delhi	Z	eP iS	18	22	49	1140	Slight, compression
						24 46		
	Chatra	Z	iP	18	24	33		Feeble, distant, rarefaction
	Shillong	Z	iP	18	25	17		Slight, distant, compression
07	Port Blair	NE	eP	19	43	06		Slight, near
	Shillong	Z	eP	19	47	51		Slight, distant
07	Epc: 10.3°S, 161.4°E. Solomon Island Region - H = 19h 44m 44.9s. h about 75 kms (USCGS)							
	Port Blair	NE	eP i	19	55	27		Slight
						55 43		
	Shillong	Z	eP	19	56	47		Slight, distant
07	New Delhi	Z	iP	20	14	04		Tremor, rarefaction
07	Shillong	Z	iP	21	05	39		Slight, distant, rarefaction
07	Epc: 7.3°S, 130.4°E. Tanimbar Island Region - H = 20h 56m 48.3s. h about 25 kms (USCGS)							
	Shillong	Z	iP	21	07	03		Slight, distant, rarefaction
	New Delhi	Z	iP	21	07	11		Tremor, rarefaction
07	Epc: 40.9°N, 20.3°E. Albania. - H = 21h 35m 28.1s h about 25 kms (USCGS)							
	Chatra	Z	iP	21	45	08		Feeble, distant, rarefaction
	Shillong	Z	iP	21	45	36		Slight, distant, compression
07	Epc: 36.6°N, 71.4°E. Hindukush. - H = 22h 14m 46.5s h about 105 kms (USCGS)							
	Dehra Dun	Z	eP	22	16	44	870	Slight
		N	iS			18 14		
			SS/Lr			18 27		
			SSS			18 37		
			M			19 07		

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS	
07	New Delhi Contd.	Z	iP	22	16	53	960	Slight, compression	
			i			16	56		
			PPP			17	08		
			i			17	38		
			iS			18	32		
	Chatra	Z	iP	22	18	29	1740	Feeble, compression	
		ZN	PP			18	41		
			PPP			18	50		
		NE	Lq			21	20		
			iS			21	24		
			SS			21	43		
			SSS			21	56		
			Lr			22	05		
	M			23	23				
	Poona	Z	eP	22	18	40		Slight, rarefaction	
	Bokaro	E	eP	22	18	48		Slight	
			i			21	47		
	Shillong	Z	iP	22	19	19		Slight, distant, rarefaction	
			i			22	59		
	Visakhapatnam	NE	iP	22	19	34	2400	Slight, initial ground movement towards East	
			iS			23	29		
	Madras	E	ePP	22	20	26	2780	Slight, phases could not be identified due to microseisms	
			S			24	31		
			eSS			26	10		
	Bombay	E	eS	22	22	17		Feeble	
07	Shillong	Z	iP	23	23	20		Slight, distant, compression	
07	Shillong	Z	iP	23	46	11		Slight, distant, compression	
08	Chatra	Z	eP	03	06	19		Feeble, nature uncertain	
08	Shillong	Z	iP	04	07	30		Slight, distant, rarefaction	
08	Shillong	Z	iP	04	38	12		Slight, distant, compression	
08	New Delhi	Z	iP	08	00	50		Tremor, rarefaction	
08	Shillong	Z	iP	11	00	24		Slight, distant, compression	
08	New Delhi	Z	eP	14	37	45	970	Slight, compression	
			iS			39	25		
08	New Delhi	Z	iP	17	13	15	970	Slight, rarefaction	
			iS			19	55		
	Dehra Dun	Z	eP	17	18	33		Tremor	
08	Shillong	Z	iP	18	30	09		Slight, distant, compression	
	New Delhi	Z	iP	18	31	10		Slight, compression	
			i			31	21		
08	Shillong	Z	ePg	20	14	23	100	Slight	
			Sg			14	34		



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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
08	Shillong	Z	iP	22	21	21		Slight, distant, rarefaction
08	Dehra Dun	Z	e	22	45	44		Tremor
	New Delhi	Z	iP	22	45	55	970	Slight, rarefaction
			iS		47	35		
09	Chatra	Z	iP	04	10	30		Feeble, distant, compression
			i		10	39		
09	Shillong	Z	iP	04	23	01		Slight, distant, rarefaction
09	Chatra	Z	eP	04	56	15		Feeble, distant, start uncertain
09	Chatra	Z	iP	07	25	42		Very feeble, compression. Nature uncertain, probably due to some non-seismic reason
09	Epc: 8.6°S, 124.1°E. Sawoe Sea - H = 08h 54m 22.7s. h about 46 kms (USCGS)							
	Shillong	Z	iP	09	02	49	5000	Slight, compression
		E	PP		04	39		
			iS		09	28		
	Bokaro	E	iP	09	03	14	5370	Slight, initial ground movement towards West
		N	eP					
		NE	i		05	14		
			iS		10	13		
	New Delhi	Z	iP	09	04	17		Slight, compression
	Dehra Dun	Z	eP	09	04	20		Tremor
09	Chatra	Z	iP	09	10	27		
09	Shillong	Z	iP	09	20	27		Slight, distant, rarefaction
09	Chatra	Z	iP	09	33	24	150	Feeble, rarefaction
			eS		33	42		
09	Epc: 8.7°N, 126.5°E. Near Coast of Mindanao, P.I. - H = 10h 23m 49.9s. h about 100 kms (USCGS)							
	Shillong	Z	iP	10	30	51		Slight, distant, rarefaction
	New Delhi	Z	eP	10	32	39		Slight, compression
09	Chatra	Z	eP	14	22	39	1300	Feeble
			eS		25	20		
09	Shillong	Z	iPg	15	25	45	120	Slight, compression
			iSg		23	00		
09	Shillong	Z	eP	15	46	48		Slight, distant
			i		48	07		
	New Delhi	Z	iP	15	47	14		Slight, rarefaction
09	Shillong	Z	eP	20	11	13		Slight, distant
09	Chatra	Z	iP	21	46	55		Feeble, distant, compression



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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
09	Chatra	Z	iP	22	20	32		Feeble, distant, compression
09	Shillong	Z	iP	22	40	07		Slight, distant, rarefaction
10	Chatra	Z	iP	00	01	33		Feeble, distant, compression
10	Shillong	Z	iP i	04	09	45 12 31		Slight, near, compression
	New Delhi	Z	eP	04	11	51		Slight, compression
10	New Delhi	Z	eP	04	15	51		Slight, compression
10	Epc: 28.6°S, 68.8°W. Chile-Argentina Border - H = 04h 36m 27.5s. h about 130 kms (USCGS)							
	Poona	Z	iPKP	04	55	52		Feeble, rarefaction
	New Delhi	Z	iPKP i	04	56	08 56 08		Slight, rarefaction
	Shillong	Z	iPKP i	04	56	18 56 58		Slight, distant, rarefaction
10	Dehra Dun	Z	eP	05	56	05		Tremor
10	Chatra	Z	iP	09	03	21		Feeble, distant, compression
10	Epc: 51.1°N, 157.7°E. Near Coast of Kamchatka - H = 10h 31m 58.5s. h about 33 kms (USCGS)							
	Shillong	Z	iP	10	41	40		Slight, distant, compression
	New Delhi	Z	eP	10	42	21		Slight, rarefaction
	Poona	Z	iP	10	43	22		Tremor, compression
10	Tocklai	E	iP iS i	11	43	30 43 51 43 56	170	Slight
	Shillong	Z	iP Pg iS Sg	11	43	59 44 12 44 43 45 01	400	Slight, rarefaction
10	Shillong	Z	iP	12	44	40		Slight, near, rarefaction
	Dehra Dun	Z N	eP iS	21	45	52 52 50	5330	
	Bombay	NE	eP PcP PP	21	46	01 47 08 47 56	5520	
		E	PPP ScP			49 10 50 47		
		NE	eS			53 10		
		E	PPS e SS Lq			53 23 56 30 56 49 58 26		

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
10 Contd.	Poona	Z	iP	21	46	08	5640	Compression
		N	PP		48	00		
			PPP		49	06		
			iS		53	24		
			PS		53	31		
			PPS		53	42		
			ScS		55	55		
			SS		56	59		
			Lq/SSS		58	30		
			Lr	22	01	00		
	M		05	17				
	Hyderabad	EN	iP	21	46	36	6110	Initial ground movement towards North and East
		N	PcP		47	26		
		EN	PP		48	50		
			iS		54	17		
		N	SS		57	25		
			Lr	22	02	35		
			M		06	29		
	N	M		06	32	Per=21 séc, Grds=8 μ Per=15 séc, Grds=6 μ		
	Visakhapatnam	NE	eP	21	47	10	6420	
			PcP		47	53		
			eS		55	09		
			PS		55	23		
			PPS		55	34		
	Madras	E	eP	21	47	10	6450	
			e		47	22		
			PcP		48	01		
			PP		49	13		
			PPP		50	41		
			eS		55	10		
			PS		55	22		
			PPS		55	30		
			e		55	58		
			ScS		56	59		
			SS		59	05		
			Lq	22	01	34		
	Lr		04	12				
	Calcutta	E	eP	21	47	14	6390	
			eS		55	11		
	Shillong	Z	iP	21	47	23	6720	Compression
		E	PcP		47	52		
			iS		55	38		
			ScS		57	10		
	Bokaro	E	i	21	48	12	6380	Initial ground movement towards East
			PcP		48	57		
			PPP		51	47		
			iS		56	03		
			PS		56	17		
			PPS		56	27		
			i		57	00		
			i		58	10		
	SS		59	53				
	Port Blair	E	eP	21	48	33		
10	Shillong	Z	eP	21	58	39		Slight, distant

DATE	STATION	COMPT	PHASE	G h	M m	TT s	$\Delta$ km	REMARKS
10	Shillong	Z	iP	22	21	01		Slight, distant, compression
11	Shillong	Z	iP	00	01	05		Slight, distant
	Dehra Dun	Z	eP i	00	01	18 03 01		Feeble
11	Shillong	Z	iP	00	06	21		Slight, distant, rarefaction
11	Shillong	Z	iP	04	48	59		Slight, distant, compression
11	Chatra	Z	eP	05	28	55		Feeble, probably near, phases uncertain
11	Chatra	Z	iP	05	39	27		Compression, probably near, land slide
11	Shillong	Z	eP	09	25	47		Slight, distant
11	Epc: 36.5°N, 71.0°E. Hindukush. - H = 09h 33m 36.4s h about 97 kms (USCGS)							
	Dehra Dun	Z	eP	09	35	34	840	Slight
		N	PP		35	43		
			PPP		35	48		
			Lq		36	47		
			iS		37	01		
			SS/Lr		37	13		
			SSS		37	23		
			M		37	48		
	New Delhi	E	eP	09	35	49	900	Slight
			eS		37	22		
	Chatra	Z	eP	09	37	17	1720	Feeble
		NEZ	eS		40	10		
	Poona	Z	eP	09	37	47	2070	Slight
			eS		41	12		
	Shillong	Z	iP	09	38	09		Slight, distant, rarefaction
	Bokaro	E	e	09	38	23		Slight
			e		39	23		
			eS		40	52		
	Visakhapatnam	E	eS	09	41	50		Slight
11	Epc: 38.2°N, 20°E. Ionian Sea. - H = 10h 47m 34s h about 43 kms (USCGS)							
	Dehra Dun	Z	eP	10	56	08		Tremor
	Poona	Z	eP	10	53	27		Tremor
	Visakhapatnam	E	eP	10	57	04	6450	Slight, distant
			eS		11	05 04		
			PS		05	22		
			PPS		05	36		
	Chatra	Z	iP	10	57	13		Feeble, distant
	Shillong	Z	iP	10	57	31		Slight, distant, rarefaction

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DATE	STATION	COMPT	PHASE	G M T			Δ	REMARKS
				h	m	s		
11	Epc: 9°N, 123.9°E. Off Coast of Mindanao, P.I. - H = 10h 57m 37.9s. h about 31 kms (USCGS)							
	Shillong	Z	eP	11	04	49		Slight, distant
	Chatra	Z	iP	11	05	28		Feeble, distant, rarefaction
	Dehra Dun	Z	eP	11	06	35		Tremor
11	Chatra	Z	iP	15	46	13		Feeble, distant, compression
11	Shillong	Z	eP	19	09	14		Slight, distant
11	Shillong	Z	eP	20	20	31		Slight, distant
11	Epc: 35.9°N, 71.1°E. Hindukush. - H = 20h 43m 17.5s h about 158 kms (USCGS)							
	Dehra Dun	Z	eP	20	45	12	820	Slight
		N	PPP		45	23		
			iS		46	37		
			SS/Lq		43	50		
			M		47	23		
	New Delhi	Z	iP	20	45	20	920	Slight, rarefaction
			iS		46	55		
	Chatra	Z	iP	20	46	56		Slight, rarefaction
	Shillong	Z	iP	20	47	47		Slight, distant, rarefaction
11	Shillong	Z	eP	23	41	25		Slight, distant
12	Epc: 37°N, 143.5°E. East of Japan. - H = 00h 52m 32s (Shillong) 33.2°N, 142.3°E. Near East Coast of Honshu, Japan - H = 00h 52m 47s. h about 68 kms (USCGS) Mag: 7-7½ (Pas), 6¾ - 7 (Pal). Felt: Tokyo area.							
	Tocklai	E	iP	01	00	33	4450	
			iS		06	39		
	Shillong	ZE	iP	01	00	49	4910	Initial ground movement towards North and East and rarefaction
			E	PP		02	34	
			PPP		03	12		
			iS		07	23		
			SS		10	33		
			Lq		11	01		
			Lr		13	25		
	Chatra	ZNE	iP	01	01	15	5280	
			PcP		02	39		
		PP		03	02			
		PPP		03	55			
		PcS		06	20			
		S		08	11			
		ScS		10	55			
		SS		11	35			
		Lq		12	39			
		SSS		12	44			
		Lr		14	35			
		N	M		23/24		Per=13 sec, Grds=152 μ	
	E	M		24/25		Per=15 sec, Grds=86 μ		

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
12	Calcutta Contd.	E	iP	01	01	27	5550	
			PcP			51		
			iS			38		
			Lq			44		
Bokaro	E	iP	01	01	35	5550	Initial ground	
		PcP			31		movement towards West	
		PP			21			
		PPP			19			
		iS			46			
		PS			58			
		PPS			08			
		i			12			
		SS			24			
		SSS/Lq			59			
		Lr			31			
M			42		Per=19 sec, Grds=66 μ			
Mn			03		Per=16 sec, Grds=90 μ			
Port Blair	N E	iP	01	01	47	5800	Initial ground movement	
		PP			45		towards South and West	
		i			20			
		iS			11			
		i			35			
		SS			57			
		SSS			20			
		Lr			42			
M			53					
Dehra Dun	Z N	eP	01	01	58	6000		
		PP			03			
		PPP			02			
		iS			33			
		SS			09			
		SSS/Lq			39			
		Lr			37			
M			29		Per=13 sec, Grds=102 μ			
New Delhi	ZNE N	iP	01	02	11	6290	Initial ground movement	
		i			30		towards South, West and	
		PcP			36		compression	
		PP			17			
		PPP			45			
		PcS			19			
		S			00			
		PS			08			
		PPS			27			
		ScS			19			
SS			25					
Visakhapatnam	NE N	iP	01	02	14	6290	First ground motion	
		PcP			09		towards North and	
		PP			20		East	
		PPP			47			
		ScP			07			
		iS			05			
		PS			12			
		PPS			19			
		ScS			54			
		SS			40			
		SSS			40			
Lr			03					
M			07		Per=19 sec, Amp=15.3 mm			

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
12	Sehore	E	eP	01	02	28	6630	
	Contd.		eS		10	38		
	Hyderabad	E	iP	01	02	42	6740	I.G.M. towards West
			PcP		03	19		
			PP		04	15		
			PPP		06	11		
			PcS		07	15		
			S		10	58		
			PS		11	30		
			SS		15	03		
			SSS		17	15		
			Lr		21	18		
			M		27	27		Per=24 secs, Grds=89 $\mu$
	Madras	E	iP	01	02	49	6840	Initial ground movement towards West
			PcP		02	32		
			PP		05	02		
			PPP		06	35		
			PcS/ScP		07	30		
			iS		11	10		
			PS		11	25		
			PPS		11	34		
			ScS		12	42		
	Poona	Z	iP	01	03	02	7070	Initial ground movement towards South, West and compression
		N	PcP		03	42		
			PP		05	29		
			PPP		06	54		
			PcS		07	31		
			iS		11	33		
			PS		11	47		
			PPS		11	59		
			ScS/SKS1		12	47		
			SS		15	45		
			SSS		18	27		
			Lq		19	12		
			Lr		22	12		
			PKKP1		23	12		
			PKKS1		26	41		
			M		27	35		
			SKKS2		30	08		
			SKKKS		35	32		
	Bombay	NE	iP	01	03	03	7110	
			PcP		03	44		
			PP		05	11		
			i		05	33		
			PPP		07	11		
			PcS		07	40		
			iS		11	44		
		N	PS		11	56		
			SKS		12	41		
		E	ScS		12	51		
			i		13	00		
			i		15	00		
			PS		16	02		
			M		33	04		Per=13 secs, Grds=57 $\mu$
	Kodaikanal	E	eP	01	03	12	7170	Initial ground movement of 'S' phase towards East
			PP		05	56		
			PcP		08	03		
			iS		11	52		

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
12	Kodaikanal	E	PPS	01	12	32		
Contd.	Contd.		SKS		13	23		
			SS		16	05		
			M		34	00		
12	Shillong	Z	eP	01	14	17		Slight, distant
12	Epc: 38.2°N, 142.5°E. Near East Coast of Honshu, Japan - H = 05h 16m 05s. h about 26 kms (USCGS)							
	Shillong	Z	iP	05	24	14	5170	Slight, compression
		E	iS		31	02		
	Dehra Dun	Z	eP	05	25	21		Tremor
	Poona	Z	iP	05	26	25		Tremor, compression
12	Shillong	Z	iP	03	05	48		Slight, distant, compression
12	Chatra	Z	ePg	08	57	52	110	Very feeble
			Sg		58	05		
12	Epc: 10.4°S, 105°E. South of Java. - H = 11h 20m 02.3s h about 84 kms (USCGS)							
	Shillong	Z	eP	11	27	17		Slight, distant
	Chatra	Z	iP	11	27	41		Very feeble, distant compression
12	Shillong	Z	iP	11	31	21		Slight, distant, compression
12	Shillong	Z	iP	16	26	37		Slight, distant, compression
	New Delhi	Z	eP	16	28	26		Slight, rarefaction
12	Epc: 23.7°S, 71.9°W. Near Coast of Northern Chile - H = 13h 36m 08.4s. h about 34 kms (USCGS)							
	Poona	Z	iPKP	13	55	47		Tremor, rarefaction
	New Delhi	Z	ePKP	16	55	55		Slight, rarefaction
			i		56	01		
	Dehra Dun	Z	e	16	56	03		Tremor
	Shillong	Z	iPKP	16	56	10		Slight, distant, rarefaction
12	Shillong	Z	eP	20	24	51		Slight, distant
12	Dehra Dun	Z	eP	22	30	37		Tremor
	New Delhi	Z	eP	22	30	50	910	Slight
			iS		32	24		
	Shillong	Z	iP	22	33	14		Slight, distant, compression
12	Shillong	Z	eP	23	24	13		Slight, distant
	New Delhi	Z	eP	23	26	07		Slight
12	Shillong	Z	eP	02	06	33		Slight, distant



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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
13	Tocklai	E	eP Pg iSg SSS	02	13	33 42 20 30	320	Slight
13	New Delhi	Z	eP	02	28	13		Slight, rarefaction
13	Epic: 25°N, 91°E. Assam-Pakistan Border - H = 03h 12m 40s (Shillong) Felt: Gauhati and Goalpara							
	Shillong	Z	iPg iSg	03	12	54 07	110	Moderate, near, compression
	Chatra	ZNE	iP PPP Lq S Lr SS SSS M	03	13	45 05 47 55 59 10 14 31	670	Slight, compression
	Calcutta	E	i i S	03	13	55 29 38		Slight
	Bokaro	E	eP eS	03	13	59 28	870	Slight
	Visakhapatnam	E NE	eP iS	03	15	22 28	1220	Slight, distant
	Dehra Dun	Z	eP iS i	03	15	41 01 33	1380	Feeble
	New Delhi	Z	eP	03	15	44		Slight, rarefaction
	Madras	E	eP Lq eS M	03	16	24 10 14 08	1690	Slight
	Bombay	E NE	eS e e	03	19	18 38 30		Feeble
	Poona	Z	eSS	03	19	47		Slight
13	Shillong	Z	iP Pg Sg	03	26	51 59 36	310	Slight, rarefaction
13	Shillong	Z	iPg Sg	03	37	12 21	80	Slight, rarefaction
13	Shillong	Z	ePg Sg	04	19	19 27	70	Slight
13	Shillong	Z	iPg Sg	04	46	22 31	80	Slight, rarefaction

DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
13	Shillong	Z	ePg Sg	05	12 12	26 35	80	Slight
13	Shillong	Z	iPg Sg	05	31 31	06 15	80	Slight, rarefaction
13	Shillong	Z	ePg Sg	06	01 01	43 48	50	Slight
13	Shillong	Z	ePg Sg	06	29 29	26 35	80	Slight
13	Dehra Dun	Z	eP	09	52	29		Tremor
13	Shillong	Z	iP	10	50	49		Slight, distant, compression
13	Dehra Dun	Z	eP	11	21	41		Tremor
13	Shillong	Z	iPg Sg	12	22 22	41 49	70	Slight, rarefaction
13	Dehra Dun	Z	eP	13	43	25		Tremor
13	Shillong	Z	iPg Sg	13	55 55	09 18	80	Slight, rarefaction
13	Shillong	Z	eP	14	08	20		Slight, near
13	Shillong	Z	ePg Sg	14	21 21	33 42	80	Slight
13	Shillong	Z	iPg Sg	17	34 34	28 38	90	Slight, rarefaction
13	Epc: 49.1°N, 87.2°E. Kazakh SSR-China border - H = 18h 35m 58.3s. h about 28 kms (USCGS)							
	Dehra Dun	Z	eP iS	18	40 44	30 12	2240	Slight, phases not clear
	New Delhi	Z	iP	18	40	48		Slight, compression
	Chatra	Z	iP	18	41	00		Feeble, distant, rarefaction other waves indistinct.
	Shillong	Z E	iP iS	18	41 45	10 28	2700	Slight, compression
	Bokaro	E	eP	18	41	27		Slight, distant
	Poona	Z	eP	18	42	28		Feeble
	Hyderabad	E	M	18	54	39		Per=9 secs, Grds=2 $\mu$
13	Shillong	Z	ePg Sg	19	42 42	09 21	100	Slight, rarefaction
13	Shillong	Z	iPg Sg	19	44 45	58 09	90	Slight, rarefaction
13	Dehra Dun	Z	eP eS	19	46 47	04 36	890	Feeble
	Chatra	Z	eP	19	46	52		Feeble, distant, other phases not clear

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DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
13	Shillong	Z	eP	20	00	52		Slight, near
	Chatra	Z	eP eS	20	01	44 02 43	560	Feeble
13	Shillong	Z	ePg Sg	20	19	24 19 34	90	Slight
13	Shillong	Z	ePg Sg	20	20	23 20 33	90	Slight
13	Shillong	Z	ePg Sg	20	28	59 29 07	70	Slight
13	New Delhi	Z	iP	20	47	19		Slight, compression
13	Shillong	Z	iPg Sg	20	50	08 50 16	70	Slight, rarefaction
	Chatra	Z	eP	20	50	34		Very feeble, distant
13	Shillong	Z	iPg Sg	21	52	33 52 41	70	Slight, rarefaction
13	Shillong	Z	iP	22	27	31		Slight, distant, compression
13	New Delhi	Z	iP	22	34	33		Slight, rarefaction
13	Shillong	Z	iPg Sg	22	39	09 39 18	80	Slight, rarefaction
14	Shillong	Z	ePg Sg	01	12	32 12 40	70	Slight
14	Shillong	Z	iPg Sg	03	06	19 06 27	70	Slight, rarefaction
14	Shillong	Z	ePg Sg	03	11	39 11 48	80	Slight
14	Shillong	Z	ePg Sg	03	56	12 56 21	80	Slight
14	Chatra	Z	eP	06	51	01		Movement of unknown type
14	Shillong	Z	iP	07	32	47		Slight, distant, rarefaction
14	Shillong	Z	eP	08	10	32		Slight, distant
14	Shillong	Z	ePg	08	19	38		Slight, near
14	Port Blair	N	eP iS	08	38	42 39 10	250	Slight
14	Shillong	Z	iPg Sg	09	12	03 12 11	70	Slight, rarefaction
14	Shillong	Z	ePg Sg	09	34	04 34 13	80	Slight
14	Shillong	Z	ePg Sg	09	56	04 56 13	80	Slight

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
14	Shillong	Z	ePg Sg	09	57	57	80	Slight
					58	06		
14	Shillong	Z	ePg Sg	11	51	25	80	Slight
					51	34		
14	Shillong	Z	ePg Sg	11	55	11	70	Slight
					55	19		
14	Shillong	Z	iPg Sg	15	46	12	80	Slight, rarefaction
					46	21		
	Chatra	Z	iP S	15	47	07	530	Feeble
					48	04		
14	Chatra	Z	eP	16	26	10		Very feeble, probably due to some local non-seismic reason
14	Shillong	Z	iP Pg Sg	16	29	15	250	Slight, rarefaction
					29	28		
					29	49		
	Chatra	Z	eP S	16	30	20	450	Feeble
					31	08		
14	Shillong	Z	iP	16	43	14		Slight, distant, compression
14	Epc: 38.2°N, 142.5°E. Off East Coast of Honshu, Japan. H = 16h 50m 05.8s. h about 53 kms (USCGS).							
	Chatra	Z	iP	16	58	39		Feeble, distant, compression
	New Delhi	Z	iP	16	59	29		Slight, rarefaction
14	Shillong	Z	eP	18	09	15		Slight, near
14	Shillong	Z	ePg Sg	18	48	45	70	Slight, near
					48	53		
14	Epc: 37.7°N, 142.8°E. Off East Coast of Honshu H = 18h 42m 56.9s. h about 44 kms (USCGS)							
	Shillong	Z	eP	18	51	06		Slight, distant
	New Delhi	Z	iP	18	52	22		Slight, compression
14	Shillong	ZE	iPg Sg	19	27	21	80	Slight, initial ground movement towards East and rarefaction
					27	40		
	Chatra	Z	eP S	19	23	21	580	Feeble
					29	23		
14	Shillong	Z	ePg Sg	19	47	27	80	Slight
					58	27		
15	Port Blair	NE	iPg Sg	01	20	04	80	Slight, first ground movement towards North and West
					20	13		
15	Dehra Dun	Z	eP iS	01	42	03	280	Feeble
					42	35		

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DATE	STATION	COMPT	PHASE	G M T			$\Delta$ km	REMARKS
				h	m	s		
15	New Delhi Contd.	Z	eP	01	42	23		Slight, rarefaction
	Chatra	Z	iP	01	43	13		Very slight
	Shillong	Z	iP	01	44	11		Slight, distant, rarefaction
15	Poona	Z	eP	01	47	47		Feeble
15	Shillong	Z	ePg Sg	03	01	53	70	Slight
					02	01		
15	Epc: 36.2°N, 140.6°E. Honshu, Japan - H = 07h 32m 14.8s. h about 123 kms (USCGS) Felt: Tokyo.							
	Shillong	Z	iP	07	40	05		Slight, distant, compression
	Chatra	Z	iP	07	40	32		Feeble, distant, rarefaction
	Dehra Dun	Z	eP	07	41	10		Tremor
15	Shillong	Z	iP	09	08	23		Slight, distant, compression
15	Bokaro	E	eP	09	25	39		Tremor
15	Epc: 13.7°N, 120.6°E. Luzon Philippine Islands - H = 11h 35m 21.1s. h about 40 kms (USCGS)							
	Shillong	Z	iP	11	41	23		Slight, distant, compression
	Chatra	Z	iP	11	42	06		Feeble, distant, rarefaction
	Dehra Dun	Z	eP	11	43	10		Tremor
15	Shillong	Z	eP	12	37	06		Slight, distant
	Chatra	Z	eP	12	38	41		Feeble, distant
15	Chatra	Z	eP	14	44	03		Feeble, distant
15	Shillong	Z	iP	15	44	38		Slight, distant, compression
15	Shillong	Z	eP	15	45	42		Slight, near
15	Epc: 2.7°S, 11.6°W. Ascension Island Region - H = 18h 08m 27.3s. h about 25 kms (USCGS)							
	Poona	Z	iP	18	21	12		Feeble
	Dehra Dun	Z	eP	18	21	24		Tremor
	New Delhi	ZNE	eS	18	31	53		Slight
15	Epc: 2.9°S, 11.9°W. Ascension Islands Region - H = 18h 45m 17.4s. h about 25 kms (USCGS)							
	Poona	Z	iP	18	58	04		Feeble, compression
	New Delhi	Z	eP	18	58	09		Slight, rarefaction
			i		58	26		
			i		58	52		
	Dehra Dun	Z	eP	18	58	16		Tremor

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
15	Shillong	Z	iP	19	42	30		Slight, distant, compression
15	Shillong	Z	iP	20	39	23		Slight, distant, compression
16	Epc: 38.2°N, 20.4°E. Ionian Sea. - H = 00h 15m 15.7s h about 25 kms (USCGS)							
	Dehra Dun	Z	eP	00	23	40		Tremor
	New Delhi	Z	eP	00	23	50		Slight, compression
16	Tocklai	E	ePg	03	53	35	80	Very slight
			iSg		53	44		
			S		53	51		
16	Shillong	Z	iP	04	23	23		Slight, near
	Chatra	Z	eP	04	24	13	400	Feeble
			eS		24	57		
16	Epc: 30.6°N, 140.6°E. South of Honshu, Japan - H = 13h 20m 15.1s. h about 176 kms (USCGS)							
	Shillong	ZE	iP	13	28	02	4970	Moderate, initial ground
		E	PP		29	46		movement towards West and
			PPP		30	10		compression
			ScP		33	33		
		ZE	iS		34	20		
			sS		35	19		
		NE	SS		37	40		
			ScS		37	50		
			Lq		38	24		
	Chatra	ZN	iP	13	28	30	5310	Feeble, compression
			iS		35	09		
			sS		36	04		
			SS		38	11		
	Rort Blair	N	eP	13	28	41	5520	
			iS		35	31		
	Bokaro	E	iP	13	28	46	5530	Slight, first ground
		NE	iS		35	39		motion towards West
			sS		36	40		
	Dehra Dun	Z	eP	13	29	19	6190	Slight, phases not clear
			PcS		34	14		
			iS		36	45		
			i		39	56		
	Visakhapatnam	E	eP	13	29	21	6190	Moderate
		NE	eS		36	47		
	New Delhi	ZE	iP	13	29	26	6220	Slight, initial ground
		E	pP		30	04		movement towards East
			PP		31	15		and compression
			PPP		31	53		
		ZE	PcS/ScP		34	18		
		ZNE	iS		36	55		
		NE	i		37	32		
			ScS		39	01		
		N	i		39	44		

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
16	New Delhi	N	SS	13	40	38		
	Contd. Contd.	NE	i		41	16		
	Bombay	E	eP	13	29	42		Slight
			i		38	36		
			e		39	10		
			i		40	00		
	Madras	E	e	13	29	55		Slight, phases could not be identified
			e		30	22		
			e		33	37		
			eS		37	50		
	Poona	Z	i	13	30	13		Slight, compression
	Tocklai	E	e	13	33	29		Slight, distant
16	Epc: 44.8°S, 37.2°E. Prince Edward Islands - H = 17h 54m 49.2s. h about 25 kms (USCGS)							
	Chatra	Z	eP	18	07	21		Feeble, distant
	Shillong	Z	iP	18	07	29		Slight, distant, compression
16	Shillong	Z	iP	18	14	00		Slight
16	Chatra	Z	iP	18	21	12		Feeble, distant, compression
	Shillong	Z	iP	18	21	20		Slight, distant, compression
16	New Delhi	Z	eP	19	56	37		Slight, rarefaction
16	Shillong	Z	iP	20	37	29	80	Slight, compression
			iS		37	40		
16	Shillong	Z	iP	23	48	11		Slight, near, compression
17	Shillong	Z	iP	00	33	21		Slight, near
17	Dehra Dun	Z	eP	06	50	23		Tremor
17	New Delhi	Z	eP	06	52	38		Slight, compression
17	Dehra Dun	Z	eP	07	08	44	1050	Slight
			PP		08	52		
			iS		10	32		
			SS		10	47		
			SSS		10	53		
			M		11	33		
	New Delhi	Z	iP	07	09	02	1190	Slight, rarefaction
			iS		11	04		
	Chatra	Z	eP	07	09	56		Feeble, distant
	Shillong	Z	eP	07	10	41		Slight, distant
	Poona	Z	eP	07	11	16		Feeble
	Bokaro	E	e	07	13	51		Slight, distant, phases not well developed
			i		18	31		
	Bombay	E	e	07	15	18		Slight, near
			e		19	12		

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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
17	Dehra Dun	Z	eP	08	11	25		Feeble
			e		13	02		
	New Delhi	Z	iP	08	11	32	950	Slight, compression
			iS		13	09		
17	Bombay	N	e	09	59	37		Slight, near
			e	10	03	52		
17	Epc: 42.3°N, 17.3°E. Adriatic Sea. - H = 10h 03m 46.9s h about 25 kms (USCGS)							
	Dehra Dun	Z	eP	10	12	35		Tremor
	New Delhi	Z	iP	10	12	37		Slight, compression
	Chatra	Z	iP	10	12	39		Feeble, distant, compression
	Poona	Z	eP	10	13	03		Tremor
	Shillong	Z	iP	10	14	07		Slight, distant, compression
17	New Delhi	Z	eP	10	30	31		Tremor
17	Hyderabad	N	e	11	02	27		
17	Epc: 27.8°N, 19.9°E. Ionian Sea. - H = 11h 33m 51s h about 25 kms (USCGS)							
	New Delhi	Z	eP	11	42	30		Slight
	Shillong	Z	eP	11	44	04		Slight, distant
17	Epc: 26.1°N, 95.1°E. Assam-Burma Border - H = 11h 51m 17.6s. h about 153 kms (USCGS)							
	Shillong	ZE	iP	11	52	05	360	Slight, rarefaction
			P*		52	10		
			Pg		52	16		
			Lq		52	32		
			iS		52	45		
			Sg/M		52	57		
	Chatra	Z	eP	11	53	00	780	Feeble
			PP		53	07		
			PPP		53	14		
			Lq		54	08		
			eS		54	20		
			Sg/M		55	03		
	Port Blair	N	eP	11	54	48		Slight
	Calcutta	E	e	11	53	51		Slight
	Madras	E	eP	11	54	49		Feeble
	Bokaro	E	iS	11	54	51		Slight, near
	Dehra Dun	Z	eP	11	54	55		Feeble
			e		58	41		
	New Delhi	Z	iP	11	54	55		Slight, compression
			e		55	32		
	Poona	Z	eP	11	55	22		Feeble



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DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$ km	REMARKS
				h	m	s		
17	Shillong	Z	iP	15	23	41		Slight, distant, compression
17	Chatra	Z	iP	18	09	55		Feeble, rarefaction, nature uncertain
17	Shillong	Z	iP	18	43	49		Slight, distant, compression
17	Dehra Dun	Z	eP	18	49	05		Tremor
17	Shillong	Z	eP	18	57	40		Slight, distant
17	Shillong	Z	iP PP iSg	19	33	25 33 33	180	Slight, rarefaction
17	Shillong	ZE	iP	19	34	21		Slight, near
	Chatra	Z ZNE	eP PP PPP Lq S Lr SS S* SSS M	19	35	11 18 27 02 13 17 22 30 34 42	580	Feeble
17	Shillong	Z	iPg iSg	19	38	11 17	50	Slight
17	Shillong	ZE	iP	19	40	08		Slight, near
	Chatra	ZNE NE	eP eS	19	41	06 01	510	Feeble
17	Shillong	Z	iPg Sg	19	54	39 47	70	Slight
17	Shillong	Z	iP	20	13	57		Slight, near, rarefaction
17	Shillong	Z	eP	20	17	56		Slight, near, rarefaction
17	Epc: 38.4°N, 142.2°E. Near East Coast of Honshu, Japan - H = 20h 54m 13.4s. h about 110 kms (USCGS)							
	Shillong	Z	iP	21	02	15		Slight, distant, compression
	Chatra	Z	iP	21	02	41		Feeble, distant, rarefaction
	Dehra Dun	Z	eP	21	03	23		Tremor
17	Shillong	Z	eP	21	08	34		Slight, near
17	Shillong	Z	eP	21	52	41		Slight, distant
17	Shillong	Z	iP	22	24	56		Slight, near, compression
17	Epc: 1.5°S, 14.9°W. Mid-Atlantic Ocean - H = 22h 34m 56.7s, h about 25 kms (USCGS)							
	Bombay	E	eP PP eSKS	22	47	54	9750	

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
17	Poona	Z	eP	22	47	55	10010	Slight
	Cont'd.		eS		58	47		
	New Delhi	Z	eP	22	48	10	10220	Slight, rarefaction
			ePP		51	52		
	Dehra Dun	Z	eP	22	48	18		Tremor
18	Shillong	Z	iP	04	59	14		Slight, distant, compression
18	Shillong	Z	iP	05	29	47		Slight, distant, compression
18	Shillong	Z	iP	05	54	22	220	Slight, rarefaction
			iSg		54	52		
18	Bokaro	E	i	08	38	57		Slight, near
18	New Delhi	Z	eP	10	53	12		Tremor
18	Shillong	Z	iPg	11	58	37	50	Feeble, local, compression
			iSg		58	43		
18	Shillong	Z	iP	13	31	19		
18	Shillong	Z	eP	14	14	04		Slight, distant
18	New Delhi	Z	eP	14	17	55		Tremor, compression
18	New Delhi	Z	iP	14	36	19		Slight, compression
18	Shillong	Z	eP	16	15	30		Slight, distant
18	Shillong	Z	eP	16	43	01		Slight, distant
18	Felt: Bhuntar							
	Dehra Dun	Z	eP	16	49	05	180	Slight
		N	PP		49	13		
			PPP		49	21		
			iS		49	27		
			SS		49	38		
			SSS		49	43		
	New Delhi	Z	P	16	49	27	380	Slight, rarefaction
			P*		49	33		
			Pg		49	39		
			S		50	08		
			S*		50	16		
	Shillong	Z	eP	16	50	59		Slight, distant
18	Shillong	Z	eP	19	29	51		Slight, distant
18	Epc: 10°S, 79°W. Off Coast of Peru.							
	H = 19h 14m 37.2s. h about 39 kms (USCGS)							
	Felt: Casma, Peru. Mag: 6¼ (Pas).							
	Shillong	Z	e	19	33	35		Compression
			iPKP		34	33		
		E	i		44	50		
	Dehra Dun	Z	ePKP	19	34	22		
		N	e		44	51		
			SSS		54	03		

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
18	Dehra Dun	N	Lq	19	57	46		
Contd.	Contd.		M	20	09	33		
	New Delhi	NE	iPKP	19	34	22		Rarefaction
		ZN	i		34	37		
		Z	i		34	44		
			i		35	02		
		ZN	PP		35	19		
			PPP		37	52		
			SS		51	06		
			SSS		54	57		
		Z	M		-	-		Per=23 secs, Amp=17 mm
	Poona	Z	iPKP	19	34	26		Compression
			e		45	00		
	Bombay	NE	ePKP	19	34	29	16630	
			ePP		38	05		
		E	e		44	44		
			e		48	03		
		N	PPP		48	37		
		NE	e		52	39		
			eSS		57	24		
			SSP		57	55		
		E	M	20	43	-		Per=21 secs, Grds=4 $\mu$
		N	M		53	-		Per=20 secs, Grds=5 $\mu$
	Chatra	Z	iPKP	19	34	35		Compression
		NE	i		45	34		
	Bokaro	E	iPKP	19	34	36		Distant, phases not well developed
		NE	i		45	42		
	Calcutta	E	ePKP	19	34	41		
			i		44	57		
	Visakhapatnam	E	eP	19	34	46	10290	
			eS		45	49		
	Port Blair	NE	iPKP	19	34	48	15370	
		E	PP		37	41		
			i		46	41		
			PS		48	14		
			PPS		49	37		
			SS		56	05		
			SSS	20	01	20		
			M		49	-		Per:22 secs, Grds=23 $\mu$
	Hyderabad	E	e	19	42	24		
			PP		45	24		
			PPP		49	13		
			PPS		58	30		
			SS	20	04	39		
			Lr		30	42		
			M		38	21		Per=24 secs, Grds=16 $\mu$
18	Shillong	Z	iP	22	58	09		Slight, compression
18	Poona	Z	iP	23	26	41		Slight, rarefaction
18	Shillong	Z	iP	23	52	05		Slight, distant
18	New Delhi	Z	iP	23	57	05		Tremor, compression

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DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
19	New Delhi	Z	iP	02	14	31		Slight, compression
19	Dehra Dun	Z	eP	02	38	43		Tremor
19	Shillong	Z	iP	08	17	42		Slight, distant, compression
19	Bokaro	E	iPg iSg	08	50	35 50 36	10	Slight
19	Shillong	Z	iP	10	16	53		Slight, tremor
19	Epc: 38.6°N, 44°E. Eastern Turkey. - H = 11h 55m 27.3s. h about 25 kms (USCGS)							
	Chatra	Z	iP	12	02	44		Feeble, distant, compression
	Shillong	Z	iP	12	03	17		Slight, distant, compression
19	Shillong	Z	iP	12	40	04		Slight, distant, compression
19	Dehra Dun	Z	eP	15	15	09		Feeble
19	Port Blair	N	ePg iSg	15	38	51 39 01	90	Slight
19	Shillong	Z	eP	16	58	30		Slight, distant
19	Shillong	Z	iPg	18	30	12		Slight, tremor
19	Dehra Dun	Z	eP e	18	50	01 51 38		Feeble
	Shillong	Z	eP	18	52	38		Slight, distant
19	Shillong	Z	iPg iSg	18	59	18 59 25	60	Feeble
19	Shillong	Z	iP	19	52	15		Slight, distant, compression
19	Epc: 9.4°S, 79°W. Off East Coast of Peru - H = 20h 18m 20.5s. h about 25 kms (USCGS)							
	Dehra Dun	Z	ePKP	20	33	05		Tremor
	Shillong	Z	iPKP	20	33	09		Slight, distant, compression
19	Epc: 15.8°S, 168°E. New Hebrides Islands. Felt: Santo - H = 22h 15m 20.9s. h about 213 kms (USCGS)							
	Shillong	ZE	iP pP iS	22	27	33 28 27 37 18	8960	Slight, compression
		E	i			39 14		
	Chatra	Z NE	iP PP S sS	22	27	55 31 13 38 04 39 39	9450	Slight, compression
	Madras	E	eS e	22	33	19 38 50		Slight
19	Shillong	Z	iP	23	02	32		Slight, distant, rarefaction

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
19	Shillong	Z	iPg iSg	23	15	14 15 16	20	Feeble
19	Shillong	Z	iF	23	19	15		Slight, distant, rarefaction
19	Epc: 71.4°N, 137°E. - H = 23h 16m 02s (Shillong) 69.8°N, 138.6°E, Siberia S.S.R. - H = 23h 16m 04.1s h about 0 km (USCGS)							
	Dehra Dun	Z N	eP iS SSS Lr M	23	25	13 32 37 37 52 40 31 44 05	5800	Slight, other phases not clear
	Shillong	ZE E	iP iS M	23	25	16 32 40 44 03	5800	Slight, distant, rarefaction
	Chatra	ZNE	iP PcP PPP PcS S ScS SS SSS Lr M	23	25	17 23 32 27 13 30 25 32 42 35 11 36 13 37 40 40 06 44 17	5830	Slight, distant, rarefaction
	New Delhi	NE	iP i iS M	23	25	29 25 33 32 58 -	5890	Moderate, initial ground motion towards South and West. Per=22 secs, Amp=56.5 mm
	Bokaro	E	iP iS	23	25	43 33 26	6140	Slight, first ground motion towards West
	Visakhapatnam	NE E N	iP iS eS	23	26	30 34 54	6890	Moderate, initial ground movement towards North, East
	Poona	Z E	iP iS PS PPS Lr PKKP1 PKKS1 M SKKS2 SKKKS	23	26	41 35 17 35 36 35 46 46 11 46 55 50 21 51 39 53 48 59 18	7120	Slight
	Port Blair	N	iP eS	23	26	45 35 19	7080	
	Bombay	N E	e eS e e	23	26	46 35 17 37 44 49 08		Slight
	Madras	E	eP M	23	27	05 53 29		Slight

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
19	Calcutta	E	iS	23	33	35		Slight
Contd.			i		45	45		
	Kodaikanal	E	i	23	54	27		Slight, distant
			i		55	27		
20	Shillong	Z	eP	03	13	02		Slight, near
20	New Delhi	Z	iP	04	25	13		Slight, compression
20	Epc: 20.6°N, 72.2°W. Near North Coast of Haiti.							
	- H = 05h 47m 55.3s. h about 25 kms							
	Minor damage at Port-au-Prince.							
	Felt: San Juan, Puerto Rico (USCGS)							
	Mag=6½-6¾ (Pas), 6¾-7 (Brk), 6 (Pal)							
	Dehra Dun	Z	ePKP	06	06	49		Compression
	New Delhi	ENZ	iPKP	06	06	52	13550	Initial ground movement towards
		EN	PP		08	30		South, East and compression
			SKS		14	12		
			i		14	45		
			PS		18	21		
			PPS		19	43		
			SS		25	30		
			M		-	-		Per=21 secs, Amp=24.5 mm
	Bombay	NE	ePKP	06	06	59	14010	
			PP		09	01		
			PPP		12	00		
			SKS2		14	20		
		E	ePS		18	54		
			PPS		21	00		
			SKKS		23	05		
		N	SS		25	57		
		E	SS		26	28		
		NE	SSP		27	18		
		E	M	07	02/03			Per=19 secs, Grds=3 μ
		N	M		13/14			Per=17 secs, Grds=4 μ
	Chatra	Z	iPKP	06	07	03	14430	
			ePP		09	09		
	Shillong	ZE	ePKP	06	07	06		
		E	i		10	34		
	Bokaro	E	iPKP	06	07	07		
			i		10	32		
	Hyderabad	N	iPKP	06	07	09		Initial ground movement towards East
	Tocklai	E	ePKP	06	07	10		Distant
	Visakhapatnam	E	ePKP	06	07	16		
	Madras	E	ePKP	06	07	19		Very distant
			e		09	50		
			e		10	54		
			e		14	51		
			e		22	56		

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DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
20	Kodaikanal	E	iP i	06	10	06 10 54		
20	Hyderabad	N E N	e M M	06	19	29 54 21 54 24		Per=18 secs, Grds=10 $\mu$ Per=19 secs, Grds= 8 $\mu$
20	Shillong	Z	ePg iSg	06	25	14 25 21	60	Slight
20	Kodaikanal	E	e e	07	01	36 09 29		Slight, distant
20	Dehra Dun	Z	eP iS	07	54	22 55 54	890	Feeble
	New Delhi	Z	iP iS	07	54	30 56 08	940	Slight, rarefaction
20	Port Blair	E	ePg eSg	12	19	09 19 16	60	Slight
20	Shillong	Z	ePg eSg	15	25	42 25 44	50	Feeble
20	Shillong	Z	ePg iSg	16	09	18 09 21	20	Feeble
20	Dehra Dun	Z	eP PP iS SS SSS Sg/M	17	07	14 07 24 08 39 08 49 09 01 09 22	820	Slight
	New Delhi	Z	iP iS	17	07	14 08 37	800	
20	Shillong	Z	eP	17	10	04		Slight, distant
20	Visakhapatnam	NE	e e	17	14	51 15 40		Slight
	Madras	E	e e	17	16	33 17 08		Feeble
20	Chatra	Z	eP	17	19	11		Feeble, distant
20	Shillong	Z	ePg iSg	17	49	14 49 24	90	Feeble
20	Epc: 37°N, 73°			Origin time 20h 23m 25s G.M.T.				
	Dehra Dun	Z	eP PP iS SS SSS Sg/M	20	25	28 25 36 27 07 27 20 27 30 28 01	960	Slight
	New Delhi	Z	iP iS	20	25	38 27 19	980	Slight, rarefaction

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
20	Shillong	Z	iP	20	27	55		Slight, distant, compression
Contd.								
20	Shillong	Z	iPg Sg	21	22	01 22 12	90	Feeble, compression
20	Shillong	Z	iP	21	31	01		Slight, distant, compression
20	Shillong	Z	iP	21	32	55		Slight, distant, compression
	Chatra	Z	iP	21	33	26		Feeble, distant, compression
	New Delhi	Z	iP	21	34	23		Slight, compression
20	Shillong	Z	iP	22	40	48		Slight, distant, rarefaction
20	New Delhi	Z	iP	22	59	19		Tremor, rarefaction
20	Shillong	Z	eP iS	23	03	15 03 33	190	Slight
21	Shillong	Z	iP	00	24	21		Slight, distant, rarefaction
21	Epc: 36°N, 70°E. Origin time 01h 07m 55s G.M.T.							
	Dehra Dun	Z	eP PP PPP iS SS Lr SSS Sg/M	01	10	14 10 19 10 28 12 01 12 12 12 18 12 23 13 05	1040	Slight
	New Delhi	Z	iP i iS	01	10	23 10 29 12 14	1080	Slight, rarefaction
	Shillong	Z	iP	01	12	49		Slight, distant, compression
21	Epc: 35°N, 73.5°E. Origin time 03h 49m 35s G.M.T. (Shillong)							
	Dehra Dun	Z	eP eS	06	50	29 51 48	760	Feeble
	New Delhi	Z	iP iS	06	50	42 52 19	350	Slight, rarefaction
	Chatra	Z	iP	06	52	14	1730	Feeble, distant, rarefaction
	Shillong	Z	iP	06	52	55		Slight, distant, rarefaction
21	Shillong	Z	iPg iSg	09	45	16 45 25	80	Slight
21	Shillong	Z	iP	14	31	52		Slight, distant, rarefaction
21	Shillong	Z	eP	15	23	03		Slight, distant
21	Epc: 24.8°N, 94.3°E. Assam-Burma Border - H = 17h 27m 30s (Shillong)							
	Shillong	ZE	iPg iSg	17	23	15 28 42	230	Slight, initial ground movement towards East and rarefaction



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DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
21	Tocklai	e		17	28	22		Moderate, phases mixed with local disturbance.
	Contd.							
	Chatra	ZN	iP	17	29	13	750	Feeble, near, compression
		ZNE	PP		29	18		
			PPP		29	28		
			Pg		29	43		
			Lq		30	13		
			S		30	30		
			Lr		30	36		
			SS		30	39		
			SSS/S*		30	51		
			Sg/M		31	08		
	New Delhi	Z	iP	17	31	17	1600	Slight, rarefaction
			iS		33	58		
21	Shillong	Z	eP	20	14	22		Slight, distant
21	Shillong	Z	iPg	20	18	10		Feeble, near
21	Shillong	Z	e	20	56	22		Slight, tremor
21	Epc: 6.5°S, 144.6°E. New Guinea. - H = 21h 18m 01.7s h about 42 kms (USCGS)							
	Shillong	Z	iP	21	28	10		Slight, distant, compression
	Chatra	Z	iP	21	28	39		Slight, distant, compression
	New Delhi	Z	iP	21	29	33		Slight, compression
	Poona	Z	iP	21	29	36		Tremor
21	Shillong	Z	iPg	21	33	52	130	Slight, rarefaction
			iSg		34	08		
	Chatra	Z	eP	21	34	32	400	Feeble
			eS		35	16		
21	Port Blair	N	iP	23	15	07		Slight, near
	Shillong	Z	eP	23	18	02		Slight, tremor
22	Shillong	Z	iP	02	22	31		Slight, distant, rarefaction
22	Epc: 44.2°S, 72.6°W. Near Chile-Argentina Border - H = 04h 29m 38.7s. h about 120 kms (USCGS)							
	Port Blair	N	iPKP	04	49	01		
	New Delhi	Z	iPKP	04	49	11		Slight, rarefaction
			i		49	17		
			i		49	25		
	Chatra	Z	iPKP	04	49	20		Feeble, distant, compression
	Shillong	Z	iPKP	04	49	22		Slight, distant, rarefaction
			i		49	52		
22	Epc: 15.5°N, 93.1°W. Near Coast of Chiapas, Mexico - H = 04h 45m 20.3s. h about 69 kms (USCGS) Mag: 5¼-5½(Pal)							



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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
22 cont'd.	Bombay	N	ePKP	05	04	31		
			e			13	09	
			e			19	47	
		NE	M	06	09	-		
	Dehra Dun	Z	ePKP	05	04	32		
			e			13	49	
	Shillong	Z	ePKP	05	04	33		Distant
	New Delhi	Z	ePKP	05	04	35	14840	Compression
			i			05	25	
			iPP			07	05	
			i			07	59	
	Roona	Z	i	05	04	48		Rarefaction
		N	i			14	49	
	Visakhapatnam	NE	e	05	05	03		
			e			06	02	
	Port Blair	N	e	05	05	05		
			i			05	18	
	Madras	E	e	05	05	16		
			e			06	06	
22	New Delhi	Z	iP	05	14	35		Slight, compression
			i			14	55	
22	New Delhi	Z	eP	06	03	06		Tremor
22	Shillong	Z	eP	07	19	45		Slight, distant, compression
22	New Delhi	Z	eP	07	58	33		Slight, rarefaction
22	Shillong	Z	iP	11	06	31		Slight, distant, compression
22	Shillong	Z	eP	11	39	57		Slight, distant
22	New Delhi	Z	eP	15	42	33		Slight
22	Shillong	Z	iP	15	57	12		Slight, distant, rarefaction
22	Epc: 5.1°S, 153.7°E. New Britain. - H = 16h 38m 17.8s h about 20 kms (USCGS)							
	Shillong	Z	iP	16	49	15		Slight, distant, rarefaction
	Chatra	Z	iP	16	49	41		Feeble, distant, rarefaction
22	Shillong	Z	iPg	18	05	41		20 Feeble
			eSg			05	44	
22	Shillong	Z	i	18	29	07		Slight, tremor
22	Shillong	Z	eP	18	53	16		Slight, distant, rarefaction
	Chatra	Z	eP	18	53	27		Feeble, distant
22	Shillong	Z	iP	18	58	51		Slight, distant, compression

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DATE	STATION	COMP	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
22	Chatra	Z	iP	18	59	16		Feeble, distant, rarefaction
	Contd.							
	New Delhi	Z	eP	19	00	05		Slight, compression
22	Dehra Dun	Z	e	19	18	56		Feeble
			e		20	35		
	New Delhi	Z	eP i	19	19	12 23	37	Slight
	Chatra	Z	iP i	19	20	41 22	35	Feeble, distant, compression Phase analysis not possible.
	Shillong	Z	iP	19	21	29		Slight, distant, rarefaction
22	Shillong	Z	i	19	24	35		
22	Shillong	Z	iP	21	11	54		Slight, distant, rarefaction
23	New Delhi	Z	eP	00	49	30		Slight, rarefaction
23	Epc: 36°N, 139.2°E. Hnoshu, Japan - H = 03h 54m 38.4s. h about 115 kms (USCGS)							
	Shillong	Z	iP	04	02	23		Slight, distant, compression
	Dehra Dun	Z	eP	04	03	35		Tremor
	New Delhi	Z	iP	04	03	46		Slight, compression
23	Shillong	ZE	eP	04	21	09	2520	Slight
			iS		25	13		
	Chatra	Z	eP	04	22	05		Feeble, distant
	Dehra Dun	Z	eP	04	23	35		Tremor
	New Delhi	Z	iP	04	23	44		Slight, compression
	Tocklai	E	e	04	24	17		Slight, distant
	Bombay	NE	e	04	33	10		Feeble, tremor
E				33	34			
N				35	10			
23	Shillong	Z	i	05	24	30		Slight, tremor
23	Shillong	Z	ePg	05	47	45		Feeble, near
23	Epc: 42.5°N, 146°E. East of Hokkaido - H = 05h 58m 10s. h about 100 kms (Shillong) 42.9°N, 143.4°E. Hokkaido, Japan - H = 05h 58m 04.9s. h about 25 kms (USCGS) Mag: 7-7½ (Pas), 7 (Pal).							
	Tocklai	E	iP i	06	06	09 06		Distant
	Shillong	ZEN	iP	06	06	25	4930	Initial ground movement towards North, East and rarefaction
		E	EcP		07	54		
		EN	PP		03	27		
			PPP		09	17		
			ScP		11	44		

DATE	STATION	COMPT	PHASE	G	M	PT	$\Delta$	REMARKS
				h	m	s	km	
23 Contd.	Shillong Contd.	EN	S	06	13	03		
			SS		13	14		
			SSS		17	18		
			Lr		19	16		
	Chatra	ZNE	iP	06	03	43	5260	Initial ground movement towards North, East and rarefaction
			PcP		03	13		
			PP		08	37		
			PPP		09	27		
		NE	PcS		12	11		
			S		13	40		
			ScS		13	34		
			SS		16	52		
			Lq		17	54		
		E N	SSS		18	03		
			Lr		20	09		
			M		30	31		Per=12 secs, Grds=34 $\mu$
			M					Per=16 secs, Grds=40 $\mu$
	Calcutta	E	iP	03	07	07	5490	
			PP		09	03		
			PPP		09	54		
			iS		14	14		
	Bokaro	E	iP	03	07	10	5550	First ground motion towards West
			iS		14	21		
			PS		14	38		
			PPS		14	48		
			i		13	53		
			SS		17	53		
			SSS		19	29		
			i		20	23		
			Lr		21	29		
M		26	06					
	Dehra Dun	Z N	eP	03	07	24	5840	
			PP		09	33		
			PPP		10	20		
			iS		14	50		
			SS		18	33		
			SSS		20	01		
			Lr		22	17		
			M		26	21		
	Port Blair	NE E	iP	06	07	32	5870	Initial ground movement towards North and East.
			PcP		08	40		
			PP		09	26		
			PPP		10	23		
			PcS		12	55		
			iS		15	00		
			PPS		15	25		
			ScS		17	33		
			SS		18	40		
			SSS		20	32		
			Lr		22	47		
M		23	59					
	New Delhi	ENZ	iP	06	07	34	5950	Initial ground movement towards North, East and rarefaction
			i		07	50		
			i		08	10		
		EZ	PcP		09	32		
			PP		09	37		
		ENZ	PPP		10	53		
		EZ	PcS, ScP		12	34		

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
23 Contd.	New Delhi Contd.	ENZ	iS	06	15	06		
		EZ	PS		15	18		
			PPS		15	25		
			i		15	37		
			i		16	07		
		ENZ	ScS		17	05		
		EZ	SS		18	49		
		E	Lq/SSS		20	45		
		N	Lr		23	47		
		ENZ	M		-			Per=38 secs
	Visakhapatnam	NE	iP	06	07	51	6210	Initial ground movement towards North and East
			PcP		08	41		
			PP		09	58		
			PPP		11	12		
			iS		15	38		
			PS		15	48		
			PPS		16	00		
			ScS		17	30		
			SS		19	22		
			SSS		21	58		
			Lr		24	39		
	Sohore	E	iP	06	07	58	6330	
			PcP		08	49		
		N	iS		15	52		
		E	PPS		16	14		
		N	e		16	23		
		EN	ScS		17	39		
	Hyderabad	E	iP	06	08	16	6550	Initial ground movement towards East
			PP		10	10		
			PPP		12	28		
			iS		16	22		
			PS		16	37		
			ScS		17	52		
			SS		20	22		
			SSS		22	46		
			Lr		26	14		
	M		30	30	18	Per=15 secs, Grds=14 $\mu$		
	Madras	E	iP	06	08	23	6810	Initial ground movement towards West
			PcP		09	05		
			PP		10	56		
			PPP		12	15		
			iS		16	43		
			i		17	03		
			PS		17	13		
			PPS		17	39		
			ScS		18	13		
			SS		20	50		
			SJS		23	47		
			Lq		24	13		
			Lr		27	35		
	M		32	48				
	Poona	Z	iP	06	08	32	6910	Initial ground movement towards North, East and rarefaction
		N	PcP		09	12		
			PP		10	51		
			PPP		12	15		
			PcS		13	06		
			iS		16	57		
	PS		17	18				

DATE	STATION	COMPT	PHASE	G M T Δ			REMARKS	
				h	m	s		
23	Poona Contd. Contd.	N	PPS	06	17	29		
			ScS/SKS1		18	13		
			SS		21	06		
			SSS		24	37		
			Lq		24	46		
			Lr		27	40		
			PKKP1		28	49		
			PKKS1		32	41		
			M		33	03		
			SKKS2 SKKKS		36 41	59 12		
23	Bombay	E	iP	03	08	39	6930	
			PcP		09	10		
			PP		10	48		
			PPP		12	16		
			e		12	39		
			PcS		13	11		
			NE	e		12	39	
			E	iS		17	06	
				PPS		17	36	
				ScS		18	24	
				SS		21	12	
				SSS		23	54	
				Lq		24	40	
23	Kodaikanal	E	iP	07	08	57	7110 Initial motion of 'S'	
			iS		17	33	phase towards West	
			PS		18	03		
			ScS		13	42		
			i		19	12		
23	New Delhi	Z	iP	08	17	14	Slight, rarefaction	
23	Shillong	Z	i	10	01	02	Slight, tremor	
23	Shillong	Z	ePg	10	54	54	120 Feeble	
			iSg		55	09		
23	Shillong	Z	ePg	11	20	19	120 Slight	
			Sg		20	34		
23	Shillong	Z	ePg	14	00	29	50 Feeble	
			iSg		00	35		
23	Shillong	Z	i	14	03	25	Slight, tremor	
23	Epc: 6.9°S, 123.4°E. Banda Sea, - H = 14h 51m 26s. h about 83 kms (USGS)							
	Shillong	Z	iP	15	00	03	Slight, distant, compression	
	Chatra	Z	iP	15	00	38	Feeble, distant, rarefaction	
	New Delhi	Z	iP	15	01	36	Tremor, rarefaction	
	23	Dehra Dun	Z	eP	15	20	28	Feeble
	23	New Delhi	Z	iP	15	20	38	950 Slight, rarefaction
				iS		22	15	
	23	Shillong	Z	iP	15	23	04	Slight, distant, compression

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DATE	STATION	COMPT	PHASE	G	M	T	$\Delta$	REMARKS
				h	m	s	km	
23	Epc: 51.6°N, 159.6°E. Kamchatka.							
	- H = 16h 04m 31.8s. h about 31 kms (USCGS)							
	Shillong	Z	iP	16	14	16		Slight, distant, compression
	Chatra	Z	iP	16	14	30		Feeble, distant, rarefaction
	Poona	Z	iP	16	13	03		Tremor, compression
23	Chatra	Z	iPg Sg	18	32	47 32 59	100	Feeble, compression
23	New Delhi	Z	iPg iSg	18	49	25 49 31	50	Slight, compression
	Dehra Dun	Z	eP	18	49	49		Tremor
23	Shillong	Z	iP i	18	52	05 52 37	230	Slight
	Chatra	Z	eP	18	53	02		Feeble, distant
23	Shillong	Z	iPg iSg	19	02	24 02 33	80	Feeble
23	Shillong	Z	iP	19	42	31		Slight, distant, rarefaction
23	Shillong	Z	iP	19	51	48		Slight, distant, compression
	New Delhi	Z	iP	19	53	41		Slight, compression
23	Shillong	Z	i	21	10	32		Slight, tremor
23	Shillong	Z	iP	22	09	31		Slight, distant, compression
24	Shillong	Z	eP	04	41	17		Slight, distant
24	Shillong	Z	iP iS	05	57	03 57 39	320	Slight
	Tocklai	E	iPg	05	57	16		Slight, local, tremor
24	New Delhi	Z	iP iS	07	21	37 22 55	750	Slight, rarefaction
24	Bokaro	E	eP e	07	55	55 57 21		Slight, near
24	Dehra Dun	Z	eP e	09	38	35 39 44		Feeble
	New Delhi	Z	iP i iS	02	38	59 39 03 40 29	870	Slight, rarefaction
24	New Delhi	Z	iP	10	07	31		Slight, compression
	Bokaro	E	iP	10	09	08		Slight, near
24	Shillong	Z	eP	11	30	55		Slight, near
	Tocklai	E	iPg Sg	11	31	05 31 09	30	Slight, tremor

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
24	Chatra	Z	eP	13	52	33		Feeble, distant
24	Epc: 37.5°N, 72.5°E. - H = 14h 20m 00s (Shillong) 37.4°N, 71.1°E. - H = 14h 19m 53.8s (USCGS) h about 32 kms.							
	Dehra Dun	Z	eP iS	14	22	15 23 40	880	Slight, phases not clear
	New Delhi	EZ ENZ	iP iS	14	22	25 24 04	960	Slight, rarefaction
	Chatra	ZN NNE	iP PP PPP Lq S SS SSS M	14	23	58 24 12 24 21 26 54 26 56 27 16 27 29 29 22	1300	Slight, compression
	Bokaro	E	iP eS i	14	24	11 27 28 28 20	1980	Slight
	Poona	Z	eP	14	24	11		Slight, other phases not distinct, compression
	Shillong	ZE E	iP iS Lq Lr	14	24	41 28 27 28 35 29 31	2290	Slight
	Sehore	E	iS iSS	14	25	57 26 49		Slight
	Madras	E	ePP iS Lq M	14	26	14 30 05 30 19 33 09	2670	Slight
	Visakhapatnam	NE	eS SS i	14	28	31 29 02 31 11	2300	Slight
24	Shillong	Z	i	14	53	24		Slight, tremor
24	Port Blair	NE	iP <sub>2</sub>	16	16	45		Slight, local
24	Epc: 2.2°S, 76.1°W. Ecuador-Peru Border - H = 16h 06m 23.7s. h about 175 kms (USCGS)							
	New Delhi	Z	iPKP	16	25	40		Slight, rarefaction
	Chatra	Z	iPKP	16	25	57		Feeble, distant, compression
	Shillong	Z	iPKP	16	25	57		Slight, distant, compression
24	Shillong	Z	eP	17	58	08		Slight, distant, rarefaction
24	Shillong	Z	i	18	03	52		Slight, tremor
24	Shillong	Z	iP	18	20	24		Slight, distant, rarefaction



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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
24	Chatra	Z	iPg Sg	18	24	50 25 09	150	Feeble, rarefaction
24	Shillong	Z	e	18	26	06		Slight, tremor
24	Chatra	Z	eP eS	18	50	15 51 09		Feeble
24	Shillong	Z	iPg iSg	20	53	50 54 03	110	Feeble
24	Shillong	Z	iP	21	40	56		Slight, distant, rarefaction
	Chatra	Z	eP eS	21	41	18 42 09		
25	New Delhi	Z	iP i	00	55	37 55 45		Slight, rarefaction
25	Shillong	Z	iP	03	38	43		Slight, distant, rarefaction
25	New Delhi	Z	iP	03	55	16		Slight, rarefaction
25	Shillong	Z	iP	04	56	04		Slight, distant, compression
25	Shillong	Z	eP	06	32	38		Slight, distant
25	Dehra Dun	Z	eP e	07	05	03 06 43		Feeble
	New Delhi	Z	iP i	07	05	17 06 55		Slight, compression
25	Shillong	Z	iP	08	30	16		Slight, distant, compression
25	Shillong	Z	iPg iSg	10	22	04 22 42	350	Slight
25	Dehra Dun	Z	e e	12	23	30 25 06		Feeble
	New Delhi	Z	iP i	12	23	45 25 23		Slight, compression
25	Epc: 37.5°N, 143.5°E. East of Honshu - H = 15h 47m 20s. h about 100 kms (Shillong)							
	Tocklai	E	eP iS	15	55	18 16 01 21	4390	Feeble
	Shillong	ZE	iP	15	55	35	4920	Slight, initial ground movement towards West and compression
		E	PcP		57	10		
			ScP	13	01	09		
		EZ	iS		02	10		
		E	SS		05	06		
			ScS		05	30		
			SSS		06	23		
	Chatra	ZNE	iP	15	56	03	5260	Slight, initial ground movement towards North, East and rarefaction
			PcP		57	20		
			PP		57	53		
			PPP		58	45		
			PcS	13	01	15		

DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
25	Chatra Contd. Contd.	ZNE	S	16	02	57		
			ScS		05	32		
			SS		03	11		
			SSS		07	29		
			Lr		09	35		
			N	M		-16/17-		
	E	M		-18/19-			Per=12 secs, Grds=20 μ	
	Calcutta	E	iP	16	56	11	5450	Moderate
			PP		56	56		
			iS	16	03	15		
			PS		03	31		
			SS		03	29		
			M		15	14		
	Bokaro	NE	iP	15	56	20	5550	Slight, initial ground movement towards South and West
			PP		58	15		
			e	16	01	38		
			S		03	31		
			PPS		03	43		
			ScS		05	47		
			SS		06	49		
			SSS		08	32		
			M		15	20		
	Dehra Dun	E N	eP	15	58	43	6170	Moderate
			PP		58	43		
			PPP		59	55		
			iS	16	04	23		
			SS		07	47		
			SSS		10	29		
			Lr		12	39		
			d		17	23		
	New Delhi	ZNE	iP	15	56	53	6250	Per=20 secs, Amp=43 mm
			i		57	02		
			i		57	13		
		E	i		57	27		
		E	PeP		57	41		
		ENZ	Pr		59	05		
			PPP	16	00	13		
		EN	PS/ScP		01	49		
		ENZ	iS		04	43		
			PS		04	53		
			i		05	53		
		E	ScS		06	37		
		ENZ	SS		03	29		
			Lr		15	38		
	M		-					
	Visakhapatnam	NE	iP	15	53	57	6250	Moderate, initial ground movement towards North and East
			iS	16	04	47		
			PS		04	56		
			PPS		05	07		
			E	SSS		11	05	
	Hyderabad	EN	iP	15	57	26	6570	Moderate intensity. Initial ground movement towards South and West
			PP		59	38		
			iS	16	05	33		
			SS		09	44		
			Lr		15	27		
			N	M		20	23	
E	M		20	32		Per=18 secs, Grds=10 μ		



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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
25 Contd.	Madras	E	iP	15	57	35	7000	Moderate. Initial ground movement towards West Depth 100 km
			pP			58 06		
			PcP			58 20		
			PP			59 59		
			PPP	16	01	24		
			iS			05 53		
			PS			06 12		
			PPS			06 27		
			ScS			07 15		
			SS			09 44		
			Lq			12 58		
Lr			13 26					
M			20 59					
	Poona	Z N	iP	15	57	47	7230	Moderate. Initial ground movement towards South, West and compression
			PP	13	00	13		
			iS			03 12		
			PPS			03 41		
			Lq			13 53		
			Lr			13 50		
			M			22 03		
	Bombay	NE	iP	15	57	52	7000	Moderate
			PP	16	00	00		
		E	ScP			02 10		
			eS			06 22		
			PS			06 56		
			ScS			07 20		
			SS			10 22		
		N E	M			27 25		
			M			28 09		
25	Shillong	Z	iP	18	53	14	Slight, distant, rarefaction	
25	Shillong	Z	iP	19	24	59	Slight, distant, compression	
25	Shillong	Z	eP	19	46	43	Slight, distant	
	New Delhi	Z	eP	19	43	14	Tremor, rarefaction	
25	Epc: 33.4°N, 142.7°E. Honshu, Japan - H = 19h 49m 57.3s. h about 120 kms (USCGS)							
	Shillong	Z	iP	19	52	02	Slight, distant, compression	
	New Delhi	Z	eP	19	59	19	Slight, compression	
25	Shillong	Z	iPg	22	25	24	Local, feeble	
23	Shillong	Z	eP	00	03	43	Slight, distant	
23	Shillong	Z	ePg	00	39	15	30	Feeble
			iSg			39 20		
26	Port Blair	NE	iP	00	57	13	Slight, near	
23	Shillong	Z	iP	01	22	23	Slight, distant, compression	
26	Epc: 44.4°N, 78.4°E. Kazakh S.S.R. - H = 03h 11m 35.3s. h about 25 kms (JSCGS)							
	Dehra Dun	Z	eP	03	14	53	Tremor	

DATE	STATION	COMPT	PHASE	G h	M m	T s	Δ km	REMARKS
26 Cont'd.	New Delhi	Z	eP iPP	03	15	20 15 35	2000	Slight, rarefaction
	Chatra	Z	iP	03	13	00		Feeble, distant, rarefaction
	Shillong	Z	iP	03	16	27		Slight, distant, compression
26	New Delhi	Z	eP	04	15	09		Tremor, compression
26	Tocklai	E	iPg iSg	05	17	22 17 30		Feeble
26	Tocklai	E	iPg iSg	07	25	36 25 38	20	Feeble
26	Shillong	Z	iP	07	38	59		Slight, distant, rarefaction
26	New Delhi	Z	eP	07	44	36		Slight, rarefaction
26	Port Blair	NE	e i	07	48	19 48 55		
26	Chatra	Z ZN	iPg Sg	07	49	11 49 23	110	Feeble, compression
26	Shillong	Z	iP	08	40	28		Slight, distant, compression
26	Shillong	Z	iP	15	20	38		Slight, distant, compression
26	Shillong	Z	iPg iSg	15	32	43 33 09	220	Slight
26	Epc: 28.5°N, 57.2°E. Southern Iran - H = 15h 53m 12.2s. h about 41 kms (USCGS)							
	New Delhi	Z	iP	15	57	49		Slight, rarefaction
	Chatra	Z	iP	15	58	49		Feeble, distant, rarefaction
	Shillong	Z	eP	15	59	28		Slight, distant
26	Shillong	Z	eP	16	24	46		Slight, near
26	Shillong	Z	i	16	27	20		Slight, tremor
26	Chatra	Z	eP S	16	28	41 29 04	190	Feeble
26	Shillong	Z	e	16	43	04		Slight, tremor
26	Shillong	Z	eP	18	23	35		Slight, distant
26	New Delhi	Z	eP	18	42	09		Tremor, rarefaction
26	New Delhi	Z	iP i	22	51	15 52 57		Slight, compression
	Dehra Dun	Z	e	22	51	56		Tremor
26	Shillong	Z	iP	23	53	19		Slight, distant, rarefaction
27	Shillong	Z	iP	00	28	34		Slight, distant, rarefaction
27	Epc: 7.5°N, 92°E. Origin time 05h 55m 50s G.M.T.(Shillong)							

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
27 Cont'd.	Port Blair	N	iP	05	56	58	450	Slight
			iS		57	48		
	Visakhapatnam	E NE E	iP	05	59	15	1460	Slight, first ground movement towards West
			iS	06	01	43		
			SS		01	56		
	Shillong	Z	iP iS	05 03	59 03	57 20		Slight, distant, rarefaction
	Chatra	Z	iP iS	06 04	00 10	35	2170	Feeble, distant, rarefaction
	New Delhi	Z	iP i	06 06	01 22	20		Slight, compression
	Dehra Dun	Z	eP e	06 07	10 06	30 43		Feeble
27	Epc: 44.4°S, 74.8°W. Southern Chile - H = 06h 47m 27s. h about 31kms (USCGS)							
	Poona	Z	ePKP	07	07	00		Slight
	Bombay	E NE	ePKP e	07	07	00		Feeble, distant
	New Delhi	Z	iPKP i	07	07	17 20		Slight
	Dehra Dun	Z	ePKP	07	07	19		Feeble
	Chatra	Z	ePKP	07	07	22		Feeble, distant
	Shillong	Z	iPKP	07	07	23		Slight, distant, compression
27	Dehra Dun	Z	eP	14	13	13		Tremor
	New Delhi	Z	iP	14	13	23	970	Slight
			iS		15	03		
	Shillong	Z	iP	14	15	57		Slight, distant, compression
27	Shillong	Z	iP	14	48	05		Feeble, near, locally felt
27	Shillong	Z	e	15	52	02		Slight, tremor
28	Port Blair	NE	ePg iSg	04	35	46 51	50	Slight
28	Shillong	Z	iP	07	46	40		Slight, distant, compression
28	Shillong	Z	eP	08	14	45		Slight, distant
28	Shillong	Z	eP	08	31	47		Slight, distant
28	Shillong	Z	iP	09	45	03		Slight, distant, rarefaction
28	Epc: 35.4°N, 26.6°E. Dodecanese Islands - H = 11h 18m 57.4s. h about 40 kms (USCGS)							
	Dehra Dun	Z N	eP	11	26	52	4690	Slight
			PP		28	42		

DATE	STATION	COMP	PHASE	G	M	T	Δ	REMARKS
				h	m	s	km	
29	Shillong	Z	iPg iSg	14	04	47 05 00	110	Feeble
29	Shillong	Z	iPg	15	05	51		Feeble, near
29	Shillong	Z	iP	15	38	38		Slight, distant, compression
29	Shillong	Z	iPg iSg	13	07	17 07 25	70	Feeble
29	Port Blair	N	e i	18	18	47 19 11		Slight, near
	Shillong	Z	iP	18	21	46		Slight, distant, rarefaction
29	Shillong	Z	iP	19	21	31		Slight, distant, rarefaction
	Chatra	Z	eP	19	22	25		Feeble, distant
29	Tocklai	E	iP iS	20	21	12 22 17		Very feeble, initial ground movement towards East
29	Chatra	Z	ePg Sg	21	51	19 51 23	120	Very feeble
29	Shillong	Z	iPg	22	26	06		Feeble, near
29	Dehra Dun	Z	e	22	48	39		Tremor
	New Delhi	Z	eP	22	48	53		Slight, compression
	Shillong	Z	e	22	51	00		Slight, tremor
29	Shillong	Z	iPg	23	13	53		Feeble, near
30	Epc: 38.7°N, 141.2°E. Akita, Japan, North of Honshu - H = 02h 26m 20s (Shillong) 38.8°N, 140.2°E. Honshu, Japan - H = 02h 26m, 30s. h about 104 kms (USCGS) Rocked NE Japan 1 killed 104 injured and damage to 132 houses							
	Tocklai	E	eP e	02	34	16 35 02		Slight
	Shillong	ZNE E	iP PP ScP iS Lq SSS	02	34	25 36 04 39 51 40 53 44 53 45 05	4860	Slight, compression, initial ground movement towards West
	Chatra	ZNE	iP PP PcP PPP PcS S SS Lq SSS Lr	02	34	50 36 28 36 38 37 19 40 21 41 23 44 51 45 34 45 49 47 44	5060	Slight, rarefaction
		N E	M M			53/54 55/56		Per=10 secs, Grds=10 μ Per=15 secs, Grds=17 μ

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS	
30 Contd.	Calcutta	E	iP	02	35	03	5280	Moderate	
			PcS			40			15
			iS			41			59
			PPS			42			19
			SS			45			13
			M			53			43
Bokaro	NE	iP	02	35	10	5390	Slight, initial ground motion towards West and South		
		PP			36			58	
		PPP			37			59	
		S			42			11	
		PPS			42			31	
		SS			45			31	
		SSS			47			03	
		M			53			26	
Port Blair	N E	iP	02	35	24	5340	Moderate, initial ground movement towards North		
		i			36			46	
		i			37			41	
		PPP			38			19	
	NE E	iS			42			40	
		SS			46			00	
		SSS			47			29	
		Lr			49			30	
M			53	42					
Dehra Dun	Z	eP	02	35	31	5720	Slight		
		iS			42			51	
		SS			46			45	
		Lr			50			14	
		M			54			25	
New Delhi	ZNE	iP	02	35	41		Slight, initial ground movement towards South, West and Compression		
	ZE	i			35			57	
Visakhapatnam	NE	iP	02	35	51	6060	Moderate, initial ground movement towards North and East		
		PcP			36			43	
		PP			37			55	
		PPP			38			56	
		iS			43			29	
		PS			43			38	
PPS			43	47					
Hyderabad	E	iP	02	36	18	6490	Slight, initial ground movement towards South and West		
		PcP			37			28	
		PP			38			28	
		PPP			39			53	
		iS			44			21	
		PS			44			38	
		SS			47			58	
		Lr			52			49	
		M			58			16	
Per=15 secs, Grds= 4 $\mu$									
Madras	E	iP	02	36	27	6590	Moderate, initial ground movement towards West		
		i			36			52	
		PcP			37			17	
		PP			38			36	
		PPP			40			07	
		iS			44			35	
		e			45			06	
		ScS			46			12	
SS			48	20					



DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
30	Madras	E	Lq	02	51	37		
Contd.	Contd.		Lr		54	23		
			M		59	24		
	Poona	Z	iP	02	36	38	6740	Moderate, initial ground
		N	PcP		37	19		movement towards South,
			PP		38	56		West and compression
			PPP		40	25		
			iS		44	54		
			PS		45	09		
			PPS		45	21		
			ScS/SkS		46	03		
			Lq		51	59		
			Lr		55	00		
			M/PkKS	03	00	21		
			SKKS2		03	52		
	Bombay	NE	iP	02	36	44	6800	Moderate
			PcP		37	13		
			PPP		40	32		
			eS		45	03		
			PS		45	22		
			PPS		45	37		
			ScS		46	14		
			e		46	54		
			SS		49	03		
		E	SSS		52	10		
			Lr		56	16		
		N	M	03	06	18		Per=13 seds, Grds= 3 $\mu$
	Kodaikanal	E	eM	03	08	59		Slight, distant
30	Shillong	Z	iPg	03	57	19		Slight, near
30	Shillong	Z	iP	03	03	08		Slight, distant, compression
30	Epc: 17°N, 147.3°E. Mariana Islands							
	- H = 09h 44m 17.4s. about 109 kms (USCGS)							
	Shillong	Z	iP	09	53	21		Slight, distant, rarefaction
	Chatra	Z	iP	09	53	52		Rarefaction, slight, distant
	Dehra Dun	Z	eP	09	54	44		Tremor
	New Delhi	Z	iP	09	54	48		Slight, compression
	Poona	Z	iP	09	55	19		Slight, compression
	Bombay	E	e	10	04	37		
30	Chatra	Z	iPg	13	09	25	70	feeble, rarefaction
			Sg		09	33		
30	Epc: 17.9°S, 176.1°W. Tonga Islands region							
	- H = 16h 16m 47.8s. about 26 kms (USCGS)							
	Shillong	Z	i	16	34	37		Appears very distant
	Madras	E	e	16	35	43		Moderate, very long distance
			eP		35	46		
			eSS		34	47		



April 1962

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DATE	STATION	COMPT	PHASE	G h	M m	T s	$\Delta$ km	REMARKS
30	Madras	E	e	16	55	21		
Contd.	Contd.		e	17	13	28		
	New Delhi	Z	ePKP	16	35	26		Slight, compression
	Bombay	E	e	16	36	17		Slight
			ePP		36	40		
			ePPP		38	00		
		NE	ePS		46	11		
		E	e		50	16		
	Dehra Dun	Z	e	16	36	26		Feeble
	Calcutta	E	e	16	39	57		Slight
	Kodaikanal	E	e	17	22	44		Slight, distant
			e		24	47		
30	Shillong	Z	iP	17	46	16		Slight, distant, compression
30	Shillong	Z	iP	18	44	09		Slight, distant, rarefaction
30	New Delhi	Z	eP	20	34	08		Slight, compression
30	Epc: 6.4°N, 124°E. Banda Sea							
	- H = 20h 39m 45.1s. h about 28 kms (USCGS)							
	Shillong	ZE	iP	20	46	48	4010	Slight, rarefaction. Initial ground movement towards East
		E	iS		52	28		
	Chatra	Z	eP	20	47	27		Very feeble, distant
	Madras	E	eP	20	47	52	4860	Slight
			iS		54	23		
	New Delhi	Z	eP	20	48	35		Slight, compression
	Dehra Dun	Z	eP	20	48	35	5420	Feeble
		N	eS		55	51		
	Bombay	E	eP	20	48	58	5570	
		NE	eS		56	10		
	Calcutta	E	eS	20	53	00		Slight
30	Shillong	Z	ePg iSg	21	28	17 28	370	Slight
30	Shillong	Z	iP	22	49	33		Slight, distant, rarefaction
30	Bombay	E	e	23	13	02		
30	Shillong	Z	ePg iSg	23	13	35 18	50	Feeble
30	Shillong	Z	iP	23	33	45		Slight, distant, compression.

*Earthquake Reports  
(Non Instrumental)*

The following is the list of Earthquakes that were reported by voluntary observers from different stations during the month of April 1962.

Place	Date	Time in G.M.T. h. m.	Duration of shocks in secs	No. of shocks	Intensity in R. F. scale	Remarks
Gauhati	18	03 12	15	2	IV	From SE/E
Goalpara	18	03 15	3	1	V	From E
Bhuntar	18	16 50	5	1	VI	From N
Shillong	27	14 55	5	1	III	
Daltonganj	29	10 05	-	1	II	From N

*Microseismic Tabulation*

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station</i>	<i>Shillong</i>			<i>Compt. E. W.</i>	<i>April 1962</i>				
01	00	...	-	-	08	00	2	0.2	7.0
	06	1	0.2	4.6		06	3	0.3	6.0
	12	2	0.2	4.4		12	1	0.2	6.6
	18	2	0.3	5.0		18	3	0.2	6.2
02	00	1	0.3	4.4	09	00	0,0	-	-
	06	2	0.2	5.0		06	1	0.3	6.6
	12	1	0.3	5.4		12	3	0.2	6.0
	18	3	0.3	5.0		18	1	0.3	6.0
03	00	2	0.2	5.0	10	00	2	0.3	6.4
	06	3	0.2	5.0		06	3	0.2	6.0
	12	1	0.2	5.0		12	3	0.2	6.0
	18	3	0.2	5.2		18	0,0	-	-
04	00	2	0.2	5.6	11	00	3	0.2	5.6
	06	2	0.3	5.0		06	3	0.2	5.4
	12	2	0.3	5.8		12	0,0	-	-
	18	1	0.3	6.0		18	3	0.2	7.0
05	00	3	0.4	6.0	12	00	3	0.2	6.0
	06	2	0.3	6.0		06	0,0	-	-
	12	1	0.3	6.4		12	0,0	-	-
	18	2	0.2	6.0		18	0,0	-	-
06	00	2	0.2	5.6	13	00	3	0.2	6.6
	06	3	0.3	5.6		06	3	0.2	6.0
	12	1	0.4	6.4		12	0,0	-	-
	18	2	0.4	6.0		18	3	0.2	6.0
07	00	1	0.3	7.0	14	00	3	0.2	6.0
	06	3	0.5	6.6		06	0,0	-	-
	12	1	0.5	7.4		12	3	0.3	6.4
	18	3	0.3	7.0		18	3	0.2	7.0

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Microseismic Tabulation

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station Shillong (Contd.)</i>					<i>Compt. E.W. April 1962</i>				
15	00	3	0.2	6.0	23	00	1	0.3	5.2
	06	0,0	-	-		06	3	0.3	5.4
	12	3	0.2	6.0		12	3	0.3	5.3
	18	3	0.2	6.0		18	3	0.3	4.8
16	00	...	-	-	24	00	1	0.3	5.0
	06	3	0.2	6.0		06	1	0.3	5.0
	12	3	0.2	6.0		12	1	0.3	5.3
	18	3	0.1	5.8		18	3	0.3	4.8
17	00	3	0.2	5.5	25	00	3	0.3	5.0
	06	3	0.2	5.6		06	3	0.3	5.2
	12	...	-	-		12	3	0.3	4.9
	18	3	0.2	5.0		18	3	0.2	5.0
18	00	3	0.1	5.5	26	00	3	0.3	5.0
	06	3	0.2	5.4		06	3	0.3	5.2
	12	3	0.2	5.0		12	3	0.3	5.0
	18	3	0.2	5.6		18	3	0.2	5.0
19	00	3	0.2	5.1	27	00	3	0.3	5.0
	06	3	0.2	5.0		06	3	0.3	5.0
	12	3	0.2	5.1		12	3	0.3	4.8
	18	3	0.2	5.2		18	3	0.3	4.9
20	00	...	-	-	28	00	3	0.3	5.0
	06	3	0.2	5.1		06	3	0.3	5.0
	12	3	0.2	5.0		12	3	0.3	5.0
	18	3	0.3	5.4		18	...	-	-
21	00	3	0.3	4.8	29	00	3	0.3	5.0
	06	3	0.2	5.2		06	3	0.3	5.0
	12	3	0.3	5.0		12	3	0.3	4.9
	18	3	0.3	5.6		18	1	0.3	3.4
22	00	3	0.3	5.8	30	00	1	0.3	3.6
	06	3	0.2	5.8		06	1	0.3	3.5
	12	3	0.3	5.4		12	3	0.2	3.5
	18	3	0.2	5.2		18	...	-	-
<i>Station Madras Compt. E.W.</i>					<i>Station Madras Compt. E.W.</i>				
01	00	3	0.3	4.4	03	06	2	0.4	5.3
	06	3	0.3	4.3	Contd.	12	2	0.5	5.5
	06	3	0.4	4.6		18	2	0.6	5.8
	12	3	0.3	4.5	04	00	2	0.6	5.8
	18	3	0.3	4.5		03	2	0.6	6.2
02	00	3	0.3	4.9		06	2	0.5	6.3
	06	2	0.5	5.1		12	2	0.7	6.4
	06	2	0.4	4.9		18	2	0.7	6.4
	12	2	0.4	5.5	05	00	2	0.7	6.4
	18	2	0.5	5.3		03	2	0.7	6.6
03	00	2	0.5	5.4		06	2	0.7	6.5
	03	2	0.5	5.1		12	2	0.6	6.4
						18	2	0.6	6.4

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Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station - Madras Compt. E.W.</i>									
06	00	2	0.6	6.4	16	00	...	-	-
	03	2	0.3	6.6		03	3	0.3	6.1
	06	2	0.7	3.4		06	...	-	-
	12	2	0.7	6.5		12	3	0.4	6.2
	18	2	0.3	7.3		18	2	0.4	6.3
07	00	2	0.8	7.2	17	00	2	0.3	5.9
	03	2	0.9	7.4			3	0.1	1.3
	06	2	0.8	7.2		03	2	0.4	6.3
	12	2	0.8	7.3		06	2	0.4	6.3
	18	2	0.8	6.9		12	2	0.4	6.7
08	00	2	0.8	6.8		18	2	0.4	6.6
	03	2	0.7	6.9			3	0.1	1.4
	06	2	0.6	6.8	18	00	3	0.1	1.8
	12	...	-	-		03 to			
	18	2	0.5	6.5		18	...	-	-
09	00	2	0.4	3.4	19	00	...	-	-
	03	2	0.5	3.5		03	...	-	-
	06	2	0.6	3.6		06	2	0.4	3.7
	12	2	0.7	6.5		12	2	0.3	7.0
	18	2	0.7	3.7		18	2	0.4	7.2
10	00	...	-	-	20	00	...	-	-
	03	2	0.7	3.9		03	2	0.4	7.5
	06	2	0.7	6.8		06	...	-	-
	12	2	0.7	6.9		12	2	0.5	7.9
	18	2	0.8	7.3		18	2	0.6	7.9
11	00	...	-	-	21	00	2	0.5	7.7
	03	2	0.8	7.8		03	2	0.5	7.4
	06	2	0.9	7.6		06	2	0.5	7.3
	12	2	0.9	7.8		12	2	0.5	7.2
	18	2	0.9	7.5		18	2	0.5	7.1
12	00	2	0.8	7.5			3	0.1	1.4
	03	...	-	-	22	00	2	0.3	5.3
	06	2	0.9	7.8		03	2	0.5	3.3
	12	2	0.9	7.5		06	3	0.4	6.1
	18	2	0.9	7.6		12	3	0.4	5.3
13	00	2	0.9	7.3		18	3	0.3	5.3
	03	2	0.9	7.6			3	0.2	2.7
	06	2	0.8	7.6	23	00	3	0.2	2.7
	12	2	0.9	7.6		03	3	0.3	5.4
	18	2	0.8	7.2			3	0.2	2.7
14	00	2	0.7	7.2		06	...	-	-
	03	2	0.7	7.2		12	3	0.2	3.0
	06	2	0.7	7.1		18	3	0.3	3.4
	12	2	0.7	7.0	24	00	3	0.3	3.4
	18	2	0.7	6.7		03	3	0.3	3.4
15	00	2	0.5	6.7		06	3	0.2	3.3
	03	2	0.5	6.6		12	3	0.3	3.2
	06	2	0.5	6.8		18	3	0.3	3.4
	12	3	0.4	6.5	25	00	3	0.3	3.3
	18	3	0.4	6.5		03	3	0.3	3.2

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Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
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Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
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Station Madras Compt. E. W.

Station Bombay (Colaba) Compt. E. W.

25	0 6	3	0.2	3.3
Cont.	12	3	0.2	3.2
	18	3	0.2	2.9
		3	0.1	1.4
26	00	3	0.1	1.5
	03	3	0.1	1.4
	06	3	0.1	1.3
	12	3	0.1	1.2
	18	3	0.1	1.7
27	00	3	0.1	1.8
	03	3	0.1	2.0
	06	3	0.2	2.3
	12	3	0.2	2.5
	18	3	0.2	2.4
28	00	3	0.1	1.3
	03 to			
	12	...	-	-
	18	3	0.1	2.1
29	00	3	0.1	1.9
	02	3	0.1	2.0
	06	3	0.1	2.2
	12	3	0.1	2.0
	18	3	0.2	2.4
30	00	1	0.2	2.7
	03	...	-	-
	06	1	0.3	2.7
	12	1	0.3	2.7
	18	1	0.4	2.8

03	12	3	0.8	6.2
Contd.			0.4	2.0
	18	3	0.8	6.3
			0.3	1.8
04	00	3	0.9	6.3
			0.6	1.7
	06	3	0.8	6.1
			0.5	2.0
	12	3	0.8	6.1
			0.4	1.8
	18	3	0.7	6.0
			0.4	2.2
05	00	3	0.3	5.9
			0.5	1.6
	06	3	0.8	6.3
			0.6	1.7
	12	1	0.8	2.1
	18	1	0.9	2.2
06	00	3	0.7	6.0
			0.3	2.0
	06	3	0.7	5.9
			0.4	2.1
	12	3	0.8	6.3
			0.3	2.0
	18	3	0.9	6.5
			0.5	1.7
07	00	3	0.7	6.2
			0.3	2.5
	06	3	0.8	6.3
			0.3	2.0
	12	3	0.7	6.1
			0.3	1.3
	18	3	0.9	6.6
			0.4	1.7
08	00	3	0.8	6.1
			0.3	2.0
	06	3	0.7	3.4
			0.3	2.0
	12	3	0.7	6.2
			0.3	1.7
	18	3	0.7	5.9
			0.4	1.8
09	00	3	0.9	6.0
			0.4	2.0
	06	...	-	-
	12	3	1.0	5.7
			0.4	1.5
	18	3	0.9	5.8
			0.5	2.0
10	00	3	1.0	5.8
			0.5	2.4
	06	...	-	-

Station Bombay (Colaba) Compt. E. W.

01	00	1	0.7	2.7
	03	1	0.8	2.8
	06	1	1.0	3.0
	09	1	0.9	3.0
	12	1	0.8	3.0
	15	1	0.7	2.8
	18	1	0.7	2.8
	21	1	0.6	2.8
02	00	3	0.5	5.7
			0.5	2.6
	06	3	0.5	5.7
			0.6	2.7
	12	3	0.6	5.9
			0.4	1.5
	18	3	0.6	6.0
			0.4	1.5
			0.4	2.7
03	00	3	0.6	6.0
			0.4	1.8
	06	3	0.7	6.0
			0.4	2.0

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
Station	Bombay (Colaba)		Compt. E. W.		Station	Bombay (Colaba)		Compt. E. W.	
10	12	3	0.7	6.6	18	06	3	0.4	5.8
Cont'd.			0.5	2.6	Cont'd.			0.4	2.0
	18	3	0.9	7.0		12	3	0.4	5.8
			0.6	2.3				0.3	1.8
11	00	3	0.8	6.8		18	3	0.4	5.3
			0.6	2.4				0.4	1.9
	06	3	1.0	6.9	19	00	...	-	-
			0.4	2.5		06	3	0.4	5.5
	12	3	1.0	6.5				0.3	2.0
			0.6	2.5		12	3	0.4	5.8
	18	3	1.0	6.5				0.3	1.7
			0.6	2.5		18	3	0.4	5.3
12	00	3	1.1	6.9				0.4	2.0
			0.6	2.5	20	00	...	-	-
	06	...	-	-		06	3	0.5	5.7
	12	3	1.2	6.8				0.5	2.5
			0.6	2.3		12	3	0.5	6.6
	18	3	1.0	6.9				0.4	2.0
			0.6	2.3		18	3	0.5	5.8
13	00	3	1.1	7.2				0.5	2.1
			0.5	2.0	21	00	3	0.5	5.5
	06	3	1.2	6.9				0.5	2.5
			0.4	2.5		06	3	0.5	5.9
	12	3	1.2	7.0				0.4	2.5
			0.4	2.5		12	3	0.5	5.0
	18	1	1.2	7.2				0.5	2.4
14	00	1	1.2	7.0		15	1	0.5	2.3
			1.2	6.9		18	1	0.5	2.5
	03	1	1.1	6.8		21	1	0.6	2.5
	06	1	1.1	6.7	22	00	1	0.5	2.6
	09	1	1.1	6.9				0.6	2.7
	12	1	1.2	6.6		03	1	0.6	2.8
	15	1	0.9	6.5				0.7	3.0
	18	1	1.0	6.3		09	1	0.7	2.7
	21	1				12	1	0.7	2.5
15	00	3	1.1	6.8		15	1	0.7	2.5
			0.4	2.0		18	1	0.7	3.0
	06	3	0.9	6.6		21	1	0.8	2.3
			0.4	2.0	23	00	1	0.7	3.0
	12	3	0.8	6.2				0.8	3.1
			0.3	1.7		03	1	0.7	3.1
	18	2	0.9	6.3		06	1	0.7	2.9
16	00	2	0.8	6.4		09	1	0.7	3.2
			0.7	6.1		12	1	0.7	2.8
	03	2	0.7	6.0		18	3	0.7	2.8
	12	2	0.7	6.0				0.4	1.5
	18	2			24	00	3	0.6	2.9
17	00	2	0.6	5.6				0.3	1.8
			0.5	6.1		06	3	0.7	3.1
	06	3	0.3	1.9				0.3	1.5
			-	-		12	3	0.7	2.8
	12	...	-	-				0.3	1.8
	18	3	0.4	5.4		18	3	0.6	2.8
			0.3	1.7				0.3	1.6
18	00	3	0.5	5.5	25	00	3	0.7	2.8
			0.4	1.8				0.3	1.5

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Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station Bombay (Colaba) Compt. E.W.</i>					<i>Station Bokaro Component E.W.</i>				
25	06	3	0.6	2.9	03	00	3	0.5	5.0
Contd.			0.3	1.7	Contd	06	0,0	-	-
	12	3	0.6	2.7		12	0,0	-	-
			0.3	1.8		18	3	0.3	4.6
	18	3	0.4	2.5	04	00	3	0.3	4.8
			0.3	1.6		06	0,0	-	-
26	00	3	0.5	2.6		12	0,0	-	-
			0.3	1.6		18	3	0.4	5.0
	06	3	0.5	2.7	05	00	3	0.5	4.8
			0.3	1.8		06	0,0	-	-
	12	3	0.4	2.6		12	...	-	-
			0.3	1.5		18	0,0	-	-
	18	3	0.4	2.5	06	00 to			
			0.4	1.9		12	0,0	-	-
27	00	3	0.5	2.6		18	3	0.4	5.6
			0.4	1.7	07	00	3	0.4	5.8
	06	1	0.6	2.2		06	0,0	-	-
	09	1	0.7	2.3		12	...	-	-
	12	1	0.5	2.1		18	...	-	-
	15	1	0.4	2.0	08	03 to			
	18	3	0.6	2.2		09	18	0,0	-
			0.3	1.5	10	00	3	0.4	5.0
28	00	3	0.4	2.3		06 to			
			0.3	1.8		18	0,0	-	-
	06	3	0.4	4.7	11	00 to			
			0.4	2.7		12	18	0,0	-
	12	...	-	-	12	00	0,0	-	-
	18	1	0.3	2.0		06	3	0.5	6.5
	21	1	0.4	2.1		12	0,0	-	-
29	00	1	0.5	2.2		18	0,0	-	-
	03	1	0.5	2.5	14	00	0,0	-	-
	06	1	0.4	2.5		06 to			
	09	1	0.5	2.5		18	3	0.4	6.0
	12	1	0.4	2.4	15	00 to			
	15	1	0.5	2.4		19	18	0,0	-
	18	1	0.5	2.5	20	00	...	-	-
	21	1	0.6	2.7		03	...	-	-
30	00	1	0.5	2.5		12	3	0.5	5.0
	03	...	-	-		18	3	0.3	2.5
	06	1	0.6	2.5	21	00	0,0	-	-
	09	1	0.6	2.6		06	0,0	-	-
	12	1	0.6	2.6		12	3	0.3	4.0
	15	1	0.6	2.6		18	0,0	-	-
	18	1	0.6	2.6	22	00	3	0.4	5.0
	21	1	0.6	2.7		06	3	0.3	4.5
<i>Station Bokaro Component E.W.</i>						12	3	0.4	4.5
01	00 to					18	3	0.3	4.3
	18	0,0	-	-					
02	00	0,0	-	-					
	06	0,0	-	-					
	12	3	0.4	4.0					
	18	0,0	-	-					

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
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Station Bokaro Component E.W.

23	00	3	0.3	4.0
	06	3	0.3	4.3
	12	3	0.4	5.0
	18	3	0.4	4.2
24	00	3	0.3	4.7
	06	0,0	-	-
	12	3	0.4	4.8
	18	0,0	-	-
25	00	0,0	-	-
	03	3	0.5	5.0
	12	3	0.5	5.0
	18	3	0.3	3.0
26	00	3	0.3	3.2
	03	3	0.3	4.0
	12	3	0.4	4.2
	18	3	0.4	4.6
27	00	3	0.4	4.0
	06	3	0.4	3.5
	12	3	0.5	3.5
	18	3	0.4	3.0
28	00	3	0.4	2.8
	03	0,0	-	-
	12	...	-	-
	18	0,0	-	-
29	00	0,0	-	-
	03	0,0	-	-
	12	3	0.4	3.8
	18	3	0.5	4.2
30	00	3	0.5	4.2
	03	3	0.5	4.0
	12	3	0.5	4.0
	18	3	0.4	3.5

Station Visakhapatnam Compt. E.W.

01	00	3	0.2	4.4
	03	3	0.2	4.2
	12	3	0.2	4.5
	18	0,0	-	-
02	00	0,0	-	-
	06	3	0.1	4.6
	12	2	0.3	4.9
	18	2	0.5	5.3
03	00	0,0	-	-
	06	3	0.4	5.5
	12	3	0.4	5.5
	18	0,0	-	-
04	00	0,0	-	-
	06	2	0.4	5.1
	12	2	0.4	5.7
	18	2	0.5	5.5

Date	Hour GMT	K	Mean Amplitude	Mean Period in sec
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Station Visakhapatnam Compt. E.W.

05	00	0,0	-	-
	06	3	0.5	5.6
	12	3	0.4	5.3
	18	3	0.4	5.5
06	00	3	0.5	5.5
	06	2	0.4	5.8
	12	2	0.4	5.4
	18	3	0.3	4.2
07	00	3	0.4	5.2
	06	3	0.5	6.1
	12	...	-	-
	18	0,0	-	-
08	00	3	0.3	4.2
	06 to 18	...	-	-
09	00	...	-	-
	06	3	0.4	5.0
	12	3	0.4	5.5
	18	3	0.4	5.2
10	00	3	0.3	4.4
	06	3	0.4	4.8
	12	2	0.2	5.3
	18	0,0	-	-
11	00	...	-	-
	06	2	0.3	5.7
	12	2	0.5	6.1
	18	0,0	-	-
12	00	0,0	-	-
	03	3	0.5	5.5
	12	3	0.5	6.0
	18	...	-	-
13	00	...	-	-
	06	2	0.5	6.0
	12	2	0.6	6.6
	18	3	0.5	5.5
14	00	...	-	-
	06	3	0.4	5.5
	12	3	0.4	3.0
	18	...	-	-
15	00	3	0.3	4.3
	06	2	0.4	5.3
	12	2	0.5	3.0
	18	2	0.3	5.4
16	00	2	0.3	5.0
	06	2	0.3	5.4
	12	2	0.4	6.0
	18	3	0.2	4.0
17	00	0,0	-	-



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Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station Visakhapatnam Compt. E.W.</i>				
17	06	3	0.2	5.2
Contd.	12	...	-	-
	18	3	0.6	2.0
18	00	3	0.2	2.4
	06	3	0.1	2.0
	12	0,0	-	-
	18	0,0	-	-
19	00	0,0	-	-
	06	3	0.3	5.1
	12	3	0.3	5.5
	18	3	0.3	5.3
20	00	...	-	-
	06	3	0.5	5.5
	12	3	0.4	5.2
	18	3	0.4	5.0
21	00	...	-	-
	06	2	0.7	6.4
	12	2	0.6	6.5
	18	2	0.2	2.1
22	00	0,0	-	-
	06	2	0.7	6.4
	12	2	0.4	5.6
	18	2	0.4	5.6
23	00	3	0.2	3.0
	06	2	0.5	5.6
	12	2	0.3	5.1
	18	2	0.5	5.1
24	00	3	0.2	3.0
	06	2	0.4	5.1
	12	3	0.2	2.6
	18	3	0.2	3.0
25	00	0,0	-	-
	06	3	0.4	5.3
	12	3	0.2	5.3
	18	3	0.2	2.1
26	00	1	0.6	2.4
	06	2	0.2	2.4
	12	2	0.2	2.3
	18	2	0.2	2.2
27	00	3	0.2	2.4
	06	...	-	-
	12	2	0.2	2.6
	18	2	0.2	2.4
28	00	2	0.2	2.6
	06	2	0.2	2.8
	12	...	-	-
	18	2	0.2	2.8

Date	Hour GMT	K	Mean Amplitude (Micron)	Mean Period in sec
<i>Station Visakhapatnam Compt. E.W.</i>				
29	00	2	0.4	3.1
	06	2	0.2	2.7
	12	2	0.3	3.0
	18	2	0.6	2.6
30	00	1	0.2	2.7
	06	1	0.6	3.2
	12	1	0.7	3.4
	18	1	1.8	3.1

Station	Port Blair	Compt.	E.	W.
01	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
02	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
03	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	1	1.0	7.0
04	00	1	1.0	5.0
	06 to	...	-	-
	18	...	-	-
05	00	...	-	-
	06	...	-	-
	12	0,0	-	-
	18	0,0	-	-
06	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	3	1.0	10.0
07	00 to	...	-	-
	12	...	-	-
	18	1	1.0	7.0
08	00	1	1.0	5.0
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
09	00	1	1.0	7.0
	06 to	...	-	-
	18	...	-	-
10	00	...	-	-
	06	...	-	-
	12	1	1.0	7.0
	18	0,0	-	-

Date Hour K Mean Mean  
GMT Amplitude Period  
(Micron) in sec

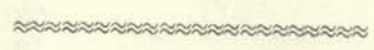
Date Hour K Mean Mean  
GMT Amplitude Period  
(Micron) in sec

Station Port Blair Component E.W.

Station Port Blair Compt. E.W.

11	00	1	1.0	7.0
	06	...	-	-
	12	1	1.0	7.0
	18	1	1.0	7.0
12	00	1	1.0	7.0
	06	...	-	-
	12	1	1.0	7.0
	18	1	1.0	7.0
13	00	1	2.0	8.0
	06	1	2.0	7.0
	12	...	-	-
	18	1	2.0	7.0
14	00	1	2.0	7.0
	06	...	-	-
	12	...	-	-
	18	1	1.0	7.0
15	00	1	1.0	7.0
	06	...	-	-
	12	...	-	-
	18	1	1.0	7.0
16	00	1	1.0	5.0
	06	...	-	-
	12	...	-	-
	18	1	1.0	7.0
17	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
18	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
19	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
20	00	...	-	-
	06	...	-	-
	12	1	1.0	7.0
	18	1	1.0	7.0

21	00	...	-	-
	06	1	1.0	7.0
	12	1	1.0	7.0
	18	1	1.0	7.0
22	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	1	1.0	7.0
23	00	1	1.0	7.0
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
24	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
25	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
26	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	1	1.0	7.0
27	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
28	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
29	00	0,0	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
30	00	0,0	-	-
	06	0,0	-	-
	12	0,0	-	-
	18	0,0	-	-





# SEISMOLOGICAL BULLETIN

MAY 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

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PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

Station	Latitude	Longitude	Height a.s.l. (Metres)	Lithographic foundation	Instrument	Compt	Period in secs	Static Magnifica- tion	Damping ratio	Paper speed mm/min.
Agra					Columbia	E	T <sub>0</sub> =15 T <sub>g</sub> =100			15
					Long Period	N	T <sub>0</sub> =15 T <sub>g</sub> =85		15	
					- do -	Z	T <sub>0</sub> =15 T <sub>g</sub> =70		15	
Bombay	18.54°N, 72.40°E		5	Deccan Trap	Milne-Shaw	N	12 350		13:1	16
					Milne-Shaw	E	12 350		23:1	8
Bokaro	23.50°N, 85.48°E			Rock	Sprengnether	E	T <sub>0</sub> -T <sub>g</sub> =7 secs			30
					Milne-Shaw	N	12 250		20:1	15
					Milne-Shaw	E	12 250		20:1	15
					Wood-Anderson	E	0.8 950		h=0.8	50
Calcutta	22.32°N, 88.22°E		(1) 7	Alluvium	Milne-Shaw	E	12 250		20:1	8
					Wood-Anderson	N	2 870		Critical	30
					Omori-Ewing	N	15 32		-	25.4
					Omori-Ewing	E	21 30		-	25.4
Chatra	25.50°N, 87.10°E		151	Sand stone	Milne-Shaw	E	12 250		20:1	15
					Wood-Anderson	N	1 1000		30:1	50
					Benioff	Z	T <sub>0</sub> =0 T <sub>g</sub> =0.45 secs		Critical	60
					Wenner- Accelerograph	ZNE	-	-	-	-
Colombo	05.54°N, 79.52°E		7	Beach Sand	Milne-Shaw	E	12 250		20:1	-
Dehra Dun	30.19°N, 78.02°E		582	Gravel	Wood-Anderson	N	0.8 950		Critical	
					Wood-Anderson	E	0.8 850		Critical	50
					Milne-Shaw	N	12 250		20:1	8
					Milne-Shaw	E	12 250		20:1	8
Hyderabad	17.25°N, 78.27°E		535	Granite	Milne-Shaw	E	12 250		20:1	8
					Milne-Shaw	N	12 250		20:1	8
Kodeikanal	10.14°N, 77.28°E		2245	Rock	Milne-Shaw	E	10 250		20:1	8
Madras	13.00°N, 80.11°E		15	-	Sprengnether	E	T <sub>0</sub> -T <sub>g</sub> =7.2 secs		Critical	30
New Delhi	28.35°N, 77.12°E		207	Massive Quartzite						
Poona	18.32°N, 73.51°E		550	Deccan Trap	Sprengnether	Z	T <sub>0</sub> -T <sub>g</sub> =1.5		Critical	30
					Wood-Anderson	E	4 1000			14
					Milne-Shaw	N	12 280		20:1	8
Port Blair	11.49°N, 92.43°E				Wood-Anderson	N	2 1000		20:1	30
					Wood-Anderson	E	0.8 1000		55:1	30
					Milne-Shaw	N	12 350		20:1	8
Sehore					Wood-Anderson	N	0.8 980		Critical	30
Shillong	25.34°N, 91.53°E		1500	Quartzite	Wood-Anderson	N	0.8 1000		h=0.8	30
				Sand Stone	Wood-Anderson	E	0.8 1000		h=0.8	30
				(Shillong Quartzite)	Milne-Shaw	N	12 250		20:1	8
				Benioff	Z	T <sub>0</sub> =1.0 T <sub>g</sub> =18			50	
				Sprengnether	E	T <sub>0</sub> -T <sub>g</sub> =5.3		Critical	30	
Wenner Accelerograph	ZNE	-	-	-	-					
Tocklai	28.45°N, 94.45°E			Alluvium	Wood-Anderson	E	0.8 970		h=0.8	50
Viziagram	18.07°N, 83.27°E				Wood-Anderson	E	0.8 1000		h=0.8	30
					Wood-Anderson	N	2 1000		20:1	30

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List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude | Longitude | Height<br>a. s. l.<br>(metres) | Lithographic<br>foundation | Instrument    | Compt | Period<br>in<br>secs | Static<br>Magnif<br>cation | Damping<br>ratio           | Paper<br>speed<br>mm/min |
|---------------|----------|-----------|--------------------------------|----------------------------|---------------|-------|----------------------|----------------------------|----------------------------|--------------------------|
| Bombay        | 18.54°N, | 72.40°E   |                                | Deccan Trap                | Milne-Shaw    | N     | 12                   | 350                        | 21:1                       | 8                        |
|               |          |           |                                |                            | Milne-Shaw    | E     | 12                   | 250                        | 21:1                       | 8                        |
|               |          |           |                                |                            | Sprengnether  | E     | To=7.3               | 5000                       | 2.30:1                     | 30                       |
|               |          |           |                                |                            |               |       |                      | Tg=7.3                     |                            |                          |
|               |          |           |                                | Benioff                    | Z             | -     | -                    | -                          | 50 for S.P.<br>30 for L.P. |                          |
| Bokaro        | 23.50°N, | 85.48°E   |                                | Rock                       | Sprengnether  | E     | To=Tg=5.5            | 5200                       | 2.33:1                     | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 930                        | Critical                   | 50                       |
|               |          |           |                                |                            | Wood-Anderson | F     | 0.8                  | 830                        | Critical                   | 50                       |
|               |          |           |                                |                            | Milne-Shaw    | E     | 12                   | 270                        | 20:1                       | 15                       |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                        | 20:1                       | 15                       |
| Calcutta      | 22.32°N, | 88.22°E   | (1) 7<br>(2) 5                 | Omori-Ewing<br>Alluvium    | Milne-Shaw    | E     | 12                   | 330                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | N     | 2                    | 1000                       | Critical                   | 30                       |
|               |          |           |                                |                            | Omori-Ewing   | E     | 10                   | 30                         | -                          | 25.4                     |
|               |          |           |                                |                            | Omori-Ewing   | N     | 16                   | 32                         | -                          | 25.4                     |
| Chatra        | 25.50°N, | 87.10°E   | 161                            | Sand Stone                 | Milne-Shaw    | N     | 10                   | 250                        | 20:1                       | 15                       |
|               |          |           |                                |                            | Milne-Shaw    | E     | 10                   | 250                        | 20:1                       | 15                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 940                        | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 970                        | Critical                   | 30                       |
|               |          |           |                                |                            | Benioff (S.P) | Z     | To=0.72              | -                          | Es=23:1                    | 50                       |
|               |          |           |                                |                            |               |       |                      | Tg=0.45                    |                            | Rg=Critical              |
| Delhi         | 28.41°N, | 77.13°E   | 207                            | Quartzite<br>Sand Stone    | Sprengnether  | E     | To=Tg=7.5            | 5000                       | Critical                   | 30                       |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                       | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                       | Critical                   | 30                       |
|               |          |           |                                |                            | Benioff       | Z     | To=Tg=1.0            | -                          | -                          | 50                       |
|               |          |           |                                |                            | Press Ewing   | Z     | To=30                | Tg=100                     | -                          | 15                       |
|               |          |           |                                |                            | Press Ewing   | N     | To=30                | Tg=100                     | -                          | 15                       |
| Dehra Dun     | 30.19°N, | 78.02°E   | 582                            | Gravel                     | Wilson Lamson | Z     | To=Tg=1.5            | -                          | -                          | 50                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                       | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 1000                       | Critical                   | 30                       |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Milne-Shaw    | E     | 12                   | 250                        | 20:1                       | 8                        |
|               |          |           |                                |                            |               |       |                      |                            |                            |                          |
| Hyderabad     | 17.25°N, | 78.27°E   | 536                            | Granite                    | Milne-Shaw    | E     | 12                   | 250                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                        | 20:1                       | 8                        |
| Kodakamal     | 10.14°N, | 77.29°E   | 2345                           | Rock                       | Milne-Shaw    | E     | 10                   | 250                        | 20:1                       | 8                        |
| Madras        | 13.00°N, | 80.11°E   | 15                             |                            | Sprengnether  | E     | To=Tg=7.5            | 5000                       | 23:1                       | 30                       |
| Poona         | 18.32°N, | 73.51°E   | 550                            | Deccan Trap                | Milne-Shaw    | N     | 12                   | 280                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | E     | 1.0                  | 1000                       | 20:1                       | 15                       |
|               |          |           |                                |                            | Sprengnether  | Z     | 1.5                  | 3000                       | 2.1:1                      | 30                       |
| Port Blair    | 11.49°N, | 92.43°E   |                                |                            | Milne-Shaw    | F     | 12                   | 290                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | N     | 2.0                  | 950                        | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 970                        | Critical                   | 30                       |
|               |          |           |                                |                            | Benioff       | Z     | To=1.0               | Tg=1.5                     | -                          | 30                       |
|               |          |           |                                |                            |               |       |                      |                            |                            |                          |
| Sehore        | 23.10°N, | 77.08°E   |                                |                            | Wood-Anderson | E     | 0.8                  | 840                        | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 900                        | Critical                   | 30                       |
| Shillong      | 25.34°N, | 91.53°E   |                                | Quartzite<br>Sand Stone    | Milne-Shaw    | N     | 12                   | 250                        | 20:1                       | 8                        |
|               |          |           |                                |                            | Benioff       | Z     | To=1.0               | Tg=1.0                     | -                          | 50                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 900                        | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 970                        | Critical                   | 30                       |
|               |          |           |                                |                            | Sprengnether  | E     | To=5.5               | 3500                       | 2.4:1                      | 30                       |
| Tocklasi      | 28.45°N, | 94.45°E   |                                | Alluvium                   | Wood-Anderson | E     | 0.8                  | 970                        | h=0.8                      | 50                       |
|               |          |           |                                |                            |               |       |                      |                            |                            |                          |
| Visakhapatnam | 18.07°N, | 83.27°E   |                                |                            | Sprengnether  | E     | To=Tg=5.0            | 5000                       | 1.2:1                      | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | To=2.0               | 970                        | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | To=0.8               | 970                        | Critical                   | 30                       |



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| Date | Station                                                                                        | Compt.       | Phase                    | G<br>h | M<br>m | T<br>s                                 | $\Delta$<br>km | Remarks                      |
|------|------------------------------------------------------------------------------------------------|--------------|--------------------------|--------|--------|----------------------------------------|----------------|------------------------------|
| 01   | Dehra Dun                                                                                      | Z            | eP<br>e                  | 00     | 00     | 10<br>08 21                            |                | Feeble                       |
|      | Shillong                                                                                       | Z            | iP                       | 00     | 01     | 08                                     |                | Slight, distant, compression |
| 01   | New Delhi                                                                                      | Z            | iP                       | 10     | 00     | 26                                     |                | Slight, rarefaction          |
| 01   | Shillong                                                                                       | Z            | iPg<br>Sg                | 10     | 57     | 35<br>57 44                            | 80             | Slight                       |
| 01   | Shillong                                                                                       | Z            | eP                       | 11     | 47     | 28                                     |                | Slight, distant              |
| 01   | Dehra Dun                                                                                      | Z            | eP                       | 12     | 57     | 28                                     |                | Tremor                       |
|      | New Delhi                                                                                      | Z            | eP<br>i                  | 12     | 57     | 53<br>58 24                            |                | Slight, compression          |
| 01   | Shillong                                                                                       | Z            | iPg                      | 13     | 35     | 28                                     |                | Slight, near                 |
| 01   | Shillong                                                                                       | Z            | ePg<br>Sg                | 14     | 14     | 31<br>14 26                            | 50             | Slight                       |
| 01   | Shillong                                                                                       | Z            | iP<br>Pg<br>Lq<br>Sg/SSS | 14     | 30     | 39<br>30 57<br>31 18<br>31 29<br>31 50 | 470            | Slight, compression          |
|      | Chatra                                                                                         | Z            | eP<br>eS                 | 14     | 31     | 39<br>33 22                            | 1010           | Feeble                       |
| 01   | Shillong                                                                                       | Z            | eP                       | 17     | 20     | 38                                     |                | Tremor                       |
| 01   | Shillong                                                                                       | Z            | ePg<br>eSg               | 17     | 21     | 49<br>21 56                            | 60             | Slight                       |
| 01   | New Delhi                                                                                      | Z            | iP                       | 19     | 46     | 24                                     |                | Tremor, compression          |
| 01   | Shillong                                                                                       | Z            | eP                       | 19     | 59     | 28                                     |                | Tremor                       |
| 01   | Shillong                                                                                       | Z            | iP                       | 20     | 31     | 24                                     |                | Slight, distant, compression |
| 01   | Epc: 20°S, 65.7°E. Moscarane Islands Region<br>- H = 21h 08m 16s. h about 39 km (USCGS)        |              |                          |        |        |                                        |                |                              |
|      | New Delhi                                                                                      | Z<br>ZNE     | eP<br>i                  | 21     | 17     | 03<br>24 12                            |                | Slight, rarefaction          |
|      | Dehra Dun                                                                                      | Z<br>N       | e<br>e                   | 21     | 17     | 17<br>24 41                            |                | Feeble                       |
|      | Shillong                                                                                       | Z            | iP                       | 21     | 17     | 20                                     |                | Slight, distant, rarefaction |
|      | Bombay                                                                                         | E<br>NE<br>E | e<br>e<br>e              | 21     | 17     | 36<br>21 42<br>25 32                   |                | Slight                       |
|      | Madras                                                                                         | E            | e                        | 21     | 20     | 53                                     |                | Feeble                       |
|      | Hyderabad                                                                                      | E            | M                        | 21     | 27     | 05                                     |                | Feeble, Per=12 sec. $\mu=3$  |
| 02   | Epc: 55.9°N, 153.1°W Kodak Islands, Alaska region<br>- H = 02h 43m 25s. h about 25 kms (USCGS) |              |                          |        |        |                                        |                |                              |
|      | Shillong                                                                                       | Z            | eP                       | 02     | 55     | 38                                     |                | Slight, distant              |

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| Date   | Station                                                                                  | Compt.    | Phase             | G<br>h | M<br>m | T<br>s                        | $\Delta$<br>km | Remarks                      |
|--------|------------------------------------------------------------------------------------------|-----------|-------------------|--------|--------|-------------------------------|----------------|------------------------------|
| 02     | Dehra Dun                                                                                | Z         | eP                | 02     | 55     | 48                            |                | Slight                       |
| Contd. | New Delhi                                                                                | Z         | eP                | 02     | 55     | 56                            |                | Slight, compression          |
| 02     | Shillong                                                                                 | Z         | eP                | 03     | 58     | 06                            |                | Slight, distant              |
|        | Chatra                                                                                   | Z         | eP<br>S           | 03     | 58     | 33<br>59 41                   | 660            | Feeble                       |
| 02     | Shillong                                                                                 | Z         | iP                | 04     | 23     | 21                            |                | Slight, distant, rarefaction |
| 02     | Epc: 52.4°N, 141.9°E. Near Coast of Sakhalin,<br>- H = 06h 15m 13s h about 25 km (USCGS) |           |                   |        |        |                               |                |                              |
|        | Shillong                                                                                 | Z         | iP                | 06     | 23     | 39                            |                | Slight, distant, compression |
|        | Dehra Dun                                                                                | Z         | eP                | 06     | 24     | 18                            |                | Slight                       |
|        | New Delhi                                                                                | Z         | iP                | 06     | 24     | 29                            |                | Slight, rarefaction          |
| 02     | Poona                                                                                    | Z         | iP                | 09     | 15     | 41                            |                | Slight                       |
|        | New Delhi                                                                                | ZNE<br>ZE | iP<br>i           | 09     | 15     | 52<br>13 48                   |                | Slight, rarefaction          |
|        | Dehra Dun                                                                                | Z         | eP                | 09     | 15     | 54                            |                | Slight                       |
|        | Chatra                                                                                   | Z         | iP                | 09     | 16     | 07                            |                | Feeble, distant, compression |
|        | Shillong                                                                                 | Z         | iP                | 09     | 16     | 12                            |                | Slight, distant, rarefaction |
| 02     | New Delhi                                                                                | NE        | i                 | 09     | 25     | 43                            |                | Slight                       |
|        | Shillong                                                                                 | Z         | iP                | 09     | 26     | 21                            |                | Slight, distant, compression |
|        | Chatra                                                                                   | Z         | iP                | 09     | 23     | 42                            |                | Feeble, distant, rarefaction |
| 02     | Shillong                                                                                 | Z         | eP                | 09     | 27     | 13                            |                | Slight, distant              |
| 02     | Shillong                                                                                 | Z         | iP                | 10     | 29     | 24                            |                | Slight, distant, compression |
| 02     | New Delhi                                                                                | Z         | iP<br>i<br>i<br>i | 12     | 52     | 31<br>52 32<br>52 35<br>53 27 |                | Slight, rarefaction          |
|        | Dehra Dun                                                                                | Z         | eP                | 13     | 52     | 32                            |                | Slight                       |
|        | Shillong                                                                                 | Z         | iP                | 12     | 52     | 48                            |                | Slight, distant, compression |
| 02     | Shillong                                                                                 | Z         | eP<br>eS<br>Sg/M  | 14     | 06     | 40<br>07 28<br>07 48          | 450            | Slight                       |
| 02     | Tocklai                                                                                  | E         | eP<br>eS          | 14     | 07     | 10<br>08 05                   |                | Slight, near                 |
| 02     | Port Blair                                                                               | N         | e                 | 15     | 34     | 54                            |                | Tremor                       |
| 03     | Shillong                                                                                 | Z         | iP                | 02     | 46     | 20                            |                | Slight, distant, rarefaction |
| 03     | Epc: 80°N, 80°E. (Felt in Western W.P.)<br>- H = 03h 28m 15s (New Delhi)                 |           |                   |        |        |                               |                |                              |
|        | Dehra Dun                                                                                | Z         | ePg<br>iSg        | 03     | 28     | 40<br>28 57                   |                | Feeble                       |



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| Date         | Station       | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|--------------|---------------|-------|-------|--------|--------|--------|----------------|------------------------------|
| 03<br>Contd. | New Delhi     | Z     | iP    | 03     | 28     | 59     | 240            | Slight, compression          |
|              |               |       | iP*   |        | 29     | 01     |                |                              |
|              |               |       | Pg    |        | 29     | 05     |                |                              |
|              |               |       | iS    |        | 29     | 27     |                |                              |
|              | Chatra        | Z     | iP    | 03     | 30     | 10     | 780            | Slight, rarefaction          |
|              |               |       | eS    |        | 31     | 31     |                |                              |
|              | Poona         | Z     | eP    | 03     | 31     | 03     | 890            | Slight                       |
|              |               |       | eS    |        | 33     | 29     |                |                              |
|              | Shillong      | Z     | iP    | 03     | 31     | 05     |                | Slight, near, compression    |
|              | Sehore        | NE    | eS    | 03     | 31     | 23     |                | Slight                       |
|              |               |       | eSg   |        | 32     | 08     |                | $\mu = 7.2$                  |
|              | Visakhapatnam | NE    | eP    | 03     | 33     | 34     | 1010           | Slight                       |
|              |               |       | iS    |        | 35     | 18     |                |                              |
|              | Bombay        | E     | e     | 03     | 33     | 51     |                | Feeble, near                 |
|              |               | NE    | e     |        | 35     | 07     |                |                              |
|              | Madras        | E     | e     | 03     | 35     | 14     |                | Slight                       |
|              |               |       | e     |        | 37     | 07     |                |                              |
|              |               |       | e     |        | 37     | 57     |                |                              |
| 03           | New Delhi     | Z     | iP    | 03     | 53     | 51     |                | Slight, compression          |
|              | Chatra        | Z     | iP    | 03     | 53     | 59     |                | Feeble, distant, compression |
|              | Shillong      | Z     | iP    | 03     | 53     | 59     |                | Slight, distant, compression |
|              | Bombay        | ES    | e     | 03     | 54     | 28     |                | Feeble, distant              |
|              |               |       | e     | 04     | 02     | 21     |                |                              |
| 03           | Shillong      | Z     | eP    | 05     | 55     | 03     | 160            | Slight, compression          |
|              |               |       | iS    |        | 55     | 21     |                |                              |
|              | Chatra        | Z     | eP    | 05     | 55     | 32     | 330            | Feeble                       |
|              |               |       | eS    |        | 56     | 10     |                |                              |
| 03           | Shillong      | Z     | iP    | 07     | 41     | 59     |                | Slight, distant, compression |
| 03           | Calcutta      | E     | e     | 17     | 41     | 40     |                | Slight                       |
|              |               |       | i     |        | 42     | 58     |                |                              |
| 03           | Chatra        | Z     | ePg   | 18     | 40     | 36     | 60             | Very feeble, probably local  |
|              |               |       | Sg    |        | 40     | 43     |                |                              |
| 03           | Shillong      | Z     | iPg   | 20     | 18     | 33     | 80             | Slight                       |
|              |               |       | Sg    |        | 18     | 42     |                |                              |
|              | Chatra        | Z     | eP    | 20     | 19     | 28     | 550            | Feeble, near                 |
|              |               |       | eS    |        | 20     | 26     |                |                              |
| 03           | Shillong      | ZNE   | iP    | 20     | 38     | 22     | 650            | Slight, compression          |
|              |               |       | iS    |        | 39     | 30     |                |                              |
|              |               |       | M     |        | 40     | 05     |                | Per=7 secs. $\mu=0.5$        |
|              | Tocklai       | E     | eP    | 20     | 38     | 49     |                |                              |
|              |               |       | iS    |        | 39     | 55     |                |                              |

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| Date         | Station                                                                            | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|--------------|------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------|
| 03<br>Contd. | Chatra                                                                             | ZNE   | eP    | 20     | 39     | 13     | 890            | Slight                       |
|              |                                                                                    |       | PP    |        | 39     | 21     |                |                              |
|              |                                                                                    |       | PPP   |        | 39     | 27     |                |                              |
|              |                                                                                    |       | i     |        | 39     | 38     |                |                              |
|              |                                                                                    |       | i     |        | 39     | 47     |                |                              |
|              |                                                                                    |       | Lq    |        | 40     | 35     |                |                              |
|              |                                                                                    |       | iS    |        | 40     | 45     |                |                              |
|              |                                                                                    |       | SS    |        | 40     | 58     |                |                              |
|              |                                                                                    |       | Lr    |        | 41     | 00     |                |                              |
|              |                                                                                    |       | SSS   |        | 41     | 09     |                |                              |
| S*           |                                                                                    | 41    | 14    |        |        |        |                |                              |
| M            |                                                                                    | 41    | 36    |        |        |        |                |                              |
|              | Bokaro                                                                             | E     | e     | 20     | 40     | 51     |                | Slight, distant              |
|              |                                                                                    |       | e     |        | 44     | 20     |                |                              |
|              | Dehra Dun                                                                          | Z     | e     | 20     | 40     | 59     |                | Feeble                       |
|              |                                                                                    |       | e     |        | 45     | 58     |                |                              |
|              | Dehli                                                                              | Z     | eP    | 20     | 41     | 09     |                | Slight, rarefaction          |
|              | Bombay                                                                             | ES    | e     | 20     | 44     | 43     |                | Slight                       |
|              |                                                                                    | NE    | e     |        | 49     | 39     |                |                              |
| 03           | Shillong                                                                           | Z     | eP    | 23     | 01     | 11     |                | Tremor                       |
| 03           | New Delhi                                                                          | Z     | eP    | 23     | 38     | 15     |                | Tremor, compression          |
|              | Shillong                                                                           | Z     | eP    | 23     | 39     | 19     |                | Tremor                       |
| 04           | New Delhi                                                                          | Z     | eP    | 00     | 43     | 13     |                | Slight, compression          |
|              |                                                                                    |       | i?    |        | 43     | 20     |                |                              |
| 04           | Dehra Dun                                                                          | Z     | eP    | 04     | 41     | 01     |                | Tremor                       |
|              | New Delhi                                                                          | Z     | eP    | 04     | 41     | 22     |                | Slight, compression          |
|              |                                                                                    |       | i     |        | 41     | 25     |                |                              |
|              |                                                                                    |       | i     |        | 41     | 53     |                |                              |
| 04           | Epic: 42.8°N, 143.7°E. Hokkaido, Japan<br>- H = 05h 48m 29s. h about 37 km (USCGS) |       |       |        |        |        |                |                              |
|              | Shillong                                                                           | Z     | iP    | 05     | 56     | 47     |                | Slight, distant, rarefaction |
| 04           | Shillong                                                                           | Z     | e     | 08     | 15     | 31     |                | Slight, near                 |
| 04           | Shillong                                                                           | Z     | eP    | 09     | 42     | 21     |                | Tremor                       |
| 04           | Shillong                                                                           | Z     | iP    | 09     | 51     | 18     |                | Slight, distant, rarefaction |
| 04           | Shillong                                                                           | Z     | iP    | 10     | 16     | 18     |                | Slight, distant, rarefaction |
| 04           | Dehra Dun                                                                          | Z     | eP    | 11     | 21     | 24     |                | Tremor                       |
| 04           | New Delhi                                                                          | Z     | eP    | 11     | 21     | 51     |                | Slight, compression          |
| 04           | Dehra Dun                                                                          | Z     | eP    | 13     | 34     | 33     |                | Tremor                       |
|              | New Delhi                                                                          | Z     | eP    | 13     | 35     | 03     |                | Slight, rarefaction          |
|              |                                                                                    |       | i     |        | 45     | 39     |                |                              |
| 04           | Dehra Dun                                                                          | Z     | eP    | 16     | 12     | 26     |                | Tremor                       |

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| Date.  | Station                                                                                                | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                                            |
|--------|--------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------------------------------------------------------------|
| 04     | New Delhi                                                                                              | Z     | eP    | 16     | 13     | 29     |                | Slight, rarefaction                                                                |
| Contd. |                                                                                                        |       |       |        |        |        |                |                                                                                    |
| 04     | Epic: 51.2°N, 173.6°W. Andreanof Islands, Aleutian Islands<br>- H = 17h 38m 53s. h about 23 km (USCGS) |       |       |        |        |        |                |                                                                                    |
|        | Shillong                                                                                               | Z     | iP    | 17     | 50     | 15     |                | Slight, distant, compression                                                       |
| 04     | Shillong                                                                                               | Z     | eP    | 18     | 17     | 51     |                | Slight, distant                                                                    |
| 04     | Shillong                                                                                               | Z     | eP    | 18     | 59     | 25     |                | Slight, distant, rarefaction                                                       |
| 04     | New Delhi                                                                                              | Z     | iP    | 23     | 27     | 37     |                | Slight, rarefaction                                                                |
| 04     | Chatra                                                                                                 | Z     | eP    | 23     | 27     | 54     |                | Feeble, distant                                                                    |
|        | Shillong                                                                                               | Z     | iP    | 23     | 23     | 00     |                | Slight, distant, compression                                                       |
| 04     | Epic: 38.2°N, 140.7°E. Honshu, Japan.<br>- H = 23h 41m 14s. h about 13 km (USCGS)                      |       |       |        |        |        |                |                                                                                    |
|        | Shillong                                                                                               | Z     | iP    | 23     | 49     | 14     |                | Slight, distant, compression                                                       |
| 05     | Shillong                                                                                               | Z     | ePg   | 00     | 09     | 26     |                | Slight, near                                                                       |
| 05     | Shillong                                                                                               | Z     | iP    | 04     | 10     | 05     |                | Slight, distant, rarefaction                                                       |
| 05     | Shillong                                                                                               | Z     | eP    | 04     | 12     | 13     |                | Tremor                                                                             |
| 05     | Shillong                                                                                               | Z     | eP    | 04     | 13     | 09     |                | Tremor                                                                             |
| 05     | Dehra Dun                                                                                              | Z     | eP    | 08     | 33     | 57     |                | Tremor                                                                             |
| 05     | New Delhi                                                                                              | Z     | iP    | 03     | 39     | 02     |                | Slight, compression                                                                |
| 05     | Shillong                                                                                               | Z     | eP    | 08     | 41     | 18     |                | Slight, distant                                                                    |
| 05     | Epic: 34.2°N, 139.2°E. Near South Coast of Honshu, Japan<br>- H = 11h 11m 11s. h about 73 km (USCGS)   |       |       |        |        |        |                |                                                                                    |
|        | Shillong                                                                                               | ZE    | eP    | 11     | 19     | 33     | 4070           | Slight, initial ground motion towards South and East.<br>Per.=15 secs, $\mu = 6.0$ |
|        |                                                                                                        |       | Pr    |        | 20     | 56     |                |                                                                                    |
|        |                                                                                                        |       | iS    |        | 25     | 53     |                |                                                                                    |
|        |                                                                                                        |       | M     |        | 32     | 33     |                |                                                                                    |
|        | Dehra Dun                                                                                              | Z     | e     | 11     | 20     | 45     |                | Feeble                                                                             |
|        |                                                                                                        |       | e     |        | 23     | 23     |                |                                                                                    |
|        | New Delhi                                                                                              | Z     | eP    | 11     | 20     | 59     |                | Slight, compression                                                                |
| 05     | Bombay                                                                                                 | N     | e     | 11     | 20     | 05     |                | Slight                                                                             |
|        |                                                                                                        | E     | e     |        | 21     | 50     |                |                                                                                    |
|        |                                                                                                        | N     | e     |        | 27     | 05     |                |                                                                                    |
|        |                                                                                                        | E     | e     |        | 42     | 00     |                |                                                                                    |
| 05     | Shillong                                                                                               | Z     | iP    | 16     | 50     | 08     |                | Slight, distant, rarefaction                                                       |
|        | New Delhi                                                                                              | Z     | iP    | 16     | 51     | 32     |                | Slight, rarefaction                                                                |
| 05     | Shillong                                                                                               | Z     | eP    | 16     | 53     | 13     |                | Slight, distant                                                                    |
| 05     | Dehra Dun                                                                                              | Z     | eP    | 19     | 01     | 22     |                | Tremor                                                                             |
|        | New Delhi                                                                                              | Z     | eP    | 19     | 01     | 46     |                | Tremor, rarefaction                                                                |
| 05     | New Delhi                                                                                              | Z     | iP    | 22     | 47     | 43     |                | Tremor, rarefaction                                                                |
| 05     | New Delhi                                                                                              | Z     | iP    | 23     | 13     | 58     |                | Tremor, rarefaction                                                                |
| 05     | New Delhi                                                                                              | Z     | eP    | 23     | 24     | 39     |                | Tremor, compression                                                                |

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| Date | Station    | Compt | Phase       | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|------|------------|-------|-------------|--------|--------|--------|----------------|------------------------------|
| 03   | Behra Dun  | Z     | ep          | 00     | 15     | 19     |                | Tremor                       |
|      | New Delhi  | Z     | ep          | 00     | 15     | 48     |                | Tremor, rarefaction          |
| 06   | Shillong   | ZE    | ip<br>es    | 00     | 46     | 14     | 3910           | Slight, compression          |
|      |            |       |             | 56     | 19     |        |                |                              |
|      | New Delhi  | Z     | ip          | 00     | 47     | 38     |                | Slight, compression          |
| 06   | New Delhi  | Z     | ep          | 03     | 33     | 22     |                | Tremor                       |
|      | Behra Dun  | Z     | ep          | 03     | 33     | 25     |                | Tremor                       |
| 06   | Behra Dun  | Z     | ep          | 03     | 53     | 23     |                | Tremor                       |
| 06   | Chatra     | Z     | ip<br>es    | 04     | 49     | 23     | 160            | Feeble, rarefaction          |
|      |            |       |             | 49     | 48     |        |                |                              |
|      | Shillong   | Z     | ip          | 04     | 50     | 08     |                | Slight, distant, compression |
|      | New Delhi  | Z     | ip          | 04     | 52     | 40     |                | Slight, rarefaction          |
| 06   | Behra Dun  | Z     | ep          | 05     | 30     | 28     |                | Tremor                       |
|      | New Delhi  | Z     | ep          | 05     | 31     | 29     |                | Tremor, rarefaction          |
| 06   | Shillong   | Z     | ep          | 05     | 44     | 41     |                | Slight, distant              |
| 06   | New Delhi  | Z     | ip          | 06     | 23     | 49     |                | Tremor, compression          |
| 06   | New Delhi  | Z     | ep          | 06     | 50     | 43     |                | Slight, rarefaction          |
| 06   | Behra Dun  | Z     | ep          | 07     | 11     | 53     |                | Tremor                       |
|      | New Delhi  | Z     | ip          | 07     | 12     | 09     |                | Slight, rarefaction          |
| 06   | Shillong   | Z     | ip          | 07     | 29     | 55     |                | Slight, distant, compression |
| 06   | Behra Dun  | Z     | ep          | 07     | 33     | 14     |                | Feeble                       |
|      |            |       |             | 33     | 50     |        |                |                              |
|      | New Delhi  | Z     | ep          | 07     | 40     | 16     |                | Slight, compression          |
| 06   | Behra Dun  | Z     | ep          | 07     | 56     | 43     |                | Tremor                       |
| 06   | Behra Dun  | Z     | ep          | 11     | 25     | 58     |                | Tremor                       |
|      | New Delhi  | Z     | ip          | 11     | 26     | 10     |                | Slight, compression          |
| 06   | Shillong   | Z     | ip          | 12     | 01     | 09     |                | Slight, distant, compression |
| 06   | Port Blair | N     | ep<br>es    | 13     | 55     | 30     | 160            | Slight                       |
|      |            |       |             | 55     | 49     |        |                |                              |
|      | Shillong   | Z     | ip          | 13     | 53     | 23     |                | Slight, distant, compression |
| 06   | Shillong   | Z     | ep          | 13     | 10     | 27     |                | Slight, distant              |
| 06   | New Delhi  | Z     | ep          | 13     | 44     | 33     |                | Tremor                       |
| 06   | Calcutta   | E     | e<br>i<br>i | 13     | 19     | 51     |                | Slight                       |
|      |            |       |             |        | 21     | 08     |                |                              |
|      |            |       |             |        | 27     | 59     |                |                              |

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| Date   | Station                                     | Compt | Phase     | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                |
|--------|---------------------------------------------|-------|-----------|--------|--------|--------|----------------|------------------------|
| 06     | Calcutta                                    | E     | i         | 18     | 30     | 59     |                |                        |
| Contd. | Contd.                                      |       | i         |        | 37     | 51     |                |                        |
|        |                                             |       | Lq/Lr     |        | 51     | 00     |                |                        |
|        |                                             |       | M         |        | 58     | 36     |                |                        |
| 06     | Epc: 60°S, 32.8°W, Sandwich Islands Regions |       |           |        |        |        |                |                        |
|        | - H = 19h 00m 10s. h about 25 km (USCGS)    |       |           |        |        |        |                |                        |
|        | Mag: 7 (Pas), 6 -6% (Brk), 7 (Pal).         |       |           |        |        |        |                |                        |
|        | Bombay                                      | N     | eP        | 19     | 16     | 00     | 12380          |                        |
|        |                                             |       | PKP       |        | 19     | 10     |                |                        |
|        |                                             | NES   | e         |        | 19     | 44     |                |                        |
|        |                                             |       | eS        |        | 29     | 36     |                |                        |
|        |                                             | N     | e         |        | 31     | 40     |                |                        |
|        |                                             |       | e         |        | 32     | 40     |                |                        |
|        |                                             |       | eSS       |        | 35     | 57     |                |                        |
|        |                                             |       | e         |        | 48     | 48     |                |                        |
|        |                                             |       | M         |        | 55     | 25     |                | Per=25 secs, $\mu=19$  |
|        | Hyderabad                                   | NE    | eP        | 19     | 18     | 47     | 10260          |                        |
|        |                                             | E     | i         |        | 20     | 02     |                |                        |
|        |                                             |       | PP        |        | 22     | 39     |                |                        |
|        |                                             |       | ScS       |        | 28     | 56     |                |                        |
|        |                                             | NE    | iS        |        | 29     | 49     |                |                        |
|        |                                             | E     | PPS       |        | 32     | 22     |                |                        |
|        |                                             |       | SS        |        | 35     | 44     |                |                        |
|        |                                             |       | SSS       |        | 39     | 49     |                |                        |
|        |                                             |       | Lr        |        | 49     | 47     |                |                        |
|        |                                             | N     | M         |        | 54     | 44     |                | Per=24 secs, $\mu=16$  |
|        |                                             | E     | M         |        | 55     | 00     |                | Per=18 secs, $\mu=11$  |
|        | Poona                                       | Z     | eP        | 19     | 18     | 48     | 9950           |                        |
|        |                                             | N     | PP        |        | 22     | 19     |                |                        |
|        |                                             |       | iS        |        | 29     | 57     |                |                        |
|        |                                             |       | PPS       |        | 31     | 12     |                |                        |
|        |                                             |       | SS        |        | 35     | 35     |                |                        |
|        |                                             |       | PKKP1     |        | 36     | 01     |                |                        |
|        |                                             |       | SSS       |        | 39     | 19     |                |                        |
|        |                                             |       | PcP, PKP2 |        | 40     | 43     |                |                        |
|        |                                             |       | SKKS2     |        | 42     | 02     |                |                        |
|        |                                             |       | Lq        |        | 43     | 33     |                |                        |
|        |                                             |       | SKKKS     |        | 47     | 25     |                |                        |
|        |                                             |       | Lr        |        | 47     | 56     |                |                        |
|        |                                             |       | M         |        | 55     | 27     |                |                        |
|        | Kodaikanal                                  | E     | eP        | 19     | 19     | 09     |                | Distant                |
|        |                                             |       | i         |        | 28     | 39     |                |                        |
|        |                                             |       | i         |        | 35     | 03     |                |                        |
|        | New Delhi                                   | ZNE   | iPKP      | 19     | 19     | 09     | 13780          | Rarefaction            |
|        |                                             | ZN    | PP        |        | 20     | 58     |                |                        |
|        |                                             | ZNE   | i?        |        | 22     | 24     |                |                        |
|        |                                             |       | PPP       |        | 23     | 57     |                |                        |
|        |                                             | ZE    | SKS       |        | 25     | 29     |                |                        |
|        |                                             |       | PS        |        | 31     | 29     |                |                        |
|        |                                             | ZNE   | PPS       |        | 32     | 30     |                |                        |
|        |                                             | ZE    | SS        |        | 37     | 38     |                |                        |
|        |                                             | E     | SSS       |        | 42     | 31     |                | Per=57 secs, Amp=84 mm |
|        | Dehra Dun                                   | Z     | e         | 19     | 19     | 12     |                |                        |
|        |                                             |       | e         |        | 21     | 14     |                |                        |
|        |                                             |       | e         |        | 22     | 57     |                |                        |

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| Date | Station       | Compt. | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                          |
|------|---------------|--------|-------|--------|--------|--------|----------------|----------------------------------|
| 06   | Dehra Dun     | Z      | e     | 19     | 32     | 54     |                |                                  |
|      | Contd. Contd. |        | e     |        | 42     | 12     |                |                                  |
|      | Chatra        | Z      | eP    | 19     | 19     | 16     |                |                                  |
|      |               |        | i     |        | 21     | 27     |                |                                  |
|      |               |        |       | i      |        | 22     | 39             |                                  |
|      |               |        | E     | e      |        | 22     | 40             |                                  |
|      |               | NE     | e     |        | 31     | 14     |                |                                  |
|      | Shillong      | ZNE    | iPKP  | 19     | 19     | 19     | 14640          | Rarefaction                      |
|      |               |        | PP    |        | 21     | 25     |                |                                  |
|      |               |        | PKS   |        | 22     | 32     |                |                                  |
|      |               |        | iSS   |        | 39     | 17     |                |                                  |
|      |               |        | Lr    | 20     | 06     | 17     |                |                                  |
|      |               |        | M     |        | 12     | 50     |                | Per.=17 secs, $\mu = 7.7$        |
|      | Madras        | E      | ePKP  | 19     | 19     | 20     |                |                                  |
|      |               |        |       | i      |        | 19     | 25             |                                  |
|      |               |        |       | e      |        | 20     | 26             |                                  |
|      |               |        |       | e      |        | 22     | 40             |                                  |
|      |               |        |       | e      |        | 29     | 12             |                                  |
|      |               |        |       | e      |        | 29     | 44             |                                  |
|      |               |        |       | e      |        | 32     | 27             |                                  |
|      |               |        |       | e      |        | 35     | 52             |                                  |
|      |               |        |       | e      |        | 40     | 05             |                                  |
|      |               |        | e     |        | 50     | 48     |                |                                  |
|      | Visakhapatnam | NE     | ePKP  | 19     | 19     | 27     | 15110          |                                  |
|      |               |        |       | PP     |        | 22     | 20             |                                  |
|      | Port Blair    | E      | eP    | 19     | 20     | 13     | 8530           |                                  |
|      |               |        |       | eCP    |        | 20     | 31             |                                  |
|      |               |        |       | PP     |        | 23     | 08             |                                  |
|      |               |        |       | PPP    |        | 24     | 49             |                                  |
|      |               |        |       | i      |        | 27     | 49             |                                  |
|      |               |        |       | eS     |        | 30     | 00             |                                  |
|      |               |        |       | PPS    |        | 30     | 57             |                                  |
|      |               |        |       | SS     |        | 34     | 32             |                                  |
|      |               |        |       | i      |        | 36     | 51             |                                  |
|      |               |        |       | Lq     |        | 40     | 15             |                                  |
|      |               |        |       | Lr     |        | 43     | 49             |                                  |
|      |               |        | M     |        | 49     | 27     |                |                                  |
|      |               |        | Mn    | 20     | 27     | 00     |                | Per.=14 secs, $\mu = 8$          |
|      | Bokaro        | E      | iP    | 19     | 21     | 08     |                | First ground motion towards West |
|      |               |        | i     |        | 23     | 30     |                |                                  |
| 06   | New Delhi     | Z      | eP    | 22     | 12     | 45     |                | Slight, compression              |
|      | Dehra Dun     | Z      | eP    | 22     | 12     | 49     |                | Tremor                           |
|      | Chatra        | Z      | eP    | 22     | 12     | 52     |                | Feeble, distant                  |
|      | Shillong      | Z      | iP    | 22     | 12     | 55     |                | Slight, distant, compression     |
| 06   | New Delhi     | Z      | eP    | 22     | 38     | 41     |                | Tremor, rarefaction              |
| 06   | New Delhi     | Z      | iP    | 22     | 41     | 47     |                | Tremor, rarefaction              |
|      |               |        | i     |        | 43     | 24     |                |                                  |
| 06   | Shillong      | Z      | eP    | 22     | 53     | 52     |                | Slight, distant                  |
|      | Dehra Dun     | Z      | eP    | 22     | 57     | 29     |                | Tremor                           |
| 07   | New Delhi     | Z      | iP    | 00     | 44     | 45     |                | Tremor, rarefaction              |
| 07   | New Delhi     | Z      | eP    | 02     | 17     | 39     |                | Tremor, compression              |

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| Date | Station                                                                                                                                                                   | Compt     | Phase                                                                  | G<br>h | M<br>m | T<br>s                                                                                                   | Δ<br>km | Remarks                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------|
| 07   | Epc: 4.1°S, 143.7°E. Near North Coast of New Guinea<br>- H = 04h 56m 23s h about 113 km (USCGS)                                                                           |           |                                                                        |        |        |                                                                                                          |         |                                                                                                |
|      | Shillong                                                                                                                                                                  | Z         | iP                                                                     | 05     | 06     | 41                                                                                                       |         | Slight, distant, compression                                                                   |
|      | New Delhi                                                                                                                                                                 | Z         | iP                                                                     | 05     | 07     | 52                                                                                                       |         | Slight, compression                                                                            |
| 07   | Epc: 19.3°N, 145.7°E. Mariana Islands<br>- H = 08h 07m 55s. h about 110 km (USCGS)                                                                                        |           |                                                                        |        |        |                                                                                                          |         |                                                                                                |
|      | Shillong                                                                                                                                                                  | Z         | iP                                                                     | 08     | 16     | 51                                                                                                       |         | Slight, distant, compression                                                                   |
|      | New Delhi                                                                                                                                                                 | Z         | eP                                                                     | 08     | 18     | 25                                                                                                       |         | Slight, compression                                                                            |
| 07   | Shillong                                                                                                                                                                  | Z         | iPg<br>iSg                                                             | 10     | 55     | 53<br>56 12                                                                                              | 130     | Slight, compression                                                                            |
| 07   | New Delhi                                                                                                                                                                 | Z         | iP                                                                     | 12     | 19     | 53                                                                                                       |         | Slight, compression                                                                            |
| 07   | New Delhi                                                                                                                                                                 | Z         | eP                                                                     | 15     | 43     | 23                                                                                                       |         | Slight, rarefaction                                                                            |
|      | Chatra                                                                                                                                                                    | Z         | iP<br>S                                                                | 15     | 55     | 00<br>55 15                                                                                              |         | Feeble, compression<br>distant                                                                 |
| 07   | Shillong                                                                                                                                                                  | Z         | ePg                                                                    | 17     | 39     | 19                                                                                                       |         | Slight, local                                                                                  |
| 07   | Epc: 45.5°N, 147.1°E. - H = 17h 39m 50s (Shillong)<br>45.3°N, 146.7°E. Kurile Islands. h about 25 km (USCGS)<br>- H = 17h 39m 50s<br>Mag. = 6.6 (Pas), 7 (Brk), 6.6 (Pal) |           |                                                                        |        |        |                                                                                                          |         |                                                                                                |
|      | Shillong                                                                                                                                                                  | ZNE       | iP<br>PP<br>PPP<br>iS<br>SS<br>Lq<br>Lr<br>M                           | 17     | 48     | 32<br>50 30<br>51 24<br>55 31<br>58 43<br>18 00 53<br>02 45<br>06 55                                     | 5330    | Compression, initial ground<br>movement towards South and<br>West<br><br>Per=12 secs, $\mu=21$ |
|      | Chatra                                                                                                                                                                    | ZNE<br>NE | iP<br>PcP<br>PP<br>PPP<br>PcS<br>S<br>ScS<br>SS<br>SSS<br>Lr<br>M<br>M | 17     | 48     | 49<br>50 03<br>50 51<br>51 40<br>54 04<br>53 04<br>58 41<br>59 33<br>18 01 04<br>03 09<br>10/11<br>10/11 | 5630    | Rarefaction, West-South.<br><br>Per=12 secs, $\mu=9.5$<br>Per=10 secs, $\mu=13.3$              |
|      | Calcutta                                                                                                                                                                  | E         | iP<br>PcP<br>PPP<br>iS<br>ScS                                          | 17     | 49     | 04<br>50 21<br>52 03<br>56 32<br>59 02                                                                   | 5870    |                                                                                                |
|      | Bokaro                                                                                                                                                                    | NE<br>I   | iP<br>PP<br>PPP<br>iS<br>i<br>i<br>SS                                  | 17     | 49     | 13<br>51 21<br>52 37<br>53 45<br>57 12<br>59 49<br>13 00 43                                              | 5950    | First ground motion<br>South and West                                                          |

| Date          | Station          | Compt    | Phase  | G<br>h | M<br>m                    | T<br>s | $\Delta$<br>km         | Remarks                     |
|---------------|------------------|----------|--------|--------|---------------------------|--------|------------------------|-----------------------------|
| 07<br>Contd.  | Bokaro<br>Contd. | E        | SSS/Lq | 18     | 02                        | 46     |                        |                             |
|               |                  | N        | M      |        | 09                        | 25     |                        | Per=16.9 secs, $\mu=32$     |
|               |                  | E        | M      |        | 09                        | 25     |                        | Per=18.7 secs, $\mu=20$     |
|               |                  | E        | Mn     |        | 13                        | 12     |                        | Per=11.3 secs, $\mu=30$     |
|               |                  | N        | Mn     |        | 13                        | 31     |                        | Per=13.1 secs, $\mu=24$     |
|               | Dehra Dun        | Z        | eP     | 17     | 49                        | 20     | 6119                   |                             |
|               |                  | N        | PP     |        | 51                        | 23     |                        |                             |
|               |                  |          | PPP    |        | 52                        | 20     |                        |                             |
|               |                  |          | iS     |        | 57                        | 01     |                        |                             |
|               |                  |          | SS     | 18     | 00                        | 50     |                        |                             |
|               |                  |          | SSS    |        | 02                        | 53     |                        |                             |
|               |                  |          | Lr     |        | 05                        | 28     |                        |                             |
|               |                  |          | M      |        | 09                        | 15     |                        | Per=17.5 secs, Amp=51.47 mm |
| New Delhi     | ZNE              | iP       |        | 17     | 49                        | 32     |                        | First ground motion         |
|               |                  | i        |        | 49     | 40                        |        | West-South             |                             |
|               |                  | i        |        | 49     | 54                        |        |                        |                             |
| Port Blair    | N                | eP       |        | 17     | 49                        | 37     | 6330                   |                             |
|               |                  | PcP      |        | 50     | 33                        |        |                        |                             |
|               |                  | PP       |        | 51     | 43                        |        |                        |                             |
|               |                  | eS       |        | 57     | 31                        |        |                        |                             |
|               |                  | PPS      |        | 57     | 53                        |        |                        |                             |
|               |                  | SS       | 18     | 01     | 16                        |        |                        |                             |
| Visakhapatnam | NE               | iP       |        | 17     | 49                        | 55     | 6590                   | First ground motion         |
|               |                  | PcP      |        | 50     | 28                        |        | towards North and East |                             |
|               |                  | PP       |        | 52     | 10                        |        |                        |                             |
|               |                  | PPP      |        | 53     | 37                        |        |                        |                             |
|               |                  | iS       |        | 58     | 03                        |        |                        |                             |
|               |                  | PS       |        | 58     | 18                        |        |                        |                             |
|               |                  | PPS      |        | 58     | 31                        |        |                        |                             |
|               |                  | ScS      |        | 59     | 22                        |        |                        |                             |
|               |                  | SS       | 18     | 02     | 05                        |        |                        |                             |
|               |                  | SSS      |        | 04     | 48                        |        |                        |                             |
|               |                  | Lr       |        | 07     | 43                        |        |                        |                             |
| M             |                  | 12       | 32     |        | Per=11.5 secs, Amp=6.5 mm |        |                        |                             |
| 07            | Sehore           | NE       | eP     | 17     | 49                        | 56     | 6690                   |                             |
|               |                  |          | PcP    |        | 50                        | 34     |                        |                             |
|               |                  | E        | PP     |        | 52                        | 09     |                        |                             |
|               | NE               | iS       |        | 58     | 09                        |        |                        |                             |
| New Delhi     | ZN               | i        |        | 17     | 50                        | 11     | 6280                   | South-West, compression     |
|               | NE               | PcP      |        | 50     | 24                        |        |                        |                             |
|               | ZE               | i        |        | 50     | 39                        |        |                        |                             |
|               | ZNE              | i        |        | 50     | 50                        |        |                        |                             |
|               |                  | PP       |        | 51     | 32                        |        |                        |                             |
|               | E                | i        |        | 52     | 06                        |        |                        |                             |
|               | ZNE              | PPP      |        | 52     | 50                        |        |                        |                             |
|               |                  | i        |        | 53     | 09                        |        |                        |                             |
|               |                  | PcS, ScP |        | 54     | 09                        |        |                        |                             |
|               | E                | i        |        | 54     | 34                        |        |                        |                             |
|               | NE               | i        |        | 55     | 52                        |        |                        |                             |
|               | ZNE              | iS       |        | 57     | 23                        |        |                        |                             |
|               | ZE               | PS       |        | 57     | 31                        |        |                        |                             |
|               | ZNE              | ScS      |        | 58     | 51                        |        |                        |                             |
|               | N                | i        |        | 59     | 09                        |        |                        |                             |
|               | NE               | i        |        | 59     | 55                        |        |                        |                             |
|               | ZE               | i        | 18     | 00     | 48                        |        |                        |                             |
| ZN            | SS               |          | 01     | 14     |                           |        |                        |                             |



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| Date         | Station             | Compt               | Phase    | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                            |
|--------------|---------------------|---------------------|----------|--------|--------|--------|----------------|------------------------------------|
| 07<br>Contd. | New Delhi<br>Contd. | ZE                  | SSS      | 18     | 03     | 29     |                |                                    |
|              |                     |                     | Lr       |        | 03     | 49     |                |                                    |
|              |                     | <del>ZE</del><br>NE | Lr       |        | 03     | 49     |                |                                    |
|              |                     |                     | M        | -      | -      | -      |                | Per=15 secs, Amp=105 mm            |
|              | Hyderabad           | NE                  | iP       | 17     | 50     | 15     | 6940           | Intensity South-West               |
|              |                     | N                   | PcP      |        | 50     | 57     |                |                                    |
|              |                     |                     | PP       |        | 52     | 33     |                |                                    |
|              |                     | NE                  | PPP      |        | 53     | 48     |                |                                    |
|              |                     |                     | iS       |        | 58     | 42     |                |                                    |
|              |                     |                     | PS       |        | 59     | 06     |                |                                    |
|              |                     |                     | SS       | 18     | 02     | 54     |                |                                    |
|              |                     |                     | Lq       |        | 05     | 42     |                |                                    |
|              |                     |                     | Lr       |        | 08     | 00     |                |                                    |
|              |                     | N                   | M        |        | 13     | 57     |                | Per=14 secs, $\mu=13$              |
|              |                     | E                   | M        |        | 14     | 03     |                | Per=12 secs, $\mu=19$              |
|              | Madras              | E                   | iP       | 17     | 50     | 23     | 7330           | Initial ground motion towards West |
|              |                     |                     | PcP      |        | 51     | 01     |                |                                    |
|              |                     |                     | PP       |        | 52     | 54     |                |                                    |
|              |                     |                     | PPP      |        | 54     | 38     |                |                                    |
|              |                     |                     | iS       |        | 59     | 15     |                |                                    |
|              |                     |                     | PS       |        | 59     | 37     |                |                                    |
|              |                     |                     | PPS      |        | 59     | 44     |                |                                    |
|              |                     |                     | SKS/ScS  | 18     | 00     | 15     |                |                                    |
|              |                     |                     | SS       |        | 03     | 14     |                |                                    |
|              |                     |                     | SSS      |        | 06     | 13     |                |                                    |
|              |                     |                     | Lq       |        | 07     | 03     |                |                                    |
|              |                     |                     | Lr       |        | 10     | 11     |                |                                    |
|              | Poona               | Z                   | iP       | 17     | 50     | 32     | 7270           |                                    |
|              |                     | N                   | PcP      |        | 51     | 02     |                |                                    |
|              |                     |                     | PP       |        | 53     | 13     |                |                                    |
|              |                     |                     | PPP      |        | 54     | 27     |                |                                    |
|              |                     |                     | iS       |        | 59     | 13     |                |                                    |
|              |                     |                     | PS       |        | 59     | 29     |                |                                    |
|              |                     |                     | PPS      |        | 59     | 47     |                |                                    |
|              |                     | N                   | ScS/SKS1 | 18     | 00     | 21     |                |                                    |
|              |                     |                     | SS       |        | 03     | 35     |                |                                    |
|              |                     |                     | SSS      |        | 03     | 23     |                |                                    |
|              |                     |                     | Lq       |        | 07     | 18     |                |                                    |
|              |                     |                     | Lr       |        | 10     | 20     |                |                                    |
|              |                     |                     | PKKS1    |        | 14     | 07     |                |                                    |
|              |                     |                     | M        |        | 15     | 50     |                |                                    |
|              | Bombay              | NE                  | eP       | 17     | 50     | 37     | 7200           |                                    |
|              |                     |                     | PcP      |        | 51     | 01     |                |                                    |
|              |                     |                     | PP       |        | 53     | 01     |                |                                    |
|              |                     |                     | PPP      |        | 54     | 31     |                |                                    |
|              |                     |                     | e        |        | 57     | 30     |                |                                    |
|              |                     |                     | iS       |        | 59     | 18     |                |                                    |
|              |                     |                     | PS       |        | 59     | 39     |                |                                    |
|              |                     |                     | PPS      | 18     | 00     | 03     |                |                                    |
|              |                     |                     | SKS1     |        | 00     | 32     |                |                                    |
|              |                     |                     | i        |        | 01     | 23     |                |                                    |
|              |                     |                     | SS       |        | 03     | 37     |                |                                    |
|              |                     |                     | Lq       |        | 07     | 07     |                |                                    |
|              |                     |                     | Lr       |        | 10     | 17     |                |                                    |
|              |                     | N                   | M        |        | 22     | 24     |                | Per=13 secs, $\mu=29$              |
|              |                     | E                   | M        |        | 23     | 12     |                | Per=13 secs, $\mu=11$              |
|              | Kodaikanal          | E                   | iP       | 17     | 50     | 52     | 8180           | Initial ground motion towards East |
|              |                     |                     | eS       | 18     | 00     | 22     |                |                                    |

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| Date   | Station                                                                                            | Compt | Phase                              | G  | M  | T  | $\Delta$ | Remarks                      |
|--------|----------------------------------------------------------------------------------------------------|-------|------------------------------------|----|----|----|----------|------------------------------|
|        |                                                                                                    |       |                                    | h  | m  | s  | km       |                              |
| 07     | Kodaikanal                                                                                         | E     | i                                  | 18 | 18 | 13 |          |                              |
| Contd. | Contd.                                                                                             |       | M                                  |    | 20 | 01 |          | Per=10 secs, $\mu=7$         |
| 07     | Shillong                                                                                           | Z     | eP                                 | 18 | 49 | 19 |          | Slight, distant              |
| 07     | Shillong                                                                                           | Z     | iP <sub>g</sub><br>S <sub>g</sub>  | 18 | 59 | 57 | 70       | Slight, rarefaction          |
|        |                                                                                                    |       |                                    | 19 | 00 | 05 |          |                              |
| 07     | Shillong                                                                                           | Z     | iP                                 | 19 | 22 | 27 |          | Slight, distant, compression |
| 07     | Dehra Dun                                                                                          | Z     | eP                                 | 19 | 38 | 35 |          | Tremor                       |
| 07     | Shillong                                                                                           | Z     | iP <sub>g</sub><br>S <sub>g</sub>  | 19 | 45 | 47 | 70       | Slight, rarefaction          |
|        |                                                                                                    |       |                                    |    | 45 | 55 |          |                              |
| 07     | Shillong                                                                                           | Z     | iP                                 | 20 | 18 | 32 |          | Slight, distant, rarefaction |
| 07     | Shillong                                                                                           | Z     | iP                                 | 21 | 17 | 43 |          | Slight, near                 |
| 07     | Shillong                                                                                           | Z     | iP <sub>g</sub><br>iS <sub>g</sub> | 21 | 32 | 23 | 110      | Slight, rarefaction          |
|        |                                                                                                    |       |                                    |    | 32 | 36 |          |                              |
| 07     | New Delhi                                                                                          | Z     | eP                                 | 22 | 44 | 45 |          | Slight, rarefaction          |
|        | Shillong                                                                                           | Z     | iP                                 | 22 | 45 | 15 |          | Slight, distant, rarefaction |
| 07     | Shillong                                                                                           | Z     | iP                                 | 22 | 02 | 50 |          | Slight, distant, compression |
| 07     | New Delhi                                                                                          | Z     | iP                                 | 22 | 53 | 11 |          | Slight, rarefaction          |
| 08     | Epc: 14.4°N, 145.1°E, Mariana Islands. Felt: Guam<br>- H = 07h 49m 27s, h about 70 km (USCGS)      |       |                                    |    |    |    |          |                              |
|        | Shillong                                                                                           | Z     | iP                                 | 07 | 58 | 24 |          | Slight, distant, rarefaction |
|        | Dehra Dun                                                                                          | Z     | eP                                 | 07 | 59 | 40 |          | Slight                       |
|        | New Delhi                                                                                          | Z     | eP                                 | 07 | 59 | 43 |          | Slight, rarefaction          |
| 08     | Bokaro                                                                                             | NE    | iP                                 | 09 | 09 | 32 |          | Tremor                       |
| 08     | Shillong                                                                                           | Z     | iP                                 | 09 | 16 | 44 |          | Slight, distant, compression |
| 08     | Dehra Dun                                                                                          | Z     | eP                                 | 09 | 34 | 21 |          | Tremor                       |
| 08     | Dehra Dun                                                                                          | Z     | eP                                 | 14 | 46 | 30 |          | Slight                       |
|        | New Delhi                                                                                          | Z     | eP                                 | 14 | 47 | 11 |          | Slight, compression          |
| 08     | Epc: 43.8°N, 144.4°E. Off East Coast of Honshu, Japan<br>- H = 16h 25m 12s. h about 103 km (USCGS) |       |                                    |    |    |    |          |                              |
|        | Shillong                                                                                           | Z     | iP                                 | 16 | 33 | 28 |          | Slight, distant, compression |
|        | Chatra                                                                                             | Z     | iP                                 | 16 | 33 | 50 |          | Feeble, compression          |
|        | Dehra Dun                                                                                          | Z     | eP                                 | 16 | 34 | 23 |          | Slight                       |
|        | New Delhi                                                                                          | Z     | iP                                 | 16 | 34 | 34 |          | Slight, rarefaction          |
| 08     | New Delhi                                                                                          | Z     | iP                                 | 17 | 25 | 07 |          | Tremor, compression          |
| 08     | Shillong                                                                                           | Z     | iP                                 | 17 | 40 | 29 |          | Slight, distant, compression |
| 08     | Calcutta                                                                                           | E     | e                                  | 18 | 47 | 00 |          | Slight                       |

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| Date | Station                                                                        | Compt              | Phase                     | G<br>h | M<br>m | T<br>s                                 | Δ<br>km | Remarks                      |
|------|--------------------------------------------------------------------------------|--------------------|---------------------------|--------|--------|----------------------------------------|---------|------------------------------|
| 08   | Epc: 33.6°N, 72.8°E. West Pakistan<br>- H = 19h 38m 30s. h about 49 km (USCGS) |                    |                           |        |        |                                        |         |                              |
|      | Dehra Dun                                                                      | Z                  | e<br>i<br>i               | 19     | 39     | 52<br>40 11<br>41 40                   |         | Feeble                       |
|      | New Delhi                                                                      | ZE<br>E<br>ZE<br>E | iP<br>Lq<br>iS<br>SS<br>i | 19     | 40     | 00<br>41 44<br>41 51<br>41 59<br>42 33 | 1080    | Slight, rarefaction          |
|      | Chatra                                                                         | Z                  | eP<br>eS                  | 19     | 41     | 47<br>44 21                            | 1520    | Feeble                       |
|      | Shillong                                                                       | Z                  | iP                        | 19     | 42     | 40                                     |         | Slight, compression          |
|      | Bombay                                                                         | E<br><br>NE        | e<br>e<br>e               | 19     | 43     | 32<br>46 15<br>47 30                   |         | Feeble                       |
|      | Bokaro                                                                         | E                  | eP                        | 19     | 44     | 26                                     |         |                              |
|      | Visakhapatnam                                                                  | E                  | eP<br>iS                  | 19     | 47     | 00<br>48 25                            | 820     | Slight                       |
|      | Madras                                                                         | E                  | e<br>e<br>e               | 19     | 49     | 39<br>49 49<br>50 58                   |         | Slight                       |
| 08   | Shillong                                                                       | Z                  | iP                        | 22     | 28     | 15                                     |         | Slight, distant, compression |
| 08   | Shillong                                                                       | Z                  | iP                        | 23     | 16     | 15                                     |         | Distant, compression         |
| 08   | New Delhi                                                                      | Z                  | iP                        | 23     | 17     | 42                                     |         | Tremor, rarefaction          |
| 09   | New Delhi                                                                      | Z                  | iP                        | 00     | 02     | 06                                     |         | Slight, rarefaction          |
|      | Dehra Dun                                                                      | Z                  | e                         | 00     | 02     | 06                                     |         | Tremor                       |
|      | Chatra                                                                         | Z                  | iP                        | 00     | 03     | 13                                     |         | Feeble, distant              |
|      | Shillong                                                                       | Z                  | iP                        | 00     | 03     | 42                                     |         | Slight, distant, compression |
| 09   | Tocklai                                                                        | E                  | ePg<br>Sg                 | 00     | 28     | 52<br>29 03                            | 90      | Slight, local                |
|      | Chatra                                                                         | Z                  | iP<br>S                   | 00     | 29     | 08<br>30 59                            | 580     | Feeble, rarefaction          |
| 09   | Port Blair                                                                     | NE                 | eP<br>eS                  | 02     | 34     | 58<br>35 13                            | 150     | Slight                       |
| 09   | Dehra Dun                                                                      | Z                  | eP                        | 04     | 23     | 53                                     |         | Tremor                       |
|      | New Delhi                                                                      | Z                  | eP                        | 04     | 27     | 52                                     |         | Slight                       |
|      | Shillong                                                                       | Z                  | eP                        | 04     | 30     | 22                                     |         | Tremor                       |
| 09   | Calcutta                                                                       | E                  | e<br>i                    | 06     | 17     | 33<br>21 56                            |         | Slight                       |
| 09   | Bokaro                                                                         | NE                 | iP                        | 07     | 16     | 06                                     |         | Slight                       |

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| Date | Station                                                                          | Compt | Phase    | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                 |
|------|----------------------------------------------------------------------------------|-------|----------|--------|--------|--------|----------------|---------------------------------------------------------|
| 09   | Epc: 43.1°N, 152.9°E. Kurile Islands<br>- H = 11h 19m 01s. h about 56 km (USCGS) |       |          |        |        |        |                |                                                         |
|      | Shillong                                                                         | Z     | iP       | 11     | 28     | 11     |                | Slight, distant, compression                            |
|      | Dehra Dun                                                                        | Z     | eP       | 11     | 28     | 59     |                | Slight                                                  |
|      | New Delhi                                                                        | Z     | iP       | 11     | 29     | 10     |                | Slight, compression                                     |
| 09   | Poona                                                                            | Z     | iP       | 11     | 30     | 08     |                | Tremor                                                  |
| 09   | Shillong                                                                         | Z     | iP       | 11     | 31     | 56     |                | Slight, distant, compression                            |
| 09   | New Delhi                                                                        | Z     | eP       | 11     | 33     | 52     |                | Tremor                                                  |
| 09   | Epc: 36.6°N, 88.3°E. Hindukush. - H = 12h 12m 33s.<br>h about 96 km (USCHS)      |       |          |        |        |        |                |                                                         |
|      | Dehra Dun                                                                        | Z     | eP       | 12     | 14     | 55     | 1900           | Slight                                                  |
|      |                                                                                  |       | iS       |        |        | 18 05  |                |                                                         |
|      |                                                                                  |       | SS       |        |        | 18 27  |                |                                                         |
|      |                                                                                  |       | SSS      |        |        | 18 45  |                |                                                         |
|      |                                                                                  |       | Lr       |        |        | 18 54  |                |                                                         |
|      |                                                                                  |       | M        |        |        | 20 30  |                |                                                         |
|      | New Delhi                                                                        | ZNE   | iP       | 12     | 15     | 02     | 1170           | Slight, compression, first ground motion East           |
|      |                                                                                  | ZE    | iS       |        |        | 17 02  |                |                                                         |
|      |                                                                                  | ZN    | i        |        |        | 17 51  |                |                                                         |
|      |                                                                                  | ZNE   | i        |        |        | 17 55  |                |                                                         |
|      |                                                                                  |       | M        |        |        | 18 22  |                |                                                         |
|      | Bombay                                                                           | N     | e        | 12     | 13     | 38     |                | Slight                                                  |
|      |                                                                                  | NE    | e        |        |        | 20 23  |                |                                                         |
|      |                                                                                  |       | e        |        |        | 22 16  |                |                                                         |
|      |                                                                                  |       | e        |        |        | 22 53  |                |                                                         |
|      | Chatra                                                                           | Z     | iP       | 12     | 16     | 44     | 2180           | Slight, compression                                     |
|      |                                                                                  |       | PP       |        |        | 17 01  |                |                                                         |
|      |                                                                                  |       | PPP      |        |        | 17 12  |                |                                                         |
|      |                                                                                  |       | S        |        |        | 20 20  |                |                                                         |
|      |                                                                                  |       | Lq       |        |        | 20 25  |                |                                                         |
|      |                                                                                  |       | SSS(PcF) |        |        | 20 59  |                |                                                         |
|      |                                                                                  |       | M        |        |        | 22 57  |                |                                                         |
|      | Poona                                                                            | Z     | eP       | 12     | 13     | 49     |                | Slight                                                  |
|      | Bokaro                                                                           | NE    | eP       | 12     | 17     | 01     |                | Slight, distant                                         |
|      |                                                                                  |       | e        |        |        | 20 31  |                |                                                         |
|      |                                                                                  |       | i        |        |        | 23 26  |                |                                                         |
|      | Shillong                                                                         | ZNE   | iP       | 12     | 17     | 29     | 2710           | Slight, compression, initial ground motion towards West |
|      |                                                                                  |       | iS       |        |        | 21 51  |                |                                                         |
|      |                                                                                  |       | M        |        |        | 25 52  |                |                                                         |
|      | Visakhapatnam                                                                    | E     | iP       | 12     | 17     | 37     | 5750           | Moderate, first ground movement towards West            |
|      |                                                                                  | NE    | eS       |        |        | 24 59  |                |                                                         |
|      | Madras                                                                           | E     | eP       | 12     | 13     | 29     |                | Slight                                                  |
|      |                                                                                  |       | e        |        |        | 22 51  |                |                                                         |
|      |                                                                                  |       | e        |        |        | 23 34  |                |                                                         |
|      |                                                                                  |       | e        |        |        | 26 17  |                |                                                         |
|      |                                                                                  |       | M        |        |        | 28 50  |                |                                                         |

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| Date        | Station                                                                                                                   | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                           |                     |
|-------------|---------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|---------------------------------------------------|---------------------|
| 09<br>Contd | Hyderabad                                                                                                                 | NE    | eP    | 12     | 21     | 20     | 1630           | Slight                                            |                     |
|             |                                                                                                                           |       | iS    |        |        | 24     | 05             |                                                   |                     |
|             |                                                                                                                           |       | Lr    |        |        | 24     | 41             |                                                   |                     |
|             |                                                                                                                           | E     | M     |        |        |        | 25             | 35                                                | Per=8 secs, $\mu=3$ |
|             |                                                                                                                           | N     | M     |        |        |        | 25             | 56                                                | Per=6 secs, $\mu=2$ |
| 09          | New Delhi                                                                                                                 | Z     | eP    | 12     | 27     | 06     |                | Slight, compression                               |                     |
| 09          | Madras                                                                                                                    | E     | e     | 12     | 48     | 17     |                | Tremor, feeble                                    |                     |
| 09          | Epc: 30.2°N, 130.3°E. Ryūkyū Islands<br>- H = 18h 20m 06s. h about 26 km (USCGS)                                          |       |       |        |        |        |                |                                                   |                     |
|             | Shillong                                                                                                                  | Z     | iP    | 18     | 26     | 49     |                | Slight, distant, compression                      |                     |
| 09          | New Delhi                                                                                                                 | Z     | iP    | 18     | 28     | 29     |                | Slight, rarefaction                               |                     |
| 09          | New Delhi                                                                                                                 | Z     | eP    | 19     | 51     | 46     |                | Tremor, rarefaction                               |                     |
| 09          | Shillong                                                                                                                  | Z     | iP    | 21     | 58     | 49     |                | Slight, near, compression                         |                     |
| 09          | Poona                                                                                                                     | Z     | eP    | 22     | 17     | 05     |                | Feeble                                            |                     |
| 09          | New Delhi                                                                                                                 | Z     | iP    | 23     | 15     | 54     |                | Slight, rarefaction                               |                     |
| 09          | Port Blair                                                                                                                | NE    | iPg   | 23     | 47     | 30     | 110            | Slight                                            |                     |
|             |                                                                                                                           |       | iSg   |        |        | 47     | 42             |                                                   |                     |
| 10          | Epc: 62°N, 150.1°W. Alaska. Mag= 6 (Brk), 5½ (Pal)<br>- H = 00h 03m 40s. h about 72 km (USCGS)                            |       |       |        |        |        |                |                                                   |                     |
|             | Shillong                                                                                                                  | Z     | iP    | 00     | 15     | 41     |                | Distant, compression                              |                     |
|             | Dehra Dun                                                                                                                 | Z     | eP    | 00     | 15     | 44     |                |                                                   |                     |
|             | Chatra                                                                                                                    | ZNE   | iP    | 00     | 15     | 46     |                | Distant, compression                              |                     |
|             |                                                                                                                           |       | i     |        |        | 25     | 54             |                                                   |                     |
|             | Port Blair                                                                                                                | N     | i     | 00     | 16     | 45     |                |                                                   |                     |
|             | Poona                                                                                                                     | Z     | iP    | 00     | 16     | 45     |                |                                                   |                     |
| 10          | Port Blair                                                                                                                | N     | iP    | 00     | 27     | 07     |                | Slight, distant                                   |                     |
|             |                                                                                                                           |       | e     |        |        | 40     | 19             |                                                   |                     |
| 10          | Shillong                                                                                                                  | Z     | iP    | 00     | 40     | 57     |                | Slight, distant, compression                      |                     |
| 10          | Bombay                                                                                                                    | NE    | e     | 00     | 55     | 46     |                | Slight                                            |                     |
|             |                                                                                                                           |       | e     |        |        | 01     | 33             |                                                   | 00                  |
| 10          | Epc: 52.4°N, 170.9°W. Fox Islands, Alutian Islands.<br>Mag: 6 (Brk), 5½ (Pal)<br>- H = 05h 12m 15s. h about 43 km (USCGS) |       |       |        |        |        |                |                                                   |                     |
|             | Shillong                                                                                                                  | ZE    | iP    | 05     | 23     | 52     | 8180           | Compression, initial ground movement towards West |                     |
|             |                                                                                                                           |       | iS    |        |        | 33     | 22             |                                                   |                     |
|             |                                                                                                                           |       | i     |        |        | 34     | 37             |                                                   |                     |
|             |                                                                                                                           |       | M     |        |        | 52     | 12             |                                                   |                     |
|             | Chatra                                                                                                                    | Z     | iP    | 05     | 24     | 03     | 8380           | Rarefaction                                       |                     |
| eS          |                                                                                                                           |       |       |        | 33     | 43     |                |                                                   |                     |
|             | Dehra Dun                                                                                                                 | Z     | e     | 05     | 24     | 14     |                |                                                   |                     |

| Date   | Station                                           | Compt | Phase | G M T |    |    | $\Delta$<br>km | Remarks                                       |
|--------|---------------------------------------------------|-------|-------|-------|----|----|----------------|-----------------------------------------------|
|        |                                                   |       |       | h     | m  | s  |                |                                               |
| 10     | Bokaro                                            | E     | eP    | 05    | 24 | 22 |                |                                               |
| Contd. |                                                   |       | e     |       | 34 | 23 |                |                                               |
|        | New Delhi                                         | Z     | iP    | 05    | 24 | 22 | 9060           | Compression, initial ground motion South-West |
|        |                                                   |       | iS    |       | 24 | 39 |                |                                               |
|        |                                                   |       | PP    |       | 27 | 26 |                |                                               |
|        |                                                   |       | i     |       | 30 | 57 |                |                                               |
|        |                                                   | NE    | iS    |       | 34 | 35 |                |                                               |
|        |                                                   |       | i     |       | 35 | 08 |                |                                               |
|        |                                                   |       | PS    |       | 35 | 16 |                |                                               |
|        |                                                   | ZNE   | SS    |       | 40 | 04 |                |                                               |
|        | Port Blair                                        | N     | iP    | 05    | 24 | 48 | 9220           |                                               |
|        |                                                   |       | eS    |       | 35 | 07 |                |                                               |
|        | Visakhapatnam                                     | E     | iP    | 05    | 24 | 58 | 9240           | Initial ground motion towards East            |
|        |                                                   |       | iS    |       | 35 | 18 |                |                                               |
|        | Poona                                             | Z     | iP    | 05    | 25 | 13 |                |                                               |
|        | Bombay                                            | NE    | eP    | 05    | 25 | 16 | 9940           |                                               |
|        |                                                   |       | ePP   |       | 28 | 55 |                |                                               |
|        |                                                   |       | SKKS1 |       | 35 | 41 |                |                                               |
|        |                                                   |       | eS    |       | 36 | 05 |                |                                               |
|        |                                                   | N     | PS    |       | 37 | 31 |                |                                               |
|        |                                                   |       | SS    |       | 42 | 32 |                |                                               |
|        |                                                   | N     | M     | 06    | 07 | 08 |                | Per=20 secs, $\mu=5$                          |
|        |                                                   | E     | M     |       | 08 | 09 |                | Per=23 secs, $\mu=3$                          |
|        | Madras                                            | E     | eP    | 05    | 25 | 18 |                |                                               |
|        |                                                   |       | e     |       | 28 | 41 |                |                                               |
|        |                                                   |       | e     |       | 35 | 46 |                |                                               |
|        |                                                   |       | e     | 06    | 01 | 30 |                |                                               |
| 10     | Hyderabad                                         | Z     | e     | 06    | 22 | 15 |                | Per=18 secs, $\mu=6$                          |
| 10     | Chatra                                            | Z     | iPg   | 09    | 10 | 43 | 130            | Compression, feeble, local                    |
|        |                                                   |       | Sg    |       | 10 | 53 |                |                                               |
| 10     | Epic: 53°N, 159.8°E. Near East Coast of Kamchatka |       |       |       |    |    |                |                                               |
|        | H = 09h 44m 25s. h about 154 km (USCGS)           |       |       |       |    |    |                |                                               |
|        | Shillong                                          | Z     | iP    | 08    | 53 | 55 |                | Slight, compression                           |
|        | Chatra                                            | Z     | iP    | 08    | 54 | 11 |                | Slight, distant, rarefaction                  |
| 10     | Shillong                                          | Z     | eP    | 13    | 38 | 00 |                | Slight, near                                  |
| 10     | Shillong                                          | Z     | iP    | 15    | 17 | 17 |                | Slight, distant, compression                  |
| 10     | Shillong                                          | Z     | iP    | 16    | 07 | 20 |                | Slight, near                                  |
| 10     | Shillong                                          | Z     | iP    | 17    | 48 | 35 |                | Slight, distant, compression                  |
|        | New Delhi                                         | Z     | iP    | 17    | 50 | 05 |                | Slight, compression                           |
|        |                                                   |       | i     |       | 50 | 09 |                |                                               |
| 10     | Shillong                                          | Z     | iP    | 18    | 48 | 12 |                | Slight, near, rarefaction                     |
| 10     | Port Blair                                        | NE    | ePg   | 18    | 57 | 46 | 80             | Slight                                        |
|        |                                                   |       | iSg   |       | 57 | 55 |                |                                               |

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| Date | Station                                                                                                                                                                                                                                                                     | Compt | Phase | G<br>h | M<br>m | T<br>s | Δ<br>km | Remarks                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|---------|--------------------------------------------------|
| 10   | Port Blair                                                                                                                                                                                                                                                                  | NE    | i     | 20     | 48     | 06     |         | Slight, local                                    |
| 10   | Shillong                                                                                                                                                                                                                                                                    | Z     | eP    | 22     | 54     | 29     |         | Slight, distant                                  |
| 11   | Shillong                                                                                                                                                                                                                                                                    | Z     | eP    | 03     | 47     | 33     | 810     | Slight                                           |
|      |                                                                                                                                                                                                                                                                             |       | CS    |        | 48     | 57     |         |                                                  |
| 11   | Epc: 6.4°S, 143.6°E. New Guinea. - H = 04h 52m 43s<br>h about 37 km (USCGS)                                                                                                                                                                                                 |       |       |        |        |        |         |                                                  |
|      | Shillong                                                                                                                                                                                                                                                                    | Z     | iP    | 05     | 02     | 45     |         | Slight, distant, rarefaction                     |
| 11   | Shillong                                                                                                                                                                                                                                                                    | Z     | ePg   | 05     | 35     | 00     |         | Slight, near                                     |
| 11   | Shillong                                                                                                                                                                                                                                                                    | Z     | eP    | 05     | 40     | 00     |         | Slight, distant                                  |
| 11   | Epc: 6.6°S, 147.7°E. Near North Coast of New Guinea<br>- H = 07h 05m 52s. h about 42 km (USCGS)                                                                                                                                                                             |       |       |        |        |        |         |                                                  |
|      | Shillong                                                                                                                                                                                                                                                                    | Z     | iP    | 07     | 16     | 19     |         | Slight, distant, rarefaction                     |
|      | New Delhi                                                                                                                                                                                                                                                                   | Z     | eP    | 07     | 17     | 41     |         | Slight, compression                              |
| 11   | New Delhi                                                                                                                                                                                                                                                                   | Z     | eP    | 08     | 43     | 07     |         | Slight, rarefaction                              |
| 11   | Shillong                                                                                                                                                                                                                                                                    | Z     | iPg   | 10     | 13     | 59     | 160     | Feeble                                           |
|      |                                                                                                                                                                                                                                                                             |       | Sg    |        | 14     | 17     |         |                                                  |
| 11   | Bokaro                                                                                                                                                                                                                                                                      | NE    | iP    | 11     | 04     | 32     |         | Tremor                                           |
| 11   | Epc: 14.3°S, 170.4°E. New Hebrides Islands Region<br>- H = 12h 06m 42s. h about 623 km (USCGS)                                                                                                                                                                              |       |       |        |        |        |         |                                                  |
|      | Shillong                                                                                                                                                                                                                                                                    | Z     | iP    | 12     | 18     | 19     |         | Slight, distant, rarefaction                     |
| 11   | Shillong                                                                                                                                                                                                                                                                    | Z     | iP    | 12     | 22     | 23     |         | Slight, distant, compression                     |
| 11   | Epc: 17°N, 99.7°W. Near Coast of Mexico. Mag= 7 (Pas), 7-7½ (Brk).<br>- H = 14h 11m 52s. h about 25 km (USCGS)<br>Four dead, many injured and extensive property damage in South-Central Mexico. Seismic sea wave, with maximum amplitude 2½ feet was reported at Acapulco. |       |       |        |        |        |         |                                                  |
|      | New Delhi                                                                                                                                                                                                                                                                   | ZNE   | ePKP  | 14     | 30     | 51     | 15360   | Rarefaction, initial ground motion towards North |
|      |                                                                                                                                                                                                                                                                             | Z     | i     |        | 31     | 10     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZNE   | i     |        | 31     | 25     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZE    | i     |        | 33     | 11     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZNE   | iPP   |        | 33     | 44     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | i     |        | 34     | 42     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZE    | i     |        | 36     | 24     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZNE   | PPP   |        | 36     | 37     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZE    | i     |        | 37     | 33     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZN    | SKS   |        | 38     | 13     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZNE   | i     |        | 38     | 57     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | i     |        | 43     | 15     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | PS    |        | 43     | 47     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | Z     | PPS   |        | 45     | 27     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | ZNE   | SS    |        | 49     | 37     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             | E     | M     |        | -      | -      |         | Per=22 secs, Amp=121 mm                          |
|      | Shillong                                                                                                                                                                                                                                                                    | E     | iPKP  | 14     | 31     | 05     | 15170   | Distant, rarefaction                             |
|      |                                                                                                                                                                                                                                                                             |       | PKS   |        | 34     | 43     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | iSS   |        | 51     | 51     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | Lq    | 15     | 08     | 43     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | Lr    |        | 09     | 13     |         |                                                  |
|      |                                                                                                                                                                                                                                                                             |       | M     |        | 20     | 30     |         |                                                  |

| Date          | Station                 | Compt      | Phase | G<br>h | M<br>m                | T<br>s | $\Delta$<br>km          | Remarks |
|---------------|-------------------------|------------|-------|--------|-----------------------|--------|-------------------------|---------|
| 11<br>Contd   | Dehra Dun               | Z          | e     | 14     | 31                    | 09     |                         |         |
|               |                         |            | i     |        | 33                    | 33     |                         |         |
|               |                         |            | i     |        | 34                    | 34     |                         |         |
|               |                         |            | i     |        | 43                    | 41     |                         |         |
|               |                         |            | i     |        | 45                    | 34     |                         |         |
|               |                         |            | i     |        | 46                    | 47     |                         |         |
|               |                         |            | i     |        | 53                    | 25     |                         |         |
|               |                         |            | i     |        | 15                    | 05     | 40                      |         |
| Chatra        | ZNE<br>NE               | ePKP1      | 14    | 31     | 12                    | 14950  | Very distant            |         |
|               |                         | PP         |       | 23     | 49                    |        |                         |         |
|               |                         | PKS        |       | 34     | 50                    |        |                         |         |
|               |                         | PPP        |       | 36     | 55                    |        |                         |         |
|               |                         | SKS2       |       | 38     | 23                    |        |                         |         |
|               |                         | PS         |       | 44     | 12                    |        |                         |         |
|               |                         | PPS        |       | 45     | 57                    |        |                         |         |
|               |                         | SS         |       | 51     | 28                    |        |                         |         |
|               |                         | SSP        |       | 51     | 53                    |        |                         |         |
|               |                         | N          | M     | 15     | 45/46                 |        | Per=18.7 secs, $\mu=31$ |         |
|               |                         | E          | M     |        | 29/30                 |        | Per=18.7 secs, $\mu=29$ |         |
|               |                         | Kodaikanal | E     | ePKP   | 14                    | 31     | 13                      |         |
| i             |                         |            |       | 54     | 04                    |        |                         |         |
| M             |                         |            |       | -      | -                     |        | Per=21 secs, $\mu=53$   |         |
|               |                         |            |       |        |                       |        |                         |         |
| Bombay        | NE<br>N<br>E<br>N       | ePKP       | 14    | 31     | 24                    | 16070  |                         |         |
|               |                         | PP         |       | 34     | 37                    |        |                         |         |
|               |                         | PPP        |       | 37     | 51                    |        |                         |         |
|               |                         | e          |       | 45     | 03                    |        |                         |         |
|               |                         | PPS        |       | 48     | 37                    |        |                         |         |
|               |                         | eSS        |       | 53     | 30                    |        |                         |         |
|               |                         | SSS        |       | 59     | 14                    |        |                         |         |
|               |                         | e          |       | 15     | 04                    | 13     |                         |         |
|               |                         | e          |       |        | 34                    | 54     |                         |         |
|               |                         | M          |       | 34     | 54                    |        | Per=24 secs, $\mu=16$   |         |
| M             |                         | 47         | 06    |        | Per=17 secs, $\mu=28$ |        |                         |         |
| Calcutta      | E                       | iPKP       | 14    | 31     | 26                    |        |                         |         |
|               |                         | e          |       | 32     | 26                    |        |                         |         |
|               |                         | i          |       | 34     | 49                    |        |                         |         |
|               |                         | i          |       | 39     | 09                    |        |                         |         |
|               |                         | i          |       | 48     | 11                    |        |                         |         |
|               |                         | i          |       | 52     | 40                    |        |                         |         |
|               |                         | e          |       | 57     | 33                    |        |                         |         |
|               |                         | e          |       | 15     | 16                    | 19     |                         |         |
| Bokaro        | NE                      | ePKP       | 14    | 31     | 27                    |        |                         |         |
|               |                         | e          |       | 33     | 53                    |        |                         |         |
|               |                         | i          |       | 34     | 49                    |        |                         |         |
|               |                         | i          |       | 37     | 19                    |        |                         |         |
| Visakhapatnam | NE<br>E                 | ePKP       | 14    | 31     | 33                    | 14800  | Distant                 |         |
|               |                         | ePP        |       | 34     | 03                    |        |                         |         |
| Hyderabad     | NE<br>N<br>NE<br>N<br>E | iPKP1      | 14    | 31     | 35                    | 15420  |                         |         |
|               |                         | PP         |       | 34     | 46                    |        |                         |         |
|               |                         | PKSP1      |       | 35     | 33                    |        |                         |         |
|               |                         | PPP        |       | 38     | 04                    |        |                         |         |
|               |                         | PS         |       | 45     | 04                    |        |                         |         |
|               |                         | PPS        |       | 47     | 28                    |        |                         |         |
|               |                         | SS         |       | 53     | 28                    |        |                         |         |
|               |                         | M          |       | 15     | 34                    | 39     | Per=24 secs, $\mu=26$   |         |
|               |                         | M          |       |        | 34                    | 55     | Per=22 secs, $\mu=55$   |         |
|               |                         |            |       |        |                       |        |                         |         |



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| Date | Station                                                                    | Compt | Phase                                                                             | G<br>h | M<br>m | T<br>s                                                                                                         | $\Delta$<br>km | Remarks                      |
|------|----------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------------------------|----------------|------------------------------|
| 11   | Port Blair                                                                 | N     | ePKP<br>i                                                                         | 14     | 31     | 39<br>45                                                                                                       |                | Distant                      |
|      | Contd.                                                                     |       |                                                                                   |        |        |                                                                                                                |                |                              |
|      | Madras                                                                     | E     | ePKP<br>PKP2<br>PKS<br>PP<br>SKS<br>PPP<br>e<br>SKSP<br>PPS<br>e<br>SS<br>Lr<br>M | 14     | 31     | 55<br>32 28<br>35 32<br>36 06<br>38 52<br>39 41<br>42 39<br>46 36<br>49 21<br>54 44<br>55 59<br>27 02<br>37 48 | 17450          |                              |
| 11   | Shillong                                                                   | Z     | iP                                                                                | 17     | 49     | 25                                                                                                             |                | Slight, local, compression   |
| 11   | Shillong                                                                   | Z     | iP                                                                                | 17     | 57     | 46                                                                                                             |                | Slight, distant, compression |
| 11   | Shillong                                                                   | Z     | eP                                                                                | 19     | 50     | 22                                                                                                             |                | Slight, distant              |
|      | New Delhi                                                                  | Z     | eP                                                                                | 19     | 52     | 06                                                                                                             |                | Slight, rarefaction          |
| 11   | Shillong                                                                   | Z     | Pg<br>Sg                                                                          | 21     | 48     | 05<br>48 13                                                                                                    | 70             | Feeble, rarefaction          |
| 12   | New Delhi                                                                  | Z     | eP                                                                                | 00     | 52     | 33                                                                                                             |                | Slight, rarefaction          |
| 12   | Shillong                                                                   | Z     | eP                                                                                | 04     | 22     | 02                                                                                                             |                | Slight, distant              |
| 12   | Port Blair                                                                 | N     | e                                                                                 | 09     | 52     | 43                                                                                                             |                | Slight, near                 |
| 12   | New Delhi                                                                  | Z     | eP                                                                                | 10     | 24     | 23                                                                                                             |                | Tremor                       |
| 12   | Shillong                                                                   | Z     | P                                                                                 | 14     | 10     | 51                                                                                                             |                | Feeble, near                 |
| 12   | New Delhi                                                                  | Z     | iP<br>i?                                                                          | 14     | 16     | 39<br>16 59                                                                                                    |                | Slight, compression          |
| 12   | Shillong                                                                   | Z     | ePg<br>Sg                                                                         | 14     | 24     | 03<br>24 13                                                                                                    | 90             | Feeble                       |
| 12   | Epic: 36.5°N, 70.6°E. Hindukush. - H = 17h 36m 50s. h about 193 km (USCGS) |       |                                                                                   |        |        |                                                                                                                |                |                              |
|      | Dehra Dun                                                                  | Z     | e                                                                                 | 17     | 38     | 52                                                                                                             |                | Tremor                       |
|      | New Delhi                                                                  | Z     | iP<br>iS                                                                          | 17     | 39     | 03<br>40 41                                                                                                    | 960            | Slight, compression          |
|      | Shillong                                                                   | Z     | iP                                                                                | 17     | 41     | 22                                                                                                             |                | Slight, distant, rarefaction |
| 12   | New Delhi                                                                  | Z     | eP                                                                                | 17     | 59     | 31                                                                                                             |                | Tremor, compression          |
| 12   | Shillong                                                                   | Z     | iP<br>S                                                                           | 18     | 53     | 51<br>54 16                                                                                                    | 190            | Slight                       |
| 12   | Shillong                                                                   | Z     | ePg<br>Sg                                                                         | 20     | 14     | 00<br>14 23                                                                                                    | 200            | Slight                       |
| 12   | Shillong                                                                   | Z     | iP                                                                                | 21     | 38     | 34                                                                                                             |                | Slight, distant, rarefaction |
| 13   | Shillong                                                                   | Z     | iP                                                                                | 00     | 47     | 50                                                                                                             |                | Slight, distant, rarefaction |

| Date | Station                                                                                        | Compt  | Phase     | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                                                 |
|------|------------------------------------------------------------------------------------------------|--------|-----------|--------|--------|-------------|----------------|---------------------------------------------------------|
| 13   | Shillong                                                                                       | Z      | iP        | 02     | 43     | 59          |                | Slight, distant, rarefaction                            |
|      | New Delhi                                                                                      | Z      | iP        | 02     | 49     | 24          |                | Slight, rarefaction                                     |
| 13   | Shillong                                                                                       | Z      | eP        | 03     | 57     | 59          |                | Slight, distant                                         |
| 13   | Shillong                                                                                       | ZE     | iP<br>iS  | 05     | 54     | 03<br>55 15 | 670            | Slight, compression; initial ground motion towards West |
| 13   | New Delhi                                                                                      | Z      | iP        | 06     | 36     | 49          |                | Slight, compression                                     |
| 13   | New Delhi                                                                                      | Z      | iP        | 09     | 31     | 35          |                | Slight, rarefaction                                     |
|      | Shillong                                                                                       | Z      | iP        | 09     | 31     | 53          |                | Slight, distant, compression                            |
| 13   | New Delhi                                                                                      | Z      | iP        | 09     | 34     | 50          |                | Slight, rarefaction                                     |
| 13   | Shillong                                                                                       | Z      | iP        | 10     | 54     | 47          |                | Slight, distant, rarefaction                            |
| 13   | Epc: 39°N, 140.8°E. Northern Honshu, Japan, Felt.<br>- H = 18h 48m 55s. h about 31 km (USCGS)  |        |           |        |        |             |                |                                                         |
| 13   | Shillong                                                                                       | Z      | iP        | 18     | 56     | 53          |                | Slight, distant, rarefaction                            |
| 13   | Shillong                                                                                       | Z      | iP        | 19     | 05     | 00          |                | Slight, compression                                     |
| 13   | Shillong                                                                                       | Z      | iP        | 19     | 19     | 09          |                | Slight, distant, compression                            |
| 13   | Chatra                                                                                         | Z      | iPg<br>Sg | 20     | 20     | 38<br>20 49 | 100            | Feeble, local, compression                              |
| 13   | Shillong                                                                                       | Z      | iP        | 20     | 43     | 23          |                | Slight, distant, rarefaction                            |
| 13   | New Delhi                                                                                      | Z      | iP        | 21     | 05     | 25          |                | Slight, compression                                     |
|      | Dehra Dun                                                                                      | Z<br>N | e<br>e    | 21     | 05     | 38<br>09 41 |                | Feeble                                                  |
| 13   | Shillong                                                                                       | Z      | iP        | 21     | 08     | 16          |                | Slight, distant, compression                            |
| 13   | New Delhi                                                                                      | Z      | iP        | 21     | 46     | 34          |                | Slight, compression                                     |
| 13   | Shillong                                                                                       | Z      | eP        | 22     | 31     | 13          |                | Slight, near                                            |
| 14   | Shillong                                                                                       | ZNE    | iPg       | 00     | 05     | 41          |                | Slight, near                                            |
| 14   | Shillong                                                                                       | Z      | iP        | 00     | 26     | 34          |                | Slight, distant, rarefaction                            |
| 14   | New Delhi                                                                                      | Z      | eP        | 04     | 48     | 38          |                | Slight, rarefaction                                     |
| 14   | Bokaro                                                                                         | NE     | iP        | 03     | 23     | 16          |                | Tremor                                                  |
| 14   | Shillong                                                                                       | Z      | iP        | 10     | 41     | 29          |                | Slight, distant, compression                            |
| 14   | New Delhi                                                                                      | Z      | iP        | 10     | 42     | 55          |                | Slight, rarefaction                                     |
| 14   | Epc: 33.8°N, 141.1°E. Off Coast of Honshu, Japan.<br>- H = 11h 07m 11s. h about 157 km (USCGS) |        |           |        |        |             |                |                                                         |
|      | New Delhi                                                                                      | Z      | iP        | 11     | 16     | 21          |                | Slight, rarefaction                                     |
| 14   | Epc: 46.3°N, 149.8°E. Kurile Islands.<br>- H = 13h 57m 49s. h about 126 km (USCGS)             |        |           |        |        |             |                |                                                         |

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| Date   | Station                                                                                                                                                 | Compt                   | Phase                                                                 | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                                              |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------------------------------------------|--------|--------|-------------|----------------|------------------------------------------------------|
| 14     | Shillong                                                                                                                                                | Z                       | iP                                                                    | 14     | 06     | 33          |                | Slight, distant, rarefaction                         |
| Contd. | Chatra                                                                                                                                                  | Z                       | iP                                                                    | 14     | 06     | 51          |                | Feeble, distant, compression                         |
|        | Dehra Dun                                                                                                                                               | Z                       | eP                                                                    | 14     | 07     | 16          |                | Tremor                                               |
|        | New Delhi                                                                                                                                               | Z                       | iP                                                                    | 14     | 07     | 31          |                | Tremor, rarefaction                                  |
| 14     | Chatra                                                                                                                                                  | Z                       | ePg<br>Sg                                                             | 14     | 32     | 17<br>32 29 |                | Feeble, local                                        |
| 14     | Epc: 36.9°N, 139.8°E. Northern Honshu, Japan, Felt.<br>- H = 15h 19m 11s. h about 80 km (USCGS)                                                         |                         |                                                                       |        |        |             |                |                                                      |
|        | Shillong                                                                                                                                                | Z                       | iP                                                                    | 15     | 26     | 54          |                | Slight, distant, compression                         |
|        | New Delhi                                                                                                                                               | Z                       | eP                                                                    | 15     | 28     | 16          |                | Slight, rarefaction                                  |
| 14     | Epc: 33.5°N, 140.6°E. South of Honshu, Japan<br>- H = 21h 06m 52s. h about 82 km (USCGS)                                                                |                         |                                                                       |        |        |             |                |                                                      |
|        | New Delhi                                                                                                                                               | Z                       | eP                                                                    | 21     | 16     | 14          |                | Slight, rarefaction                                  |
|        | Shillong                                                                                                                                                | Z                       | eP                                                                    | 21     | 17     | 33          |                | Slight                                               |
| 14     | Shillong                                                                                                                                                | Z                       | eP                                                                    | 22     | 07     | 05          |                | Slight, distant                                      |
| 14     | Shillong                                                                                                                                                | Z                       | eP                                                                    | 22     | 19     | 00          |                | Slight, distant                                      |
| 14     | Chatra                                                                                                                                                  | Z                       | eP                                                                    | 23     | 19     | 26          |                | Slight, distant                                      |
| 15     | Chatra                                                                                                                                                  | Z                       | iP                                                                    | 00     | 47     | 28          |                | Slight, distant, compression                         |
| 15     | Epc: 6°S, 125°E. - = 05h 23m 45s (Shillong)<br>Epc: 7.3°S, 128.3°E. Banda Sea. - H = 05h 23m 45s. h about 34 km (USCGS)<br>Mag. = 7-7½ (Pas), 7½ (Brk). |                         |                                                                       |        |        |             |                |                                                      |
|        | Port Blair                                                                                                                                              | NE<br>N<br>E<br>NE<br>E | iP<br>PP<br>PPP<br>i<br>iS<br>i                                       | 05     | 31     | 20          | 4450           | First ground motion<br>towards North-West.           |
|        |                                                                                                                                                         |                         |                                                                       |        | 32     | 54          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 33     | 28          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 35     | 42          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 37     | 23          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 38     | 58          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 40     | 16          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 40     | 29          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 41     | 50          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 43     | 02          |                |                                                      |
|        | Shillong                                                                                                                                                | ZNE                     | iP<br>PcP<br>PP<br>PPP<br>ScP<br>iS<br>ScS<br>SS<br>Lq/SSS<br>Lr<br>M | 05     | 32     | 26          | 5340           | Compression, initial ground<br>movement towards West |
|        |                                                                                                                                                         |                         |                                                                       |        | 38     | 44          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 34     | 19          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 35     | 13          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 37     | 35          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 39     | 24          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 41     | 34          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 42     | 31          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 43     | 55          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 50     | 20          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 54     | 40          |                |                                                      |
|        | Calcutta                                                                                                                                                | E                       | iP<br>PP<br>iS                                                        | 05     | 32     | 38          | 5420           |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 34     | 37          |                |                                                      |
|        |                                                                                                                                                         |                         |                                                                       |        | 39     | 41          |                |                                                      |

| Date   | Station       | Compt | Phase   | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                       |
|--------|---------------|-------|---------|--------|--------|--------|----------------|-------------------------------|
| 15     | Calcutta      | E     | SS      | 05     | 43     | 08     |                |                               |
| Contd. | Contd.        |       | M       |        | 48     | 38     |                |                               |
|        | Visakhapatnam | N     | iP      | 05     | 32     | 44     | 5750           | First ground motion towards   |
|        |               | NE    | iPcP    |        | 33     | 49     |                | West                          |
|        |               |       | iPP     |        | 34     | 41     |                |                               |
|        |               |       | iPPP    |        | 35     | 54     |                |                               |
|        |               |       | iPcS    |        | 37     | 41     |                |                               |
|        |               |       | iS      |        | 40     | 06     |                |                               |
|        |               |       | iPS     |        | 40     | 17     |                |                               |
|        |               |       | iPPS    |        | 40     | 25     |                |                               |
|        |               |       | iSS     |        | 43     | 45     |                |                               |
|        |               |       | iLq/SSS |        | 45     | 45     |                |                               |
|        |               |       | iLr     |        | 48     | 14     |                |                               |
|        |               |       | eM      |        | 52     | 42     |                | Per=11.5 sec, $\mu=20.5$      |
|        | Bokaro        | NE    | iP      | 05     | 32     | 53     | 5860           | Initial ground motion towards |
|        |               |       | PP      |        | 34     | 59     |                | North-West                    |
|        |               |       | PPP     |        | 36     | 00     |                |                               |
|        |               |       | S       |        | 40     | 20     |                |                               |
|        |               |       | ScS     |        | 42     | 14     |                |                               |
|        |               |       | SS      |        | 43     | 59     |                |                               |
|        |               |       | SSS     |        | 45     | 57     |                |                               |
|        |               |       | Lr      |        | 48     | 31     |                |                               |
|        |               |       | M       |        | 53     | 15     |                |                               |
|        | Madras        | E     | iP      | 05     | 32     | 57     | 5690           | Initial ground motion East    |
|        |               |       | PcP     |        | 34     | 12     |                |                               |
|        |               |       | PP      |        | 34     | 53     |                |                               |
|        |               |       | PPP     |        | 35     | 47     |                |                               |
|        |               |       | PcS     |        | 38     | 15     |                |                               |
|        |               |       | iS      |        | 40     | 15     |                |                               |
|        |               |       | PS      |        | 40     | 23     |                |                               |
|        |               |       | PPS     |        | 40     | 30     |                |                               |
|        |               |       | ScS     |        | 42     | 48     |                |                               |
|        |               |       | SS      |        | 43     | 48     |                |                               |
|        |               |       | Lq      |        | 45     | 12     |                |                               |
|        |               |       | SSS     |        | 45     | 26     |                |                               |
|        |               |       | Lr      |        | 48     | 14     |                |                               |
|        |               |       | M       |        | 52     | 36     |                |                               |
|        | Chatra        | ZNE   | iP      | 05     | 32     | 57     | 5700           | Rarefaction                   |
|        |               | NE    | PcP     |        | 34     | 31     |                |                               |
|        |               |       | PP      |        | 34     | 54     |                |                               |
|        |               |       | PPP     |        | 35     | 50     |                |                               |
|        |               |       | PcS     |        | 38     | 20     |                |                               |
|        |               |       | S       |        | 40     | 16     |                |                               |
|        |               |       | ScS     |        | 43     | 03     |                |                               |
|        |               |       | SS      |        | 43     | 31     |                |                               |
|        |               |       | Lq      |        | 44     | 32     |                |                               |
|        |               |       | SSS     |        | 44     | 42     |                |                               |
|        |               |       | Lr      |        | 46     | 54     |                |                               |
|        |               |       | M       |        | 50/51  |        |                |                               |
|        | Kodaikanal    | E     | iP      | 05     | 33     | 15     | 5800           | Initial ground movement       |
|        |               |       | PP      |        | 35     | 15     |                | towards East. Actual          |
|        |               |       | PPP     |        | 36     | 21     |                | ground movement 100 $\mu$     |
|        |               |       | iS      |        | 40     | 39     |                |                               |
|        |               |       | SSS     |        | 45     | 48     |                |                               |
|        |               |       | M       |        | 58     | 24     |                | Per=14 secs                   |
|        | Hyderabad     | NE    | iP      | 05     | 33     | 21     | 6050           | Initial ground motion         |
|        |               |       | PcP     |        | 34     | 35     |                | towards West-South            |

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| Date         | Station             | Compt  | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km        | Remarks                |
|--------------|---------------------|--------|-------|--------|--------|--------|-----------------------|------------------------|
| 15<br>Contd. | Hyderabad<br>Contd. | NE     | PP    | 05     | 35     | 39     |                       |                        |
|              |                     |        | PPP   |        | 36     | 47     |                       |                        |
|              |                     |        | PcS   |        | 38     | 38     |                       |                        |
|              |                     |        | iS    |        | 40     | 59     |                       |                        |
|              |                     |        | SS    |        | 44     | 53     |                       |                        |
|              |                     |        | SSS   |        | 47     | 01     |                       |                        |
|              |                     |        | Lr    |        | 49     | 38     |                       |                        |
|              |                     | E      | M     |        | 53     | 33     |                       | Per=30 sec, $\mu=183$  |
|              |                     | N      | M     |        | 53     | 38     |                       | Per=23 sec, $\mu=75$   |
|              |                     | Sehore | NE    | eP     | 05     | 33     | 45                    | 6550                   |
| PPP          |                     |        |       | 37     | 12     |        |                       |                        |
| iS           |                     |        |       | 41     | 51     |        |                       |                        |
| PS           |                     |        |       | 42     | 02     |        |                       |                        |
| PPS          |                     |        |       | 42     | 13     |        |                       |                        |
| SKS          |                     |        |       | 43     | 40     |        |                       |                        |
| SS           |                     |        |       | 45     | 53     |        |                       |                        |
| Poona        | Z                   | iP     | 05    | 33     | 47     | 6530   |                       |                        |
|              |                     | PcP    |       | 34     | 38     |        |                       |                        |
|              |                     | PP     |       | 36     | 00     |        |                       |                        |
|              |                     | PPP    |       | 37     | 17     |        |                       |                        |
|              |                     | PS     |       | 38     | 34     |        |                       |                        |
|              |                     | E      | iS    |        | 41     | 52     |                       |                        |
|              |                     | N      | PPS   |        | 42     | 22     |                       |                        |
|              |                     |        | ScS   |        | 43     | 43     |                       |                        |
|              |                     |        | SS    |        | 45     | 36     |                       |                        |
|              |                     |        | SSS   |        | 48     | 03     |                       |                        |
|              |                     |        | Lq    |        | 48     | 17     |                       |                        |
|              |                     |        | Lr    |        | 51     | 02     |                       |                        |
|              | M                   |        | 55    | 50     |        |        |                       |                        |
| Bombay       | NE                  | eP     | 05    | 33     | 56     | 6540   |                       |                        |
|              |                     | PcP    |       | 35     | 12     |        |                       |                        |
|              |                     | PP     |       | 36     | 03     |        |                       |                        |
|              |                     | E      | i     |        | 37     | 01     |                       |                        |
|              |                     | NE     | PPP   |        | 37     | 48     |                       |                        |
|              |                     |        | i     |        | 39     | 48     |                       |                        |
|              |                     |        | eS    |        | 42     | 01     |                       |                        |
|              |                     |        | PS    |        | 42     | 16     |                       |                        |
|              |                     |        | PPS   |        | 42     | 38     |                       |                        |
|              |                     |        | i     |        | 43     | 36     |                       |                        |
|              |                     |        | SS    |        | 46     | 33     |                       |                        |
|              |                     |        | Lq    |        | 48     | 31     |                       |                        |
|              |                     |        | Lr    |        | 50     | 38     |                       |                        |
|              |                     | N      | M     |        | 58     | 21     |                       | Per=23 secs, $\mu=129$ |
|              |                     | E      | M     |        | 59     | 58     |                       | Per=23 secs, $\mu=108$ |
| New Delhi    | ZNE                 | iP     | 05    | 33     | 56     | 6560   | Initial ground motion |                        |
|              |                     | i      |       | 34     | 04     |        | towards North West,   |                        |
|              |                     | PcP    |       | 34     | 50     |        | compression           |                        |
|              |                     | PP     |       | 35     | 56     |        |                       |                        |
|              |                     | PPP    |       | 37     | 52     |        |                       |                        |
|              |                     | N      | i     |        | 40     | 20     |                       |                        |
|              |                     | NE     | iS    |        | 42     | 02     |                       |                        |
|              |                     | N      | SS    |        | 45     | 38     |                       |                        |
|              | i                   |        | 47    | 46     |        |        |                       |                        |
|              | Lq                  |        | 48    | 49     |        |        |                       |                        |
| Dehra Dun    | Z                   | eP     | 05    | 34     | 02     | 6690   |                       |                        |
|              |                     | PP     |       | 36     | 26     |        |                       |                        |
|              |                     | PPP    |       | 37     | 15     |        |                       |                        |

| Date         | Station                                      | Compt | Phase                      | G<br>h                                    | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                                                                   |
|--------------|----------------------------------------------|-------|----------------------------|-------------------------------------------|--------|-------------|----------------|---------------------------------------------------------------------------|
| 15<br>Contd. | Dehra Dun<br>Contd.                          | N     | iS<br>SS<br>SSS<br>Lr<br>M | 05                                        | 42     | 15          |                |                                                                           |
| 15           | Epic: 7.2°S, 128.3°E. Banda Sea.             |       |                            | -- H = 06h 42m 58s. h about 52 km (USCGS) |        |             |                |                                                                           |
|              | Shillong                                     | Z     | iP                         | 06                                        | 51     | 38          |                | Slight, distant, compression                                              |
|              | Chatra                                       | Z     | eP                         | 06                                        | 52     | 11          |                | Slight, distant                                                           |
|              | New Delhi                                    | Z     | eP                         | 06                                        | 53     | 10          |                | Slight, rarefaction                                                       |
|              | Dehra Dun                                    | Z     | eP                         | 06                                        | 53     | 15          |                | Slight                                                                    |
| 15           | Epic: 7.2°S, 128.2°E. Banda Sea.             |       |                            | -- H = 09h 55m 16s. h about 30 km (USCGS) |        |             |                |                                                                           |
|              | Shillong                                     | Z     | iP                         | 10                                        | 03     | 56          |                | Slight, distant, rarefaction                                              |
|              | Chatra                                       | Z     | iP                         | 10                                        | 04     | 28          |                | Feeble, distant, compression                                              |
|              | New Delhi                                    | Z     | iP                         | 10                                        | 05     | 25          |                | Slight, compression                                                       |
|              | Dehra Dun                                    | Z     | eP                         | 10                                        | 05     | 31          |                | Slight                                                                    |
| 15           | Dehra Dun                                    | Z     | e                          | 12                                        | 56     | 43          |                | Tremor                                                                    |
|              | New Delhi                                    | Z     | iP<br>i                    | 12                                        | 56     | 51<br>58 30 |                | Slight, compression                                                       |
| 15           | Epic: 7.8°S, 127.9°E. Banda Sea.             |       |                            | -- H = 12h 55m 36s. h about 35 km (USCGS) |        |             |                |                                                                           |
|              | Shillong                                     | Z     | iP                         | 13                                        | 01     | 06          |                | Slight, distant, rarefaction                                              |
|              | New Delhi                                    | Z     | iP                         | 13                                        | 02     | 08          |                | Slight, rarefaction                                                       |
| 15           | Epic: 53.2°N, 164.7°W. Unimak Islands Region |       |                            | -- H = 16h 16m 19s. h about 25 km (USCGS) |        |             |                |                                                                           |
|              | Shillong                                     | Z     | iP                         | 16                                        | 25     | 49          |                | Slight, distant, compression                                              |
|              | New Delhi                                    | Z     | eP                         | 16                                        | 27     | 27          |                | Slight, rarefaction                                                       |
| 15           | Epic: 7.4°S, 128°E. Banda Sea.               |       |                            | -- H = 16h 54m 01s. h about 34 km (USCGS) |        |             |                |                                                                           |
|              | Port Blair                                   | N     | e<br>i                     | 17                                        | 01     | 19<br>07 40 |                | Slight                                                                    |
|              | Shillong                                     | ZE    | iP                         | 17                                        | 02     | 40          |                | Slight, distant, rarefaction.<br>Initial ground movement<br>towards West. |
|              | Visakhapatnam                                | E     | iP<br>eS                   | 17                                        | 02     | 59<br>10 21 | 5750           |                                                                           |
|              | Chatra                                       | Z     | iP                         | 17                                        | 03     | 12          |                | Slight, distant, compression                                              |
|              | Poona                                        | Z     | iP                         | 17                                        | 04     | 04          |                | Slight                                                                    |
|              | New Delhi                                    | Z     | eP                         | 17                                        | 04     | 10          |                | Slight, compression                                                       |

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| Date   | Station                                                                                        | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|--------|------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------|
| 15     | Dehra Dun                                                                                      | Z     | ep    | 17     | 04     | 15     |                | Slight                       |
| Contd. |                                                                                                |       | e     |        | 12     | 41     |                |                              |
|        | Bombay                                                                                         | E     | e     | 17     | 06     | 20     |                | Slight                       |
|        |                                                                                                | NE    | e     |        | 12     | 30     |                |                              |
| 15     | New Delhi                                                                                      | Z     | ep    | 18     | 07     | 25     |                | Tremor                       |
| 15     | Epc: 53.4°N, 159.6°E. Near East Coast of Kamchatka<br>- H = 19h 32m 22s. h about 30 km (USCGS) |       |       |        |        |        |                |                              |
|        | Shillong                                                                                       | Z     | ip    | 19     | 42     | 05     |                | Slight, distant, compression |
|        | Chatra                                                                                         | Z     | ip    | 19     | 42     | 18     |                | Slight, distant, rarefaction |
|        | Dehra Dun                                                                                      | Z     | ep    | 19     | 42     | 38     |                | Slight                       |
|        | New Delhi                                                                                      | Z     | ip    | 19     | 42     | 47     |                | Slight, compression          |
| 15     | Epc: 53.5°N, 164°W. Unimak Islands Region<br>- H = 20h 33m 29s. h about 25 km (USCGS)          |       |       |        |        |        |                |                              |
|        | Shillong                                                                                       | Z     | ip    | 20     | 45     | 26     |                | Slight, distant, compression |
|        | New Delhi                                                                                      | Z     | ep    | 20     | 45     | 50     |                | Slight, compression          |
| 15     | Epc: 7.2°S, 128.1°E. Banda Sea. - H = 21h 31m 00s. h about 38 km (USCGS)                       |       |       |        |        |        |                |                              |
|        | Shillong                                                                                       | Z     | ip    | 21     | 39     | 37     |                | Slight, distant, compression |
|        | New Delhi                                                                                      | Z     | ip    | 21     | 41     | 07     |                | Slight, rarefaction          |
| 16     | Shillong                                                                                       | Z     | ip    | 00     | 15     | 23     |                | Slight, near, rarefaction    |
| 16     | Shillong                                                                                       | Z     | ep    | 05     | 29     | 07     |                | Slight, distant              |
| 16     | Shillong                                                                                       | Z     | ep    | 06     | 10     | 07     |                | Slight, distant              |
| 16     | Epc: 0.9°S, 127°E. Spice Islands. -H=08h 18m 30s. h about 34 km (USCGS)                        |       |       |        |        |        |                |                              |
|        | Shillong                                                                                       | Z     | ip    | 08     | 26     | 29     |                | Slight, distant, compression |
|        | New Delhi                                                                                      | Z     | ip    | 08     | 28     | 05     |                | Slight, rarefaction          |
| 16     | Bokaro                                                                                         | NE    | ip    | 09     | 38     | 04     |                | Tremor                       |
| 16     | Epc: 7.3°S, 128.1°E. Banda Sea. -H= 14h 35m 29s. h about 39 km (USCGS)                         |       |       |        |        |        |                |                              |
|        | Shillong                                                                                       | Z     | ip    | 14     | 44     | 09     |                | Slight, distant, rarefaction |
|        | Chatra                                                                                         | Z     | ip    | 14     | 44     | 40     |                | Slight, distant, rarefaction |
|        | New Delhi                                                                                      | Z     | ip    | 14     | 45     | 36     |                | Slight, compression          |
|        | Dehra Dun                                                                                      | Z     | ep    | 14     | 45     | 40     |                | Slight                       |
| 16     | New Delhi                                                                                      | Z     | ip    | 14     | 55     | 42     |                | Slight, rarefaction          |
| 16     | New Delhi                                                                                      | Z     | ip    | 14     | 56     | 06     |                | Slight, rarefaction          |
| 16     | Epc: 13.4°S, 167.3°E. New Hebrides Islands<br>- H = 17h 33m 05s. h about 35 km (USCGS)         |       |       |        |        |        |                |                              |

| Date         | Station                                                                                                   | Compt | Phase | G M T<br>h m s | $\Delta$<br>km | Remarks                      |
|--------------|-----------------------------------------------------------------------------------------------------------|-------|-------|----------------|----------------|------------------------------|
| 16<br>Contd. | Shillong                                                                                                  | Z     | iP    | 17 45 30       |                | Slight, distant, rarefaction |
|              | Chatra                                                                                                    | Z     | iP    | 17 45 51       |                | Slight, distant              |
| 16           | Shillong                                                                                                  | Z     | iP    | 19 07 09       |                | Slight, distant, compression |
| 16           | Shillong                                                                                                  | Z     | iP    | 19 17 04       |                | Slight, distant, compression |
| 16           | Shillong                                                                                                  | Z     | eP    | 19 45 56       |                | Slight, distant              |
| 16           | Shillong                                                                                                  | Z     | iP    | 20 43 35       | 200            | Slight                       |
|              |                                                                                                           |       | Pg    | 43 38          |                |                              |
|              |                                                                                                           |       | Sg    | 44 02          |                |                              |
| 16           | Chatra                                                                                                    | Z     | eP    | 20 58 50       | 310            | Slight, near                 |
|              |                                                                                                           |       | eS    | 59 25          |                |                              |
| 16           | Epc: 35.6°S, 137.7°E. Near Coast of Southern Australia. Felt.<br>- H = 21h 41m 35s. h about 25 km (USCGS) |       |       |                |                |                              |
|              | Shillong                                                                                                  | Z     | iP    | 21 53 19       |                | Slight, distant, rarefaction |
| 16           | Shillong                                                                                                  | Z     | iPg   | 22 08 12       |                | Slight, near                 |
|              |                                                                                                           |       | eP    | 22 08 42       |                | Slight, near                 |
|              | Chatra                                                                                                    | Z     | S     | 09 31          |                |                              |
| 16           | Shillong                                                                                                  | Z     | iPg   | 22 22 13       | 130            | Slight, rarefaction          |
|              |                                                                                                           |       | iSg   | 22 26          |                |                              |
| 16           | Epc: 15.1°S, 167.6°E. New Hebrides Islands, Felt: Santo.<br>- H = 23h 05m 21s. h about 136 km (USCGS)     |       |       |                |                |                              |
|              | Shillong                                                                                                  | Z     | iP    | 23 17 39       |                | Slight, distant, compression |
| 17           | Shillong                                                                                                  | Z     | iP    | 02 50 47       |                | Slight, near, compression    |
| 17           | Shillong                                                                                                  | Z     | eP    | 06 44 14       |                | Slight, distant              |
| 17           | Epc: 7.2°S, 128°E. Banda Sea. - H = 09h 20m 04s. h about 35 km (USCGS)                                    |       |       |                |                |                              |
|              | New Delhi                                                                                                 | Z     | iP    | 09 30 12       |                | Slight, compression          |
| 17           | Shillong                                                                                                  | Z     | iPg   | 11 15 36       | 200            | Slight, rarefaction          |
|              |                                                                                                           |       | Sg    | 15 59          |                |                              |
| 17           | Shillong                                                                                                  | Z     | iP    | 11 50 40       |                | Slight, distant, rarefaction |
| 17           | Epc: 6.2°S, 68.3°E. Chagos Archipelago Region.<br>- H = 12h 00m 29s. h about 25 km (USCGS)                |       |       |                |                |                              |
|              | Bombay                                                                                                    | ZNE   | e     | 12 06 49       |                | Slight                       |
|              | New Delhi                                                                                                 | Z     | eP    | 12 07 33       |                | Slight, rarefaction          |
|              | Chatra                                                                                                    | Z     | iP    | 12 07 53       |                | Slight, distant, rarefaction |
|              | Shillong                                                                                                  | Z     | iP    | 12 07 59       |                | Slight, distant, rarefaction |
| 17           | Bombay                                                                                                    | NE    | e     | 12 10 41       |                | Slight                       |
|              | Dehra Dun                                                                                                 | N     | eP    | 12 13 54       |                | Slight                       |



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| Date | Station                                                                          | Compt   | Phase      | G M T<br>h p m s  | $\Delta$<br>km | Remarks                      |
|------|----------------------------------------------------------------------------------|---------|------------|-------------------|----------------|------------------------------|
| 17   | Hyderabad                                                                        | E       | M          | 12 14 16          |                | Slight, Per=9 sec, $\mu=3$   |
| 17   | New Delhi                                                                        | Z       | iP         | 16 19 30          |                | Tremor, rarefaction          |
|      | Dehra Dun                                                                        | Z       | eP         | 16 19 35          |                | Tremor                       |
|      | Shillong                                                                         | Z       | eP         | 16 19 40          |                | Slight, distant              |
|      | Chatra                                                                           | Z       | iP         | 16 19 40          |                | Slight, distant, compression |
| 17   | Chatra                                                                           | Z       | iPg<br>Sg  | 18 03 39<br>03 53 | 140            | Slight                       |
|      | Shillong                                                                         | Z       | eP         | 18 05 22          |                | Slight, distant              |
| 17   | New Delhi                                                                        | Z       | eP         | 20 05 08          |                | Tremor, rarefaction          |
| 17   | Shillong                                                                         | Z       | iPg<br>iSg | 21 15 13<br>15 21 | 70             | Feeble                       |
| 17   | Shillong                                                                         | Z       | iP         | 22 19 02          |                | Slight, distant, compression |
| 18   | Shillong                                                                         | Z       | iPg<br>Sg  | 00 55 42<br>55 55 | 110            | Slight                       |
| 18   | Shillong                                                                         | Z       | iPg<br>iSg | 01 21 55<br>22 07 | 100            | Slight                       |
| 18   | Shillong                                                                         | Z       | eP         | 05 00 15          |                | Slight, distant              |
| 18   | Bokaro                                                                           | NE      | iP         | 08 08 07          |                | Slight                       |
| 18   | Bokaro                                                                           | NE      | iP         | 11 58 51          |                | Slight, tremor               |
| 18   | Shillong                                                                         | Z       | eP         | 12 03 35          |                | Slight, distant              |
| 18   | Shillong                                                                         | Z       | eP         | 12 24 57          |                | Slight, distant              |
| 18   | Shillong                                                                         | Z       | iP         | 12 50 36          |                | Slight, distant, rarefaction |
| 18   | Shillong                                                                         | Z<br>E  | iP<br>Sg   | 16 45 43<br>46 14 | 220            | Slight                       |
| 18   | Shillong                                                                         | Z       | iP         | 18 14 17          |                | Slight, distant, compression |
| 18   | Shillong                                                                         | ZNE     | iPg<br>Sg  | 18 33 30<br>33 45 | 110            | Slight, felt                 |
|      | Chatra                                                                           | Z<br>ZN | iP<br>S    | 18 34 38<br>35 47 | 660            | Feeble, compression          |
|      | New Delhi                                                                        | Z       | eS         | 18 40 48          |                | Slight, compression          |
| 18   | Shillong                                                                         | Z       | iPg        | 18 41 15          |                | Slight, near, compression    |
| 18   | Epc: 46.1°N, 148.5°E. Kurile Islands<br>- H = 18h 46m 40s. h about 60 km (USCGS) |         |            |                   |                |                              |
|      | Shillong                                                                         | Z       | iP         | 18 55 29          |                | Slight, distant, compression |
|      | Chatra                                                                           | Z       | iP         | 18 55 49          |                | Slight, distant, compression |

| Date   | Station                                                                                                                                                                           | Compt | Phase | G  | M  | T  | Δ     | Remarks                                           |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----|----|----|-------|---------------------------------------------------|
|        |                                                                                                                                                                                   |       |       | h  | m  | s  | km    |                                                   |
| 18     | Dehra Dun                                                                                                                                                                         | Z     | eP    | 18 | 56 | 18 |       | Slight                                            |
| Contd. | New Delhi                                                                                                                                                                         | Z     | iP    | 18 | 56 | 28 |       | Slight, compression                               |
| 19     | Shillong                                                                                                                                                                          | Z     | eP    | 10 | 01 | 11 |       | Slight, distant                                   |
| 19     | Shillong                                                                                                                                                                          | Z     | eP    | 10 | 12 | 13 |       | Slight                                            |
| 19     | Shillong                                                                                                                                                                          | Z     | iPg   | 11 | 56 | 13 |       | Slight, near                                      |
| 19     | New Delhi                                                                                                                                                                         | Z     | eP    | 14 | 52 | 12 |       | Slight, rarefaction                               |
| 19     | Epic: 17.2°N, 99.5°W. Near Coast of Maxico. 3 dead, 16 injured<br>extensive property damage in South Central Maxico.<br>Mag= 7.7½ (Pas). - H = 14h 58m 13s. h about 20 km (USCGS) |       |       |    |    |    |       |                                                   |
|        | Dehra Dun                                                                                                                                                                         | Z     | e     | 15 | 17 | 28 |       |                                                   |
|        |                                                                                                                                                                                   |       | i     |    | 19 | 52 |       |                                                   |
|        | New Delhi                                                                                                                                                                         | ZN    | ePKP  | 15 | 17 | 31 | 14850 | Compression                                       |
|        |                                                                                                                                                                                   | Z     | i?    |    | 17 | 42 |       |                                                   |
|        |                                                                                                                                                                                   | ZN    | iPP   |    | 20 | 03 |       |                                                   |
|        |                                                                                                                                                                                   |       | i?    |    | 21 | 09 |       |                                                   |
|        |                                                                                                                                                                                   |       | PPP   |    | 23 | 03 |       |                                                   |
|        |                                                                                                                                                                                   |       | i?    |    | 24 | 00 |       |                                                   |
|        |                                                                                                                                                                                   | Z     | SKS   |    | 25 | 07 |       |                                                   |
|        |                                                                                                                                                                                   | ZN    | i?    |    | 25 | 55 |       |                                                   |
|        |                                                                                                                                                                                   | N     | i?    |    | 26 | 55 |       |                                                   |
|        |                                                                                                                                                                                   |       | PS    |    | 29 | 50 |       |                                                   |
|        |                                                                                                                                                                                   |       | i?    |    | 31 | 14 |       |                                                   |
|        |                                                                                                                                                                                   | Z     | PPS   |    | 31 | 47 |       |                                                   |
|        |                                                                                                                                                                                   | NZ    | SS    |    | 37 | 37 |       |                                                   |
|        |                                                                                                                                                                                   | E     | M     | -  | -  | -  |       | Per=27 secs, Amp=100 mm                           |
|        | Shillong                                                                                                                                                                          | Z     | iPKP  | 15 | 17 | 34 | 16480 | Compression, initial ground movement towards East |
|        |                                                                                                                                                                                   | ZE    | ePKS  |    | 21 | 10 |       |                                                   |
|        |                                                                                                                                                                                   |       | eSS   |    | 38 | 25 |       |                                                   |
|        | Chatra                                                                                                                                                                            | Z     | ePKP  | 15 | 17 | 35 |       | Distant                                           |
|        | Poona                                                                                                                                                                             | Z     | iPKP  | 15 | 17 | 46 |       |                                                   |
|        |                                                                                                                                                                                   | N     | i     |    | 24 | 50 |       |                                                   |
|        | Bombay                                                                                                                                                                            | NE    | ePKP1 | 15 | 17 | 46 | 15890 |                                                   |
|        |                                                                                                                                                                                   |       | ePKP2 |    | 18 | 05 |       |                                                   |
|        |                                                                                                                                                                                   | N     | PP    |    | 20 | 59 |       |                                                   |
|        |                                                                                                                                                                                   |       | PPP   |    | 24 | 05 |       |                                                   |
|        |                                                                                                                                                                                   |       | SKKS1 |    | 27 | 58 |       |                                                   |
|        |                                                                                                                                                                                   |       | SKSP  |    | 31 | 13 |       |                                                   |
|        |                                                                                                                                                                                   |       | PPS   |    | 34 | 57 |       |                                                   |
|        |                                                                                                                                                                                   | E     | eSS   |    | 40 | 11 |       |                                                   |
|        |                                                                                                                                                                                   | N     | eSS   |    | 40 | 54 |       |                                                   |
|        |                                                                                                                                                                                   |       | SSP   |    | 41 | 58 |       |                                                   |
|        |                                                                                                                                                                                   | NE    | SSS   |    | 45 | 39 |       |                                                   |
|        |                                                                                                                                                                                   | E     | M     | 16 | 16 | 51 |       | Per=23 secs, μ=14                                 |
|        |                                                                                                                                                                                   | N     | M     |    | 23 | 13 |       | Per=23 secs, μ=37                                 |
|        | Hyderabad                                                                                                                                                                         | E     | PKP1  | 15 | 17 | 53 | 15470 |                                                   |
|        |                                                                                                                                                                                   |       | PS    |    | 31 | 26 |       |                                                   |
|        |                                                                                                                                                                                   |       | PPS   |    | 33 | 59 |       |                                                   |
|        |                                                                                                                                                                                   | N     | M     | 16 | 20 | 55 |       | Per=22 secs, μ=21                                 |
|        |                                                                                                                                                                                   | E     | M     |    | 20 | 56 |       | Per=21 secs, μ=57                                 |

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| Date         | Station                                                                                    | Compt | Phase                                                                                   | G<br>h | M<br>m | T<br>s                                                                                                            | $\Delta$<br>km | Remarks                         |
|--------------|--------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------|--------|--------|-------------------------------------------------------------------------------------------------------------------|----------------|---------------------------------|
| 19<br>Contd. | Visakhapatnam                                                                              | NE    | iPKP<br>iPP                                                                             | 15     | 17     | 54<br>20 24                                                                                                       | 14800          | First ground motion South West  |
|              | Calcutta                                                                                   | E     | ePKP<br>i<br>i<br>i<br>i<br>i                                                           | 15     | 17     | 58<br>22 37<br>28 32<br>39 19<br>43 06<br>59 52                                                                   |                | Distant                         |
|              | Port Blair                                                                                 | N     | ePKP                                                                                    | 15     | 18     | 03                                                                                                                |                | Distant                         |
|              | Madras                                                                                     | E     | ePKP1<br>PKP2<br>PP<br>PKS<br>SKS<br>SKKKS<br>SKSP<br>PS<br>PPS<br>SS<br>SSS<br>Lr<br>M | 15     | 18     | 13<br>18 22<br>21 49<br>21 54<br>25 19<br>29 09<br>31 58<br>32 44<br>34 42<br>40 59<br>46 34<br>16 08 46<br>20 38 | 16534          |                                 |
|              | Bokaro                                                                                     | NE    | ePKP<br>e                                                                               | 15     | 20     | 29<br>38 59                                                                                                       |                |                                 |
| 19           | Kodaikanal                                                                                 | E     | e<br>i<br>e                                                                             | 16     | 11     | 57<br>41 33<br>42 39                                                                                              |                | Slight, distant<br>Per= 21 secs |
| 19           | Chatra                                                                                     | Z     | iPg<br>Sg                                                                               | 16     | 37     | 36<br>37 54                                                                                                       | 160            | Feeble, rarefaction             |
| 19           | Chatra                                                                                     | Z     | ePg<br>Sg                                                                               | 18     | 00     | 57<br>01 13                                                                                                       | 130            | Slight                          |
| 19           | Calcutta                                                                                   | E     | eP<br>iSg                                                                               | 19     | 21     | 31<br>22 06                                                                                                       | 310            | Slight                          |
| 19           | Shillong                                                                                   | Z     | eP                                                                                      | 19     | 28     | 36                                                                                                                |                | Slight, distant                 |
| 19           | Shillong                                                                                   | Z     | iP<br>iS                                                                                | 19     | 49     | 37<br>50 08                                                                                                       | 220            | Slight, compression             |
| 19           | Shillong                                                                                   | Z     | iP                                                                                      | 20     | 42     | 31                                                                                                                |                | Slight, distant, rarefaction    |
| 19           | New Delhi                                                                                  | Z     | eP<br>i                                                                                 | 20     | 49     | 06<br>49 29                                                                                                       |                | Slight, compression             |
| 19           | Epc: 39.5°N, 73.9°E. Sinkiang Province, China.<br>- H = 20h 50m 09s. h about 45 km (USCGS) |       |                                                                                         |        |        |                                                                                                                   |                |                                 |
|              | Dehra Dun                                                                                  | Z     | eP<br>PP<br>PPP<br>iS<br>SSS<br>M                                                       | 20     | 52     | 31<br>52 38<br>52 46<br>54 21<br>54 43<br>55 24                                                                   | 1070           | Slight                          |

| Date          | Station                                                       | Compt   | Phase                              | G<br>h | M<br>m                           | T<br>s                           | $\Delta$<br>km | Remarks                                                      |
|---------------|---------------------------------------------------------------|---------|------------------------------------|--------|----------------------------------|----------------------------------|----------------|--------------------------------------------------------------|
| 19<br>Cont'd. | New Delhi                                                     | Z       | iP<br>iS                           | 20     | 53<br>55                         | 03<br>05                         | 1190           | Slight, rarefaction                                          |
|               | Chatra                                                        | Z       | iP                                 | 20     | 54                               | 03                               |                | Slight, distant, rarefaction                                 |
|               | Shillong                                                      | Z       | iP                                 | 20     | 54                               | 47                               |                | Slight, distant, compression                                 |
|               | Sehore                                                        | NE<br>E | eP<br>PP<br>PPP<br>Lq<br>eS<br>SSS | 20     | 56<br>57<br>57<br>58<br>59<br>59 | 58<br>10<br>14<br>52<br>03<br>42 | 1220           | Slight                                                       |
|               | Visakhapatnam                                                 | E       | eP<br>iS                           | 21     | 00<br>02                         | 25<br>38                         | 1300           | Slight                                                       |
| 19            | New Delhi                                                     | Z       | iP                                 | 21     | 05                               | 50                               |                | Slight, rarefaction                                          |
| 19            | Epc: 27°N, 92.5°E. Assam. - H = 21h 28m 40s. GMT, (New Delhi) |         |                                    |        |                                  |                                  |                |                                                              |
|               | Shillong                                                      | ZNE     | iPg<br>iSg                         | 21     | 29                               | 09<br>25                         | 130            | Slight, felt, initial ground movement towards South and West |
|               | Tocklai                                                       | E       | ePg<br>Sg                          | 21     | 29                               | 14<br>34                         | 170            | Slight, local                                                |
|               | Chatra                                                        | Z       | iP<br>eS                           | 21     | 29                               | 54<br>05                         | 670            | Slight, compression                                          |
|               | Bokaro                                                        | NE      | iP<br>i                            | 21     | 30                               | 25<br>09                         |                | Slight, near                                                 |
|               | Dehra Dun                                                     | Z       | eP                                 | 21     | 31                               | 47                               |                | Slight                                                       |
|               | New Delhi                                                     | Z       | eP                                 | 21     | 31                               | 47                               |                | Slight                                                       |
| 19            | Shillong                                                      | Z       | eP                                 | 23     | 04                               | 28                               |                | Slight, distant                                              |
| 19            | Shillong                                                      | Z       | eP                                 | 23     | 19                               | 06                               |                | Slight                                                       |
| 19            | Shillong                                                      | Z       | iP<br>iS                           | 23     | 22                               | 14<br>42                         | 200            | Slight, compression, initial ground motion towards West      |
| 19            | Shillong                                                      | Z       | eP                                 | 23     | 50                               | 06                               |                | Tremor                                                       |
| 20            | New Delhi                                                     | Z       | iP<br>i                            | 00     | 16                               | 16<br>22                         |                | Slight, rarefaction                                          |
|               | Dehra Dun                                                     | Z       | eP                                 | 00     | 16                               | 17                               |                | Slight                                                       |
|               | Shillong                                                      | Z       | iP                                 | 00     | 16                               | 33                               |                | Slight, distant, rarefaction                                 |
| 20            | Calcutta                                                      | E       | e                                  | 05     | 24                               | 38                               |                | Slight                                                       |
| 20            | Bokaro                                                        | NE      | iP                                 | 06     | 56                               | 51                               |                | Slight                                                       |
| 20            | Port Blair                                                    | N       | iPg<br>iSg                         | 08     | 16                               | 36<br>43                         | 60             | Slight                                                       |
| 20            | Shillong                                                      | Z       | iP                                 | 08     | 21                               | 58                               |                | Slight, distant                                              |
| 20            | Shillong                                                      | Z       | iP                                 | 15     | 20                               | 28                               |                | Slight, distant, compression                                 |

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| Date | Station                                                                                                       | Compt | Phase     | G  | M  | T           | Δ   | Remarks                        |
|------|---------------------------------------------------------------------------------------------------------------|-------|-----------|----|----|-------------|-----|--------------------------------|
|      |                                                                                                               |       |           | h  | m  | s           | km  |                                |
| 20   | Shillong                                                                                                      | Z     | iP        | 16 | 01 | 57          |     | Slight, distant<br>compression |
| 20   | Epc: 6.2°N, 125.8°E. Near Coast of Mindanao, Philippine Islands.<br>- H = 16h 49m 46s. h about 133 km (USCGS) |       |           |    |    |             |     |                                |
|      | Shillong                                                                                                      | Z     | iP        | 16 | 56 | 54          |     | Slight, distant, compression   |
|      | Chatra                                                                                                        | Z     | iP        | 16 | 57 | 29          |     | Slight, distant, rarefaction   |
|      | New Delhi                                                                                                     | Z     | eP<br>i?  | 16 | 58 | 36<br>58 37 |     | Slight, compression            |
| 20   | Dehra Dun                                                                                                     | Z     | eP        | 16 | 58 | 36          |     | Slight                         |
| 20   | Shillong                                                                                                      | Z     | iP        | 17 | 02 | 40          |     | Slight, distant, compression   |
| 20   | Shillong                                                                                                      | Z     | iP        | 17 | 06 | 40          |     | Slight, distant, rarefaction   |
| 20   | New Delhi                                                                                                     | Z     | eP        | 17 | 21 | 49          |     | Tremor, compression            |
| 20   | Shillong                                                                                                      | Z     | iPg<br>Sg | 20 | 10 | 02<br>10 10 | 70  | Slight                         |
| 20   | Chatra                                                                                                        | Z     | eP<br>S   | 20 | 10 | 53<br>11 56 | 600 | Slight                         |
| 20   | Shillong                                                                                                      | Z     | iPg       | 20 | 17 | 49          |     | Slight                         |
| 20   | Shillong                                                                                                      | Z     | iPg<br>Sg | 21 | 21 | 24<br>21 37 | 110 | Slight                         |
| 20   | Shillong                                                                                                      | Z     | iP        | 21 | 32 | 31          |     | Tremor                         |
| 20   | Shillong                                                                                                      | Z     | iPg<br>Sg | 22 | 13 | 24<br>13 32 | 70  | Slight                         |
| 20   | New Delhi                                                                                                     | Z     | eP        | 22 | 26 | 32          |     | Tremor                         |
| 20   | Shillong                                                                                                      | Z     | ePg<br>Sg | 22 | 41 | 52<br>41 59 | 60  | Slight                         |
|      | Chatra                                                                                                        | Z     | eP<br>eS  | 22 | 42 | 44<br>43 06 | 590 | Slight                         |
| 20   | Shillong                                                                                                      | Z     | eP<br>eS  | 23 | 10 | 53<br>11 23 | 220 | Slight                         |
| 21   | Shillong                                                                                                      | ZE    | iPg<br>Sg | 01 | 57 | 09<br>57 24 | 120 | Slight, compression            |
| 21   | Shillong                                                                                                      | Z     | iP        | 04 | 03 | 58          |     | Slight, distant, compression   |
| 21   | New Delhi                                                                                                     | Z     | iP        | 04 | 48 | 53          |     | Tremor, rarefaction            |
| 21   | Shillong                                                                                                      | Z     | iP        | 05 | 36 | 58          |     | Slight, distant, compression   |
| 21   | Shillong                                                                                                      | Z     | eP<br>iS  | 10 | 20 | 48<br>21 19 | 220 | Slight                         |

| Date | Station                                                                                                                                                                               | Compt. | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                 |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|--------|--------|--------|----------------|---------------------------------------------------------|
| 21   | Epc: 37.3°N, 93°E. Chinghai Province, China. Mag= 7-7½ (Pas), 6½-6¾ (Pal)<br>- H = 12h 02m 50s. h about 25 km (USCGS)<br>Epc: 38.5°N, 98°E. - H = 12h 02m 30s (Shillong). Mag= 6- 6¾. |        |       |        |        |        |                |                                                         |
|      | Tocklai                                                                                                                                                                               | E      | iP    | 12     | 05     | 26     |                |                                                         |
|      |                                                                                                                                                                                       |        | PP    |        | 05     | 40     |                |                                                         |
|      |                                                                                                                                                                                       |        | S     |        | 08     | 37     |                |                                                         |
|      |                                                                                                                                                                                       |        | SS    |        | 09     | 00     |                |                                                         |
|      |                                                                                                                                                                                       |        | Lr    |        | 09     | 25     |                |                                                         |
|      |                                                                                                                                                                                       |        | M     |        | 10     | 50     |                |                                                         |
|      | Shillong                                                                                                                                                                              | ZNE    | eP    | 12     | 05     | 41     | 1620           | Rarefaction, initial ground movement towards West-North |
|      |                                                                                                                                                                                       |        | PP    |        | 05     | 42     |                |                                                         |
|      |                                                                                                                                                                                       |        | PPP   |        | 05     | 48     |                |                                                         |
|      |                                                                                                                                                                                       |        | eS    |        | 08     | 25     |                |                                                         |
|      |                                                                                                                                                                                       |        | SSS   |        | 09     | 00     |                |                                                         |
|      |                                                                                                                                                                                       |        | M     |        | 10     | 25     |                |                                                         |
|      |                                                                                                                                                                                       |        | PcP   |        | 10     | 49     |                |                                                         |
|      |                                                                                                                                                                                       |        | PcS   |        | 13     | 55     |                |                                                         |
|      |                                                                                                                                                                                       |        | ScS   |        | 17     | 25     |                | Per=10 secs, $\mu=171$                                  |
|      | Chatra                                                                                                                                                                                | ZNE    | eP    | 12     | 05     | 53     | 1630           |                                                         |
|      |                                                                                                                                                                                       |        | PP    |        | 05     | 59     |                |                                                         |
|      |                                                                                                                                                                                       |        | PPP   |        | 06     | 10     |                |                                                         |
|      |                                                                                                                                                                                       |        | Lq    |        | 08     | 31     |                |                                                         |
|      |                                                                                                                                                                                       |        | S     |        | 08     | 38     |                |                                                         |
|      |                                                                                                                                                                                       |        | SS    |        | 08     | 54     |                |                                                         |
|      |                                                                                                                                                                                       |        | SSS   |        | 09     | 11     |                |                                                         |
|      |                                                                                                                                                                                       | N      | M     |        | 10     | 00     |                | Per=5.2 secs, $\mu=362$                                 |
|      | Bokaro                                                                                                                                                                                | NE     | iP    | 12     | 06     | 31     | 1800           | Initial ground motion towards North-West                |
|      |                                                                                                                                                                                       |        | PP    |        | 06     | 42     |                |                                                         |
|      |                                                                                                                                                                                       |        | PPP   |        | 06     | 54     |                |                                                         |
|      |                                                                                                                                                                                       |        | S     |        | 09     | 31     |                |                                                         |
|      |                                                                                                                                                                                       |        | SS    |        | 09     | 51     |                |                                                         |
|      |                                                                                                                                                                                       |        | SSS   |        | 10     | 06     |                |                                                         |
|      |                                                                                                                                                                                       |        | Lr    |        | 10     | 19     |                |                                                         |
|      |                                                                                                                                                                                       |        | M     |        | 11     | 44     |                |                                                         |
|      | Calcutta                                                                                                                                                                              | N      | eP    | 12     | 06     | 34     | 1900           |                                                         |
|      |                                                                                                                                                                                       |        | iS    |        | 09     | 44     |                |                                                         |
|      |                                                                                                                                                                                       |        | M     |        | 12     | 00     |                |                                                         |
|      | Dehra Dun                                                                                                                                                                             | Z      | eP    | 12     | 06     | 38     | 2140           |                                                         |
|      |                                                                                                                                                                                       |        | PP    |        | 07     | 01     |                |                                                         |
|      |                                                                                                                                                                                       |        | PPP   |        | 07     | 12     |                |                                                         |
|      |                                                                                                                                                                                       |        | iS    |        | 10     | 10     |                |                                                         |
|      |                                                                                                                                                                                       |        | SSS   |        | 10     | 45     |                |                                                         |
|      |                                                                                                                                                                                       |        | Lr    |        | 10     | 54     |                |                                                         |
|      |                                                                                                                                                                                       |        | M     |        | 12     | 10     |                |                                                         |
|      | New Delhi                                                                                                                                                                             | ZNE    | iP    | 12     | 06     | 53     | 1910           | Compression, initial ground motion South-West           |
|      |                                                                                                                                                                                       | Z      | i?    |        | 06     | 54     |                |                                                         |
|      |                                                                                                                                                                                       | ZNE    | PP    |        | 07     | 11     |                |                                                         |
|      |                                                                                                                                                                                       |        | PPP   |        | 07     | 18     |                |                                                         |
|      |                                                                                                                                                                                       | NE     | i     |        | 08     | 48     |                |                                                         |
|      |                                                                                                                                                                                       | ZN     | i     |        | 09     | 12     |                |                                                         |
|      |                                                                                                                                                                                       | ZNE    | S     |        | 10     | 04     |                |                                                         |
|      |                                                                                                                                                                                       |        | SS    |        | 10     | 27     |                |                                                         |
|      |                                                                                                                                                                                       | NE     | SSS   |        | 10     | 46     |                |                                                         |
|      |                                                                                                                                                                                       |        | PcP   |        | 11     | 31     |                |                                                         |
|      |                                                                                                                                                                                       | ZNE    | i     |        | 12     | 11     |                |                                                         |
|      |                                                                                                                                                                                       | Z      | M     |        | 12     | 42     |                |                                                         |

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| Date         | Station | Compt | Phase         | G<br>h | M<br>m | T<br>s | $\Delta$<br>km              | Remarks |      |                                          |
|--------------|---------|-------|---------------|--------|--------|--------|-----------------------------|---------|------|------------------------------------------|
| 21<br>Contd. | Sehore  | NE    | iP            | 12     | 07     | 40     | 2490                        |         |      |                                          |
|              |         |       | PP            |        |        | 08 02  |                             |         |      |                                          |
|              |         |       | PPP           |        |        | 08 12  |                             |         |      |                                          |
|              |         |       | iS            |        |        | 11 42  |                             |         |      |                                          |
|              |         |       | Lq            |        |        | 11 53  |                             |         |      |                                          |
|              |         |       | SS            |        |        | 12 17  |                             |         |      |                                          |
|              |         |       | SSS           |        |        | 12 30  |                             |         |      |                                          |
|              |         |       | N             | M      |        | 14 20  |                             |         |      |                                          |
|              |         |       | Visakhapatnam | NE     | iP     | 12     | 07                          | 50      | 2680 | Initial ground motion towards North-West |
|              |         |       |               |        | PP     |        |                             | 08 28   |      |                                          |
|              |         | PPP   |               |        | 08 40  |        |                             |         |      |                                          |
|              |         | iS    |               |        | 12 06  |        |                             |         |      |                                          |
|              |         | SS    |               |        | 13 08  |        |                             |         |      |                                          |
|              |         | SSS   |               |        | 13 25  |        |                             |         |      |                                          |
|              |         | Lr    |               |        | 14 09  |        |                             |         |      |                                          |
|              |         | M     |               |        | 16 11  |        | Per=13.2 secs, Amp=95.2 mm  |         |      |                                          |
| Hyderabad    | E       | iP    | 12            | 08     | 17     | 2710   |                             |         |      |                                          |
|              |         | PP    |               |        | 08 41  |        |                             |         |      |                                          |
|              |         | PPP   |               |        | 09 05  |        |                             |         |      |                                          |
|              |         | iS    |               |        | 12 35  |        |                             |         |      |                                          |
|              |         | SS    |               |        | 13 38  |        |                             |         |      |                                          |
|              |         | Lr    |               |        | 14 41  |        |                             |         |      |                                          |
|              |         | M     |               |        | 16 05  |        | Per= 9 secs, $\mu=131$      |         |      |                                          |
| Port Blair   | N       | iP    | 12            | 08     | 23     | 2850   | Initial ground motion North |         |      |                                          |
|              |         | PP    |               |        | 08 34  |        |                             |         |      |                                          |
|              |         | PPP   |               |        | 09 16  |        |                             |         |      |                                          |
|              |         | iS    |               |        | 12 49  |        |                             |         |      |                                          |
|              |         | Lq    |               |        | 13 49  |        |                             |         |      |                                          |
|              |         | SS    |               |        | 13 59  |        |                             |         |      |                                          |
|              |         | SSS   |               |        | 14 16  |        |                             |         |      |                                          |
|              |         | Lr    |               |        | 15 06  |        |                             |         |      |                                          |
|              |         | M     |               |        | 17 07  |        |                             |         |      |                                          |
| Poona        | Z       | iP    | 12            | 08     | 31     | 3020   |                             |         |      |                                          |
|              | N       | iS    |               |        | 13 09  |        |                             |         |      |                                          |
| Bombay       | NE      | eP    | 12            | 08     | 34     | 3010   |                             |         |      |                                          |
|              |         | PP    |               |        | 09 08  |        |                             |         |      |                                          |
|              | N       | i     |               |        | 10 01  |        |                             |         |      |                                          |
|              |         | i     |               |        | 12 25  |        |                             |         |      |                                          |
|              | NE      | iS    |               |        | 13 12  |        |                             |         |      |                                          |
|              | N       | SSS   |               |        | 14 50  |        |                             |         |      |                                          |
|              |         | Lr    |               |        | 15 34  |        |                             |         |      |                                          |
|              |         | M     |               |        | 19 38  |        | Per=10 secs, $\mu=147$      |         |      |                                          |
|              | E       | M     |               |        | 20 33  |        | Per=8 secs, $\mu=151$       |         |      |                                          |
|              | Madras  | E     | eP            | 12     | 08     | 43     | 3010                        |         |      |                                          |
| PP           |         |       |               |        | 09 25  |        |                             |         |      |                                          |
| PPP          |         |       |               |        | 09 37  |        |                             |         |      |                                          |
| PcP          |         |       |               |        | 12 15  |        |                             |         |      |                                          |
| eS           |         |       |               |        | 13 21  |        |                             |         |      |                                          |
| Lq           |         |       |               |        | 14 07  |        |                             |         |      |                                          |
| SSS          |         |       |               |        | 14 46  |        |                             |         |      |                                          |
| Lr           |         |       |               |        | 15 28  |        |                             |         |      |                                          |
| M            |         |       |               |        | 17 28  |        |                             |         |      |                                          |
| Kodaikanal   | E       | eP    | 12            | 09     | 16     | 3660   |                             |         |      |                                          |
|              |         | iS    |               |        | 24 34  |        |                             |         |      |                                          |

| Date | Station                                                                                   | Compt   | Phase      | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                      |
|------|-------------------------------------------------------------------------------------------|---------|------------|--------|--------|-------------|----------------|------------------------------|
| 21   | Chatra                                                                                    | Z       | eP         | 12     | 39     | 24          |                | Slight, distant              |
| 21   | Shillong                                                                                  | Z       | eP         | 13     | 02     | 37          |                | Slight, near                 |
| 21   | Epc: 37°N, 95.7°E. Chinghai Province, China<br>- H = 13h 15m 39s. h about 25 km (USCGS)   |         |            |        |        |             |                |                              |
|      | Shillong                                                                                  | Z       | eP         | 13     | 18     | 31          |                | Slight                       |
|      | Chatra                                                                                    | Z       | eP         | 13     | 18     | 41          |                | Slight, distant              |
|      | Dehra Dun                                                                                 | Z       | eP         | 13     | 19     | 27          |                | Slight                       |
|      | New Delhi                                                                                 | Z       | iP         | 13     | 19     | 41          |                | Slight, rarefaction          |
|      | Port Blair                                                                                | ZN      | iP<br>e    | 13     | 21     | 17<br>25 41 |                | Slight                       |
|      | Bombay                                                                                    | NE      | e<br>e     | 13     | 26     | 10<br>30 34 |                | Slight                       |
| 21   | Shillong                                                                                  | Z       | eP<br>iS   | 14     | 22     | 26<br>24 11 | 1020           | Slight                       |
| 21   | Shillong                                                                                  | Z       | eP         | 14     | 39     | 41          |                | Slight, distant              |
| 21   | Epc: 37.1°N, 95.9°E. Chinghai Province, China<br>- H = 15h 41m 40s. h about 36 km (USCGS) |         |            |        |        |             |                |                              |
|      | Shillong                                                                                  | Z<br>ZE | iP<br>iPeP | 15     | 44     | 33<br>49 44 |                | Slight, distant, compression |
|      | Chatra                                                                                    | Z       | eP         | 15     | 44     | 47          |                | Feeble, distant              |
|      | New Delhi                                                                                 | Z       | eP         | 15     | 45     | 51          |                | Slight, rarefaction          |
|      | Calcutta                                                                                  | E       | eP         | 15     | 49     | 16          |                | Slight                       |
| 21   | Epc: 36.9°N, 96.4°E. Chinghai Province, China<br>- H = 18h 15m 29s. h about 35 km (USCGS) |         |            |        |        |             |                |                              |
|      | Shillong                                                                                  | Z       | eP         | 18     | 18     | 20          |                | Slight, distant              |
| 21   | Shillong                                                                                  | Z       | iPg        | 19     | 18     | 48          |                | Slight, near, compression    |
|      | Chatra                                                                                    | Z       | eP<br>S    | 19     | 19     | 38<br>20 41 | 590            | Slight                       |
| 21   | Epc: 37.4°N, 95.5°E. Chinghai Province, China<br>- H = 19h 29m 10s. h about 25 km (USCGS) |         |            |        |        |             |                |                              |
|      | Shillong                                                                                  | Z       | eP<br>S    | 19     | 31     | 57<br>32 55 | 390            | Slight                       |
| 21   | Epc: 36.7°N, 95.8°E. Chinghai Province, China<br>- H = 19h 46m 01s. h about 35 km (USCGS) |         |            |        |        |             |                |                              |
|      | Shillong                                                                                  | Z<br>ZE | iP<br>i    | 19     | 48     | 47<br>53 29 |                | Slight, distant, rarefaction |
|      | Chatra                                                                                    | Z       | eP         | 19     | 49     | 01          |                | Slight, near                 |
|      | New Delhi                                                                                 | Z       | eP         | 19     | 50     | 05          |                | Slight, compression          |



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| Date   | Station                                                  | Compt | Phase | G  | M  | T  | Δ    | Remarks                      |
|--------|----------------------------------------------------------|-------|-------|----|----|----|------|------------------------------|
|        |                                                          |       |       | h  | m  | s  | km   |                              |
| 21     | Calcutta                                                 | E     | e     | 19 | 54 | 00 |      | Slight                       |
| Contd. |                                                          |       |       |    |    |    |      |                              |
| 21     | Shillong                                                 | Z     | iP    | 20 | 10 | 07 |      | Slight, distant, compression |
| 21     | Kodaikanal                                               | E     | e     | 20 | 31 | 00 |      | Slight, distant              |
|        |                                                          |       |       |    | 39 | 18 |      |                              |
| 21     | Shillong                                                 | Z     | iP    | 21 | 23 | 51 |      | Slight, distant, compression |
| 21     | Chatra                                                   | Z     | er    | 21 | 24 | 05 |      | Feeble, distant              |
| 21     | New Delhi                                                | Z     | eP    | 21 | 25 | 08 |      | Slight, rarefaction          |
| 21     | Epc: 20°S, 177.5°W. Fiji Islands, Region. Mag=6½-7 (Pas) |       |       |    |    |    |      |                              |
|        | - H = 21h 15m 31s. h about 379 km (USCGS)                |       |       |    |    |    |      |                              |
|        | Port Blair                                               | N     | eP    | 21 | 28 | 19 | 8550 |                              |
|        |                                                          |       | PcP   |    | 28 | 29 |      |                              |
|        |                                                          |       | i     |    | 30 | 10 |      |                              |
|        |                                                          |       | PP    |    | 31 | 24 |      |                              |
|        |                                                          |       | i     |    | 32 | 36 |      |                              |
|        |                                                          |       | PPP   |    | 33 | 13 |      |                              |
|        |                                                          |       | eS    |    | 38 | 07 |      |                              |
|        |                                                          |       | SKS   |    | 39 | 13 |      |                              |
|        |                                                          |       | ScS   |    | 38 | 25 |      |                              |
|        |                                                          |       | PS    |    | 38 | 53 |      |                              |
|        |                                                          |       | PPS   |    | 39 | 12 |      |                              |
|        |                                                          |       | S     |    | 43 | 10 |      |                              |
|        | Shillong                                                 | ZNE   | eP    | 21 | 28 | 33 | 8800 | Initial ground motion        |
|        |                                                          |       | PcP   |    | 28 | 40 |      | towards East                 |
|        |                                                          |       | PP    |    | 31 | 32 |      |                              |
|        |                                                          |       | PPP   |    | 33 | 22 |      |                              |
|        |                                                          |       | iS    |    | 38 | 33 |      |                              |
|        |                                                          |       | SKS   |    | 38 | 44 |      |                              |
|        |                                                          |       | ScS   |    | 38 | 53 |      |                              |
|        |                                                          |       | PS    |    | 39 | 16 |      |                              |
|        |                                                          |       | PPS   |    | 39 | 37 |      |                              |
|        |                                                          |       | SS    |    | 43 | 38 |      |                              |
|        |                                                          |       | SSS   |    | 46 | 50 |      |                              |
|        |                                                          |       | Lq    |    | 49 | 34 |      |                              |
|        | Tocklai                                                  | E     | er    | 21 | 28 | 34 |      |                              |
|        | Calcutta                                                 | E     | eP    | 21 | 28 | 36 |      |                              |
|        |                                                          |       | i     |    | 30 | 09 |      |                              |
|        |                                                          |       | i     |    | 34 | 36 |      |                              |
|        |                                                          |       | i     |    | 37 | 20 |      |                              |
|        |                                                          |       | S     |    | 38 | 36 |      |                              |
|        | Madras                                                   | E     | eP    | 21 | 28 | 58 |      |                              |
|        |                                                          |       | e     |    | 30 | 53 |      |                              |
|        |                                                          |       | e     |    | 33 | 24 |      |                              |
|        |                                                          |       | e     |    | 34 | 52 |      |                              |
|        |                                                          |       | e     |    | 37 | 36 |      |                              |
|        |                                                          |       | eS    |    | 39 | 15 |      |                              |
|        | Chatra                                                   | Z     | eP    | 21 | 28 | 58 |      |                              |
|        |                                                          | ZNE   | i     |    | 33 | 18 |      |                              |
|        | Bokaro                                                   | NE    | iP    | 21 | 29 | 05 |      | Distant                      |
|        |                                                          |       | i     |    | 33 | 08 |      |                              |

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| Date      | Station                                       | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km         | Remarks         |
|-----------|-----------------------------------------------|-------|-------|--------|--------|--------|------------------------|-----------------|
| 21        | Bokaro<br>Contd. Contd.                       | NE    | i     | 21     | 33     | 23     |                        |                 |
|           |                                               |       | i     |        | 35     | 30     |                        |                 |
|           |                                               |       | e     |        | 39     | 02     |                        |                 |
|           | Visakhapatnam                                 | N     | eP    | 21     | 29     | 07     |                        | Distant         |
|           |                                               | NE    | i     |        | 33     | 36     |                        |                 |
|           | Hyderabad                                     | E     | eP    | 21     | 29     | 29     |                        |                 |
|           |                                               |       | e     |        | 34     | 03     |                        |                 |
|           |                                               |       | e     |        | 39     | 27     |                        |                 |
|           |                                               |       | e     |        | 40     | 24     |                        |                 |
|           |                                               |       | e     |        | 42     | 15     |                        |                 |
|           |                                               |       | e     |        | 48     | 35     |                        |                 |
|           |                                               |       | e     | 22     | 09     | 29     |                        |                 |
|           |                                               |       | e     |        | 17     | 39     |                        |                 |
|           |                                               |       | e     | 28     | 42     |        | Per=12 secs, $\mu=4$   |                 |
| New Delhi | Z                                             |       | eP    | 21     | 29     | 30     |                        | Rarefaction     |
|           |                                               |       | i     |        | 29     | 40     |                        |                 |
|           |                                               |       | i     |        | 31     | 19     |                        |                 |
|           |                                               |       | i     |        | 34     | 22     |                        |                 |
|           |                                               |       | e     |        | 35     | 53     |                        |                 |
|           |                                               |       | ee    |        | 36     | 14     |                        |                 |
|           |                                               |       | i     |        | 37     | 04     |                        |                 |
|           |                                               |       | i     |        | 37     | 47     |                        |                 |
|           |                                               |       | e     | 40     | 12     |        |                        |                 |
|           | Z                                             |       | M     | -      | -      |        | Per=43 secs, Amp=75 mm |                 |
| Dehra Dun | Z                                             |       | eP    | 21     | 29     | 41     |                        |                 |
|           |                                               |       | e     |        | 34     | 35     |                        |                 |
|           |                                               |       | e     |        | 35     | 21     |                        |                 |
|           |                                               |       | e     |        | 35     | 58     |                        |                 |
|           |                                               |       | e     |        | 36     | 38     |                        |                 |
|           |                                               |       | e     |        | 38     | 15     |                        |                 |
| Poona     | Z                                             |       | eP    | 21     | 29     | 45     |                        |                 |
|           |                                               |       | i     |        | 34     | 30     |                        |                 |
| Bombay    | NE                                            |       | eP    | 21     | 31     | 33     |                        | Deep focus      |
|           |                                               |       | iPKP1 |        | 34     | 33     |                        |                 |
|           |                                               |       | PP    |        | 36     | 13     |                        |                 |
|           |                                               |       | i     |        | 36     | 47     |                        |                 |
|           |                                               |       | PPP   |        | 38     | 35     |                        |                 |
|           |                                               |       | i     |        | 39     | 43     |                        |                 |
|           |                                               |       | i     |        | 40     | 58     |                        |                 |
|           |                                               |       | i     |        | 42     | 24     |                        |                 |
|           |                                               |       | SKS1  |        | 42     | 24     |                        |                 |
|           |                                               |       | SKS2  |        | 43     | 00     |                        |                 |
|           |                                               |       | iS    |        | 43     | 51     |                        |                 |
|           |                                               |       | PS    |        | 45     | 35     |                        |                 |
| PPS       |                                               | 46    | 13    |        |        |        |                        |                 |
| e         |                                               | 49    | 51    |        |        |        |                        |                 |
| 21        | Shillong                                      | Z     | eP    | 22     | 25     | 53     |                        | Slight, distant |
| 22        | Shillong                                      | Z     | eP    | 00     | 20     | 48     |                        | Slight, distant |
| 22        | Shillong                                      | Z     | eP    | 00     | 41     | 41     |                        | Slight, distant |
| 22        | Shillong                                      | Z     | eP    | 00     | 59     | 42     |                        | Slight, distant |
| 22        | Epc: 37.4°N, 95.8°E. Chinghai Province, China |       |       |        |        |        |                        |                 |
|           | - H = 04h 34m 53s. h about 35 km (USCGS)      |       |       |        |        |        |                        |                 |

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| Date         | Station                                                                                                                  | Compt    | Phase                                                    | G<br>h | M<br>m   | T<br>s   | $\Delta$<br>km | Remarks                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------|--------|----------|----------|----------------|------------------------------------------------------|
| 22<br>Contd. | Shillong                                                                                                                 | Z        | eP<br>e                                                  | 04     | 37<br>41 | 36<br>37 |                | Slight, distant                                      |
| 22           | Shillong                                                                                                                 | Z        | iP                                                       | 06     | 22       | 49       |                | Slight, distant, rarefaction                         |
| 22           | Epc: 22.7°N, 121.5°E. Off South Coast of Formosa<br>- H = 06h 17m 05s. h about 25 km (USCGS)                             |          |                                                          |        |          |          |                |                                                      |
|              | Chatra                                                                                                                   | Z        | iP                                                       | 06     | 23       | 29       |                | Feeble, distant, compression                         |
|              | Dehra Dun                                                                                                                | Z        | eP                                                       | 06     | 24       | 38       |                | Feeble                                               |
|              | New Delhi                                                                                                                | Z        | eP                                                       | 06     | 24       | 41       |                | Feeble, compression                                  |
| 22           | Shillong                                                                                                                 | Z        | iP                                                       | 06     | 29       | 47       |                | Slight, distant, compression                         |
| 22           | New Delhi                                                                                                                | Z        | iP                                                       | 06     | 31       | 53       |                | Tremor, compression                                  |
| 22           | Dehra Dun                                                                                                                | Z        | eP                                                       | 06     | 33       | 13       |                | Tremor 22                                            |
| 22           | New Delhi                                                                                                                | Z        | eP                                                       | 06     | 33       | 29       |                | Slight, rarefaction                                  |
| 22           | Epc: 35.7°N, 89.3°E. Tibet. - H=07h 40m 54s. h about 25 km (USCGS)                                                       |          |                                                          |        |          |          |                |                                                      |
|              | Shillong                                                                                                                 | Z        | eP                                                       | 07     | 43       | 24       |                | Slight, distant                                      |
| 22           | Epc: 12.3°S, 166.6°E. Santa Cruz Islands<br>- H = 08h 06m 38s. h about 151 km (USCGS)<br>Mag. = 6½-6¾ (Pas), 5¾-6 (Pal). |          |                                                          |        |          |          |                |                                                      |
|              | Port Blair                                                                                                               | NE<br>E  | iP<br>i<br>i<br>i<br>i<br>PP<br>i<br>iS<br>PS<br>i<br>SS | 08     | 18       | 21       | 8310           | First ground motion<br>South-West                    |
|              | Shillong                                                                                                                 | ZNE      | iP<br>PP<br>PPP<br>iS<br>PS<br>SS<br>SSS<br>i            | 08     | 18       | 44       | 9470           | Compression, initial ground<br>movement towards West |
|              | Calcutta                                                                                                                 | E        | i<br>i                                                   | 08     | 18       | 57       |                |                                                      |
|              | Bokaro                                                                                                                   | NE       | iP<br>i<br>e                                             | 08     | 19       | 09       |                |                                                      |
|              | Chatra                                                                                                                   | Z<br>ZNE | iP<br>S                                                  | 08     | 19       | 09       | 9130           | Compression                                          |

| Date        | Station       | Compt | Phase   | G<br>h | M<br>m | T<br>s | $\Delta$<br>km                               | Remarks                                                   |    |    |
|-------------|---------------|-------|---------|--------|--------|--------|----------------------------------------------|-----------------------------------------------------------|----|----|
| 22<br>Contd | Visakhapatnam | NE    | iP      | 08     | 19     | 12     | 9510                                         | First ground movement<br>towards South-East               |    |    |
|             |               |       | ePP     |        | 22     | 39     |                                              |                                                           |    |    |
|             |               |       | ePPP    |        | 24     | 38     |                                              |                                                           |    |    |
|             |               |       | iSKS    |        | 29     | 29     |                                              |                                                           |    |    |
|             |               |       | iS      |        | 29     | 44     |                                              |                                                           |    |    |
| Madras      | E             |       | iP      | 08     | 19     | 22     | 9270                                         | Initial ground motion<br>towards West                     |    |    |
|             |               |       | PcP     |        | 19     | 29     |                                              |                                                           |    |    |
|             |               |       | e       |        | 19     | 50     |                                              |                                                           |    |    |
|             |               |       | PP      |        | 22     | 41     |                                              |                                                           |    |    |
|             |               |       | e       |        | 22     | 53     |                                              |                                                           |    |    |
|             |               |       | PPP     |        | 24     | 28     |                                              |                                                           |    |    |
|             |               |       | iS, SKS |        | 29     | 43     |                                              |                                                           |    |    |
|             |               |       | ScS     |        | 30     | 02     |                                              |                                                           |    |    |
|             |               |       | PS      |        | 30     | 34     |                                              |                                                           |    |    |
|             |               |       | PPS     |        | 30     | 57     |                                              |                                                           |    |    |
|             |               |       | SS      |        | 35     | 18     |                                              |                                                           |    |    |
|             |               |       | SSS     |        | 38     | 36     |                                              |                                                           |    |    |
| Kodaikanal  | E             |       | iP      | 08     | 19     | 32     | 11050                                        |                                                           |    |    |
|             |               |       | SKS1    |        | 30     | 11     |                                              |                                                           |    |    |
|             |               |       | iS      |        | 31     | 02     |                                              |                                                           |    |    |
| Hyderabad   | E             |       | iP      | 08     | 19     | 33     | 9320                                         | Initial Ground motion<br>towards West                     |    |    |
|             |               |       | PP      |        | 23     | 03     |                                              |                                                           |    |    |
|             |               |       | iS      |        | 29     | 57     |                                              |                                                           |    |    |
|             |               |       | PS      |        | 31     | 15     |                                              |                                                           |    |    |
|             |               |       | PPS     |        | 31     | 41     |                                              |                                                           |    |    |
|             |               |       | SS      |        | 36     | 03     |                                              |                                                           |    |    |
|             |               |       | SSS     |        | 40     | 18     |                                              |                                                           |    |    |
|             |               |       | Lq      |        | 43     | 03     |                                              |                                                           |    |    |
|             |               |       | Lr      |        | 46     | 24     |                                              |                                                           |    |    |
|             |               |       | M       |        | 53     | 49     |                                              |                                                           |    |    |
| N           |               |       | M       |        | 53     | 54     | Per=12 secs, $\mu=3$<br>Per= 9 secs, $\mu=2$ |                                                           |    |    |
|             |               |       |         |        |        |        |                                              |                                                           |    |    |
| New Delhi   | ZN            |       | iP, PcP | 08     | 19     | 46     | 10500                                        | First ground motion<br>towards North-West,<br>compression |    |    |
|             |               |       | i       |        | 20     | 15     |                                              |                                                           |    |    |
|             |               |       | i       |        | 23     | 30     |                                              |                                                           |    |    |
|             |               |       | PP      |        | 24     | 06     |                                              |                                                           |    |    |
|             |               |       | E       | PPP    |        | 26     |                                              |                                                           | 29 |    |
|             | ZNE           |       |         | SKS1   |        | 30     |                                              |                                                           | 07 |    |
|             |               |       |         | ScS    |        | 30     |                                              |                                                           | 57 |    |
|             | NE            |       |         | i      |        | 31     |                                              |                                                           | 38 |    |
|             |               |       |         | ZE     | PPS    |        |                                              |                                                           | 32 | 57 |
|             |               |       |         | ZNE    | SS     |        |                                              |                                                           | 37 | 52 |
| Dehra Dun   | Z             |       | eP      | 08     | 19     | 48     | 8090                                         |                                                           |    |    |
|             |               |       | PP      |        | 23     | 32     |                                              |                                                           |    |    |
|             |               |       | PPP     |        | 25     | 13     |                                              |                                                           |    |    |
|             |               |       | eS      |        | 29     | 14     |                                              |                                                           |    |    |
|             |               |       | SS      |        | 36     | 13     |                                              |                                                           |    |    |
|             |               |       | SSS     |        | 40     | 17     |                                              |                                                           |    |    |
|             |               |       | Lq      |        | 44     | 17     |                                              |                                                           |    |    |
|             |               |       | M       |        | 56     | 20     |                                              |                                                           |    |    |
| Poona       | Z             |       | iP      | 08     | 19     | 54     |                                              |                                                           |    |    |
|             |               |       | i       |        | 22     | 55     |                                              |                                                           |    |    |
| Bombay      | NE            |       | eP      | 08     | 19     | 59     | 9430                                         |                                                           |    |    |
|             |               |       | PP      |        | 23     | 03     |                                              |                                                           |    |    |
|             | E             |       |         | i      |        | 23     |                                              |                                                           | 49 |    |
|             |               |       |         | PPP    |        | 26     |                                              |                                                           | 09 |    |

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| Date  | Station                                                                                    | Compt   | Phase        | G<br>h | M<br>m | T<br>s               | $\Delta$<br>km | Remarks                      |
|-------|--------------------------------------------------------------------------------------------|---------|--------------|--------|--------|----------------------|----------------|------------------------------|
| 22    | Bombay                                                                                     | E       | ei           | 08     | 23     | 34                   | 9430           |                              |
| Contd | Contd                                                                                      | NE      | iS           |        | 30     | 27                   |                |                              |
|       |                                                                                            |         | PS           |        | 31     | 11                   |                |                              |
|       |                                                                                            | E       | PPS          |        | 32     | 06                   |                |                              |
|       |                                                                                            |         | e            |        | 33     | 57                   |                |                              |
|       |                                                                                            |         | SS           |        | 37     | 39                   |                |                              |
|       |                                                                                            |         | SSS          |        | 41     | 49                   |                |                              |
| 22    | New Delhi                                                                                  | Z       | eP           | 08     | 44     | 55                   |                | Slight, rarefaction          |
| 22    | Bokaro                                                                                     | NE      | iP           | 08     | 46     | 00                   |                | Slight                       |
| 22    | Shillong                                                                                   | Z       | iPg<br>Sg    | 08     | 52     | 39<br>52 49          | 90             | Slight                       |
| 22    | Bokaro                                                                                     | NE      | iP           | 09     | 43     | 04                   |                | Slight                       |
| 22    | Epc: 37.2°N, 95.7°E. Chinghai Province, China<br>- H = 11h 02m 33s. h about 25 km (USCGS)  |         |              |        |        |                      |                |                              |
|       | Shillong                                                                                   | Z       | eP<br>i      | 11     | 05     | 13<br>09 24          |                | Slight, distant              |
| 22    | Shillong                                                                                   | Z       | iPg<br>Sg    | 12     | 00     | 42<br>00 51          | 80             | Slight                       |
| 22    | Chatra                                                                                     | Z       | iP           | 14     | 13     | 35                   |                | Slight                       |
| 22    | Shillong                                                                                   | Z       | iP           | 16     | 27     | 12                   |                | Slight, distant              |
| 22    | Epc: 37.1°N, 95.5°E. Changhai Province, China<br>- H = 17h 57m 03s. h about 35 km (USCGS)  |         |              |        |        |                      |                |                              |
|       | Shillong                                                                                   | Z<br>ZE | eP<br>i      | 17     | 53     | 47<br>18 03 32       |                | Slight, distant              |
| 22    | Chatra                                                                                     | Z       | eP           | 18     | 00     | 02                   |                | Feeble, distant              |
| 22    | New Delhi                                                                                  | Z       | eP           | 18     | 01     | 06                   |                | Tremor, compression          |
| 22    | Calcutta                                                                                   | E       | e            | 18     | 05     | 14                   |                | Slight                       |
| 22    | Shillong                                                                                   | Z       | iP           | 19     | 57     | 26                   |                | Slight, distant, rarefaction |
| 22    | New Delhi                                                                                  | Z       | iP           | 20     | 30     | 12                   |                | Tremor, compression          |
| 22    | Calcutta                                                                                   | E       | e            | 21     | 16     | 28                   |                | Slight                       |
| 22    | Epc: 5.5°S, 152°E. New Britain felt: Palmamal<br>- H = 22h 03m 36s. h about 100 km (USCGS) |         |              |        |        |                      |                |                              |
|       | Shillong                                                                                   | ZE      | iP           | 22     | 14     | 13                   |                | Slight, distant, compression |
|       | Chatra                                                                                     | Z       | iP           | 22     | 14     | 42                   |                | Slight, distant, rarefaction |
|       | Madras                                                                                     | E       | eP<br>e<br>e | 22     | 15     | 03<br>24 53<br>26 05 |                | Slight                       |
|       | Dehra Dun                                                                                  | Z       | eP           | 22     | 15     | 29                   |                | Slight                       |
|       | New Delhi                                                                                  | ZE      | iP           | 22     | 15     | 32                   |                | Slight, West, compression    |

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| Date | Station                                                                                   | Compt   | Phase   | G<br>h | M<br>m | T<br>s   | $\Delta$<br>km | Remarks                       |
|------|-------------------------------------------------------------------------------------------|---------|---------|--------|--------|----------|----------------|-------------------------------|
| 22   | Bombay                                                                                    | NE<br>E | e<br>e  | 22     | 28     | 09<br>33 | 08             | Slight                        |
| 22   | Hyderabad                                                                                 | E       | M       | 22     | 51     | 19       |                | Per=14 sécs, $\mu=4$ , slight |
| 22   | Epc: 36.8°N, 96°E. Chinghai Province, China<br>- H = 23h 29m 14s. h about 25 km (USCGS)   |         |         |        |        |          |                |                               |
|      | Shillong                                                                                  | ZE      | iP<br>i | 23     | 32     | 02<br>37 | 00             | Slight, distant, compression  |
|      | Dehra Dun                                                                                 | Z       | eP      | 23     | 33     | 00       |                | Slight                        |
|      | New Delhi                                                                                 | Z       | eP      | 23     | 33     | 20       |                | Slight, rarefaction           |
| 22   | Shillong                                                                                  | ZE      | eP      | 23     | 45     | 37       |                | Slight, distant               |
| 22   | New Delhi                                                                                 | Z       | iP      | 23     | 53     | 00       |                | Tremor, rarefaction           |
| 23   | Epc: 37.2°N, 95.8°E. Chinghai Province, China<br>- H = 00h 53m 02s. h about 39 km (USCGS) |         |         |        |        |          |                |                               |
|      | Shillong                                                                                  | ZE      | iP<br>e | 00     | 55     | 21<br>59 | 39             | Slight, distant               |
|      | Chatra                                                                                    | Z       | eP      | 00     | 56     | 04       |                | Feeble, distant               |
|      | Dehra Dun                                                                                 | Z       | eP      | 00     | 56     | 49       |                | Slight                        |
|      | New Delhi                                                                                 | Z       | eP      | 00     | 57     | 10       |                | Slight, compression           |
| 23   | Shillong                                                                                  | Z       | iP      | 01     | 05     | 55       |                | Slight, distant, rarefaction  |
| 23   | New Delhi                                                                                 | Z       | eP      | 01     | 46     | 16       |                | Slight, rarefaction           |
| 23   | Shillong                                                                                  | Z       | iP      | 03     | 59     | 03       |                | Slight, distant, rarefaction  |
| 23   | Shillong                                                                                  | Z       | iP      | 04     | 15     | 51       |                | Slight, distant, rarefaction  |
| 23   | Epc: 5.4°S, 151.9°E. New Britain<br>- H = 05h 03m 47s. h about 55 km (USCGS)              |         |         |        |        |          |                |                               |
|      | Shillong                                                                                  | Z       | iP      | 05     | 14     | 29       |                | Slight, distant, rarefaction  |
| 23   | Epc: 5.4°S, 152°E. New Britain, Felt: Rabaul<br>- H = 06h 34m 00s. h about 70 km (USCGS)  |         |         |        |        |          |                |                               |
|      | Shillong                                                                                  | Z       | iP      | 06     | 44     | 48       |                | Slight, distant, rarefaction  |
|      | New Delhi                                                                                 | Z       | eP      | 06     | 46     | 01       |                | Tremor, rarefaction           |
| 23   | Shillong                                                                                  | Z       | eP      | 06     | 54     | 13       |                | Slight, distant               |
| 23   | Epc: 7.3°S, 128.4°E. Banda Sea. - H = 07h 10m 51s. h about 25 km (USCGS)                  |         |         |        |        |          |                |                               |
|      | Shillong                                                                                  | Z       | eP      | 07     | 19     | 34       |                | Slight, distant               |
|      | New Delhi                                                                                 | Z       | eP      | 07     | 21     | 09       |                | Slight, rarefaction           |
| 23   | Bokaro                                                                                    | NE      | iP      | 08     | 40     | 41       |                | Tremor                        |
| 23   | Shillong                                                                                  | Z       | iP      | 09     | 56     | 54       |                | Slight, distant, rarefaction  |

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| Date | Station                                                                                               | Conpt | Phase      | G  | M  | T           | Δ  | Remarks                      |
|------|-------------------------------------------------------------------------------------------------------|-------|------------|----|----|-------------|----|------------------------------|
|      |                                                                                                       |       |            | h  | m  | s           | km |                              |
| 23   | Shillong                                                                                              | Z     | eP         | 15 | 33 | 17          |    | Slight, distant              |
| 23   | Shillong                                                                                              | Z     | eP         | 15 | 33 | 14          |    | Slight, distant              |
| 23   | Chatra                                                                                                | Z     | iP         | 15 | 38 | 05          |    | Feeble, compression          |
|      | Shillong                                                                                              | Z     | iP         | 15 | 38 | 07          |    | Slight, near                 |
| 23   | Shillong                                                                                              | Z     | ePg<br>eSg | 16 | 48 | 51<br>49 01 | 90 | Slight                       |
| 23   | Shillong                                                                                              | Z     | iP         | 16 | 51 | 40          |    | Slight, distant, rarefaction |
| 23   | Shillong                                                                                              | Z     | eP         | 17 | 07 | 39          |    | Slight, distant              |
| 23   | Shillong                                                                                              | Z     | eP         | 17 | 43 | 19          |    | Slight, distant              |
| 23   | Shillong                                                                                              | Z     | iPg<br>iSg | 18 | 32 | 25<br>32 44 | 30 | Slight                       |
| 23   | Shillong                                                                                              | Z     | iP         | 19 | 33 | 53          |    | Slight, distant, rarefaction |
| 23   | Shillong                                                                                              | Z     | eP         | 20 | 39 | 32          |    | Slight, distant              |
| 23   | Epc: 48.2°S, 119.4°E. About 1200 miles South of Australia<br>- H = 20h 48m 03s. h about 25 km (USCGS) |       |            |    |    |             |    |                              |
|      | Shillong                                                                                              | Z     | iP         | 21 | 00 | 14          |    | Slight, distant, rarefaction |
| 23   | Shillong                                                                                              | Z     | eP         | 21 | 16 | 21          |    | Slight, distant              |
| 23   | Shillong                                                                                              | Z     | iP         | 21 | 54 | 01          |    | Slight, distant, rarefaction |
| 23   | Shillong                                                                                              | Z     | eP         | 22 | 00 | 59          |    | Slight, distant              |
| 24   | Epc: 5.4°S, 151.9°E. New Britain. -H= 02h 11m 35.8s.<br>h about 55 km (USCGS)                         |       |            |    |    |             |    |                              |
|      | Shillong                                                                                              | Z     | iP         | 02 | 22 | 19          |    | Slight, distant, compression |
|      | New Delhi                                                                                             | Z     | eP         | 02 | 23 | 36          |    | Slight, rarefaction          |
| 24   | New Delhi                                                                                             | Z     | iP         | 05 | 56 | 31          |    | Slight, compression          |
| 24   | New Delhi                                                                                             | Z     | iP         | 06 | 28 | 14          |    | Slight, compression          |
| 24   | Shillong                                                                                              | Z     | eP         | 08 | 35 | 44          |    | Slight, distant              |
| 24   | Bokaro                                                                                                | NE    | iP         | 08 | 38 | 02          |    | Tremor                       |
| 24   | Shillong                                                                                              | Z     | eP         | 10 | 14 | 12          |    | Slight, distant              |
| 24   | Shillong                                                                                              | Z     | eP         | 10 | 16 | 07          |    | Tremor                       |
| 24   | Dehra Dun                                                                                             | Z     | eP         | 12 | 58 | 11          |    | Tremor                       |
| 24   | Shillong                                                                                              | Z     | eP         | 18 | 25 | 38          |    | Slight, near                 |
| 24   | Dehra Dun                                                                                             | Z     | eP<br>i    | 19 | 43 | 37<br>43 53 |    | Feeble                       |
| 24   | New Delhi                                                                                             | Z     | iP<br>e    | 20 | 29 | 00<br>29 35 |    | Slight, compression          |

| Date | Station                                                                                 | Compt | Phase     | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                      |
|------|-----------------------------------------------------------------------------------------|-------|-----------|--------|--------|-------------|----------------|------------------------------|
| 24   | Shillong                                                                                | Z     | eP        | 22     | 13     | 55          |                | Slight, distant              |
|      | Chatra                                                                                  | Z     | iP        | 22     | 14     | 33          |                | Feeble, compression, distant |
| 25   | Shillong                                                                                | Z     | iP        | 00     | 17     | 05          |                | Slight, near                 |
| 25   | Epc: 5.6°S, 152.2°E. New Britain. - H = 01h 09m 58s<br>h about 25 km (USCGS)            |       |           |        |        |             |                |                              |
|      | Shillong                                                                                | Z     | iP        | 01     | 20     | 43          |                | Slight, distant, rarefaction |
| 25   | New Delhi                                                                               | Z     | iP        | 07     | 34     | 41          |                | RTremor, rarefaction         |
| 25   | Bokaro                                                                                  | NE    | iP        | 08     | 56     | 46          |                | Tremor                       |
| 25   | Shillong                                                                                | Z     | eP        | 09     | 16     | 50          |                | Slight, near                 |
| 25   | Shillong                                                                                | Z     | eP        | 09     | 33     | 42          |                | Slight, distant              |
|      | New Delhi                                                                               | Z     | eP        | 09     | 35     | 29          |                | Slight                       |
| 25   | Epc: 5.4° S, 151.7°E. New Britain. - H = 09h 40m 33s<br>h about 129 km (USCGS)          |       |           |        |        |             |                |                              |
|      | Shillong                                                                                | Z     | eP        | 09     | 51     | 06          |                | Slight, distant              |
| 25   | Shillong                                                                                | Z     | iPg<br>Sg | 10     | 56     | 46<br>56 54 | 70             | Slight                       |
| 25   | Shillong                                                                                | Z     | iP        | 11     | 36     | 55          |                | Slight, distant, compression |
| 25   | Epc: 38°N, 95.9°E. Chinghai Province, China<br>- H = 11h 35m 07s. h about 25 km (USCGS) |       |           |        |        |             |                |                              |
|      | Shillong                                                                                | Z     | iP        | 11     | 37     | 50          |                | Slight, rarefaction          |
|      | New Delhi                                                                               | Z     | eP        | 11     | 39     | 11          |                | Slight, rarefaction          |
| 25   | Shillong                                                                                | Z     | iPg       | 15     | 29     | 47          |                | Slight, local                |
|      | Chatra                                                                                  | Z     | eP        | 15     | 30     | 51          |                | Feeble                       |
| 25   | Shillong                                                                                | Z     | iPg<br>Sg | 15     | 37     | 59<br>38 08 | 80             | Feeble                       |
| 25   | Shillong                                                                                | Z     | iPg<br>Sg | 15     | 40     | 22<br>40 32 | 90             | Feeble                       |
| 25   | Shillong                                                                                | Z     | iPg       | 15     | 50     | 08          |                | Slight, near                 |
| 25   | Shillong                                                                                | Z     | iPg<br>Sg | 17     | 53     | 42<br>53 51 | 80             | Slight                       |
| 25   | Shillong                                                                                | Z     | iP        | 21     | 21     | 34          |                | Slight, distant, rarefaction |
|      | New Delhi                                                                               | Z     | iP        | 21     | 23     | 17          |                | Slight, compression          |
| 25   | Shillong                                                                                | Z     | iPg       | 21     | 31     | 18          |                | Feeble, near                 |
| 25   | New Delhi                                                                               | Z     | iP<br>i   | 21     | 48     | 19<br>48 22 |                | Slight, rarefaction          |
|      | Dehra Dun                                                                               | Z     | e         | 21     | 48     | 24          |                | Slight                       |



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| Date   | Station                                                                        | Compt   | Phase                                                    | G<br>h | M<br>m                        | T<br>s                                                                              | $\Delta$<br>km | Remarks                                                  |
|--------|--------------------------------------------------------------------------------|---------|----------------------------------------------------------|--------|-------------------------------|-------------------------------------------------------------------------------------|----------------|----------------------------------------------------------|
| 25     | Shillong                                                                       | Z       | iP                                                       | 21     | 48                            | 34                                                                                  |                | Slight, distant, rarefaction                             |
| Contd. |                                                                                |         |                                                          |        |                               |                                                                                     |                |                                                          |
| 25     | Port Blair                                                                     | NE      | ePg<br>iSg                                               | 22     | 30                            | 24<br>30 30                                                                         | 60             | Slight                                                   |
| 26     | Shillong                                                                       | Z       | iP                                                       | 00     | 33                            | 25                                                                                  |                | Slight, distant, compression                             |
| 26     | Shillong                                                                       | Z       | iP                                                       | 06     | 52                            | 23                                                                                  |                | Slight, distant, rarefaction                             |
| 26     | Shillong                                                                       | Z       | iP                                                       | 07     | 38                            | 56                                                                                  |                | Slight, distant, compression                             |
| 26     | Shillong                                                                       | Z       | eP                                                       | 10     | 01                            | 07                                                                                  |                | Slight, distant                                          |
|        | Chatra                                                                         | Z       | eP                                                       | 10     | 01                            | 43                                                                                  |                | Feeble, distant                                          |
| 26     | New Delhi                                                                      | Z       | iP<br>i                                                  | 10     | 02                            | 44<br>02 49                                                                         |                | Slight, rarefaction                                      |
| 26     | Bokaro                                                                         | NE      | iP                                                       | 11     | 05                            | 48                                                                                  |                | Slight                                                   |
|        | Shillong                                                                       | Z       | iPg<br>Sg                                                | 11     | 06                            | 44<br>06 55                                                                         | 90             | Slight                                                   |
| 26     | New Delhi                                                                      | Z       | eP                                                       | 13     | 10                            | 59                                                                                  |                | Slight                                                   |
| 26     | Shillong                                                                       | ZNE     | iPg<br>Sg                                                | 17     | 33                            | 35<br>33 39                                                                         | 30             | Slight, initial ground movement towards South-East       |
|        | Chatra                                                                         | Z       | iP                                                       | 17     | 34                            | 35                                                                                  |                | Slight, distant, compression                             |
| 26     | New Delhi                                                                      | Z       | eP                                                       | 18     | 20                            | 26                                                                                  |                | Slight, compression                                      |
| 26     | Epc: 6.7°N, 94.6°E. Nicobar Islands<br>- H = 19h 44m 17s h about 60 km (USCGS) |         |                                                          |        |                               |                                                                                     |                |                                                          |
|        | Port Blair                                                                     | NE<br>N | iP<br>PP<br>PPP<br>Lq                                    | 19     | 45                            | 42<br>45 50<br>45 56<br>46 37                                                       | 610            | Slight, first ground motion towards West                 |
|        |                                                                                | NE<br>N | iS<br>Lr<br>SSS<br>M                                     | 46     | 46<br>46 52<br>47 09<br>47 21 |                                                                                     |                |                                                          |
|        | Madras                                                                         | E       | iP<br>PP<br>PPP<br>i<br>Lq<br>iS<br>SS<br>SSS<br>Lr<br>M | 19     | 47                            | 59<br>48 08<br>48 13<br>48 25<br>50 35<br>50 40<br>50 57<br>51 07<br>51 18<br>52 19 | 1600           | Slight, initial ground motion towards East               |
|        | Visakhapatnam                                                                  | NE      | iP<br>PP<br>PPP<br>iS<br>SS<br>SSS                       | 19     | 48                            | 01<br>48 11<br>48 18<br>50 39<br>50 59<br>51 09                                     | 1570           | Moderate, near, first ground movement towards South-East |
|        | Calcutta                                                                       | E       | eP<br>i                                                  | 19     | 48                            | 01<br>51 22                                                                         |                | Slight                                                   |

| Date          | Station   | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                    |
|---------------|-----------|-------|-------|--------|--------|--------|----------------|------------------------------------------------------------|
| 26<br>Cont'd. | Shillong  | Z     | iP    | 19     | 48     | 35     | 1810           | Slight, rarefaction, initial<br>ground motion towards East |
|               |           | E     | eS    |        | 51     | 55     |                |                                                            |
|               |           |       | i     |        | 52     | 10     |                |                                                            |
|               |           |       | M     |        | 53     | 15     |                |                                                            |
|               | Hyderabad | NE    | iP    | 19     | 48     | 41     | 2150           | Slight, initial ground<br>movement South and East          |
|               |           |       | iS    |        | 52     | 14     |                |                                                            |
|               |           | E     | Lr    |        | 52     | 57     |                |                                                            |
|               |           | N     | Lr    |        | 53     | 02     |                |                                                            |
|               |           | E     | M     |        | 54     | 59     |                | Per=8 secs, $\mu = 3$<br>Per=8 secs, $\mu = 3$             |
|               | Bokaro    | NE    | iP    | 19     | 48     | 41     | 2090           | Slight, initial ground<br>movement towards South-East      |
|               |           |       | PPP   |        | 49     | 06     |                |                                                            |
|               |           |       |       | S      |        | 52     | 08             |                                                            |
|               |           |       |       | Lq     |        | 52     | 15             |                                                            |
|               |           |       |       | SSS    |        | 52     | 50             |                                                            |
|               |           |       |       | Lr     |        | 53     | 08             |                                                            |
|               |           |       | M     |        | 54     | 39     |                |                                                            |
|               | Tocklai   | E     | iP    | 19     | 48     | 51     | 2130           | Slight                                                     |
|               |           |       | eS    |        | 52     | 22     |                |                                                            |
|               | Chatra    | Z     | iP    | 19     | 49     | 02     | 2300           | Slight, compression                                        |
|               |           |       | ZN    | S      |        | 52     |                |                                                            |
| 26            | Bombay    | E     | e     | 19     | 49     | 24     |                | Slight, and deep                                           |
|               |           |       | e     |        | 49     | 59     |                |                                                            |
|               |           | NE    | e     |        | 53     | 51     |                |                                                            |
|               | Poona     | Z     | iP    | 19     | 49     | 27     | 2570           | Slight                                                     |
|               |           |       | iS    |        | 53     | 35     |                |                                                            |
|               |           | N     | Lq    |        | 54     | 02     |                |                                                            |
|               |           |       |       | SS     |        | 54     | 31             |                                                            |
|               |           |       |       | SSS    |        | 54     | 41             |                                                            |
|               |           |       |       | Lr     |        | 55     | 10             |                                                            |
|               |           |       | M     |        | 57     | 04     |                |                                                            |
|               | Sehore    | NE    | iP    | 19     | 49     | 29     | 2860           | Slight                                                     |
|               |           | E     | PcP   |        | 53     | 44     |                |                                                            |
|               |           | NE    | eS    |        | 53     | 56     |                |                                                            |
|               |           |       |       | SS     |        | 54     | 23             |                                                            |
|               |           | E     | SSS   |        | 55     | 01     |                |                                                            |
|               | New Delhi | Z     | iP    | 19     | 50     | 02     | 2890           | Slight, rarefaction, first<br>ground motion South-East     |
|               |           | E     | iS    |        | 54     | 31     |                |                                                            |
|               | Dehra Dun | Z     | eP    | 19     | 50     | 08     | 2990           | Slight                                                     |
|               |           |       |       | eS     |        | 54     |                |                                                            |
| 26            | Shillong  | Z     | eP    | 20     | 00     | 04     |                | Slight, distant                                            |
| 26            | Shillong  | Z     | eP    | 23     | 44     | 22     |                | Slight, distant                                            |
| 27            | New Delhi | Z     | iP    | 04     | 40     | 38     |                | Tremor, rarefaction                                        |
| 27            | Shillong  | Z     | eP    | 05     | 39     | 07     |                | Slight, distant                                            |
| 27            | New Delhi | Z     | iP    | 10     | 53     | 57     |                | Tremor, rarefaction                                        |
| 27            | Dehra Dun | Z     | eP    | 10     | 59     | 07     |                | Feeble                                                     |

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| Date         | Station                                                                                                                               | Compt | Phase     | G M T<br>h m s | $\Delta$<br>km | Remarks                      |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------|-------|-----------|----------------|----------------|------------------------------|
| 27<br>Contd. | New Delhi                                                                                                                             | Z     | iP        | 10 59 20       |                | Slight, compression          |
|              |                                                                                                                                       |       |           | 11 00 53       |                |                              |
|              | Shillong                                                                                                                              | Z     | iP        | 11 00 39       |                | Slight, distant, rarefaction |
| 27           | Shillong                                                                                                                              | Z     | iP        | 11 01 40       |                | Slight, distant, compression |
| 27           | Shillong                                                                                                                              | Z     | iP        | 13 45 52       |                | Slight, distant, compression |
| 27           | Shillong                                                                                                                              | Z     | eP        | 14 13 27       |                | Slight, distant              |
| 27           | Shillong                                                                                                                              | Z     | iP        | 14 28 50       |                | Slight, distant, compression |
| 27           | Chatra                                                                                                                                | Z     | iP<br>S   | 14 42 44       | 180            | Feeble, rarefaction          |
|              |                                                                                                                                       |       |           | 43 06          |                |                              |
|              | New Delhi                                                                                                                             | Z     | eP        | 14 44 11       |                | Tremor, rarefaction          |
|              | Dehra Dun                                                                                                                             | Z     | eP        | 14 44 20       |                | Tremor                       |
| 27           | Shillong                                                                                                                              | Z     | eP        | 17 10 26       |                | Slight, distant              |
| 27           | Shillong                                                                                                                              | Z     | iP        | 17 55 16       |                | Slight, distant, compression |
| 27           | Shillong                                                                                                                              | Z     | iP        | 19 46 45       |                | Slight, distant, rarefaction |
|              | Chatra                                                                                                                                | Z     | iP        | 19 47 21       |                | Feeble, distant, compression |
| 28           | Epc: 16.4°N, 120.4°E. Luzon, Philippine Islands,<br>Felt: Dagupan, Lingayen and Binmalay.<br>- H = 02h 48m 13s. h about 25 km (USCGS) |       |           |                |                |                              |
|              | Shillong                                                                                                                              | Z     | eP        | 02 54 07       |                | Slight, distant              |
| 28           | Epc: 3.3°S, 146°E. Bismark Sea. - H = 03h 08m 07s.<br>h about 25 km (USCGS)                                                           |       |           |                |                |                              |
|              | Shillong                                                                                                                              | Z     | eP        | 03 18 10       |                | Slight, distant              |
| 28           | Shillong                                                                                                                              | Z     | iP<br>iS  | 07 03 31       | 230            | Slight, compression          |
|              |                                                                                                                                       |       |           | 04 03          |                |                              |
| 28           | Chatra                                                                                                                                | Z     | iPg<br>Sg | 09 25 31       | 100            | Feeble, compression          |
|              |                                                                                                                                       |       |           | 25 42          |                |                              |
| 28           | Epc: 31.1°N, 140.9°E. South of Honshu, Japan<br>- H = 10h 09m 57s. h about 158 km (USCGS)                                             |       |           |                |                |                              |
|              | Shillong                                                                                                                              | Z     | eP        | 10 17 48       |                | Slight, distant              |
|              | New Delhi                                                                                                                             | Z     | iP        | 10 19 18       |                | Slight, rarefaction          |
| 28           | Shillong                                                                                                                              | Z     | eP        | 10 51 56       |                | Slight, distant              |
| 28           | New Delhi                                                                                                                             | Z     | iP        | 14 06 37       |                | Slight, compression          |
| 28           | Shillong                                                                                                                              | Z     | iP        | 17 22 25       |                | Slight, distant, rarefaction |
| 28           | Epc: 7°S. 128.9°E. Banda Sea. - H = 21h 45m 18s. h about 65 km (USCGS)                                                                |       |           |                |                |                              |
|              | Shillong                                                                                                                              | Z     | iP        | 21 53 56       |                | Slight, distant, rarefaction |

| Date         | Station                                                                                                 | Compt | Phase    | G<br>h | M<br>m   | T<br>s      | $\Delta$<br>km | Remarks                      |
|--------------|---------------------------------------------------------------------------------------------------------|-------|----------|--------|----------|-------------|----------------|------------------------------|
| 28<br>Contd. | New Delhi                                                                                               | Z     | eP       | 21     | 55       | 27          |                | Slight, rarefaction          |
| 28           | Shillong                                                                                                | Z     | iPg      | 22     | 08       | 56          |                | Slight, near                 |
| 29           | Shillong                                                                                                | Z     | iP       | 00     | 07       | 53          |                | Slight, distant, rarefaction |
|              | New Delhi                                                                                               | Z     | iP       | 00     | 08       | 38<br>08 44 |                | Slight, rarefaction          |
|              | Dehra Dun                                                                                               | Z     | eP       | 00     | 08       | 43          |                | Slight                       |
| 29           | Shillong                                                                                                | Z     | iPg      | 03     | 59       | 19          |                | Slight, local                |
| 29           | New Delhi                                                                                               | Z     | iP<br>i  | 08     | 11<br>13 | 34<br>12    |                | Slight, compression          |
|              | Dehra Dun                                                                                               | Z     | eP       | 08     | 13       | 01          |                | Slight                       |
| 29           | Port Blair                                                                                              | N     | eP<br>iS | 08     | 20<br>30 | 48<br>20    | 290            | Slight                       |
|              | Shillong                                                                                                | Z     | iP       | 08     | 32       | 42          |                | Slight, distant, compression |
|              | New Delhi                                                                                               | Z     | iP<br>i  | 08     | 34<br>34 | 16<br>29    |                | Slight, compression          |
|              | Dehra Dun                                                                                               | Z     | eP       | 08     | 34       | 39          |                | Slight                       |
| 29           | New Delhi                                                                                               | Z     | eP       | 08     | 58       | 33          |                | Tremor, rarefaction          |
| 29           | Port Blair                                                                                              | N     | eP<br>eS | 09     | 13<br>14 | 30<br>25    | 520            | Slight                       |
|              | New Delhi                                                                                               | Z     | eP       | 09     | 18       | 33          |                | Slight, compression          |
|              | Dehra Dun                                                                                               | Z     | eP       | 09     | 18       | 46          |                | Slight                       |
| 29           | New Delhi                                                                                               | Z     | eP       | 09     | 22       | 54          |                | Slight, rarefaction          |
| 29           | Shillong                                                                                                | Z     | iP<br>eS | 11     | 07<br>08 | 50<br>18    | 210            | Slight, rarefaction          |
| 29           | Shillong                                                                                                | Z     | iP       | 15     | 47       | 18          |                | Slight, distant, rarefaction |
| 29           | Epc: 51.8°N, 177.1°W. Andrean of Islands, Aleutian Islands.<br>- H = 21h 00m 16s. h about 25 km (USCGS) |       |          |        |          |             |                |                              |
|              | Shillong                                                                                                | Z     | iP       | 21     | 11       | 34          |                | Slight, distant, rarefaction |
|              | Chatra                                                                                                  | Z     | iP       | 21     | 11       | 46          |                | Feeble, compression, distant |
|              | Dehra Dun                                                                                               | Z     | eP       | 21     | 11       | 58          |                | Slight                       |
| 29           | Shillong                                                                                                | Z     | eP       | 21     | 35       | 05          |                | Slight, distant              |
| 29           | Epc: 26.3°S, 113.7°W. Eastern Islands Region<br>- H = 21h 52m 50s. h about 25 km (USCGS)                |       |          |        |          |             |                |                              |
|              | New Delhi                                                                                               | Z     | eP       | 22     | 03       | 26          |                | Slight                       |
|              | Shillong                                                                                                | Z     | iP       | 22     | 05       | 25          |                | Slight, distant, compression |
| 30           | New Delhi                                                                                               | Z     | eP       | 00     | 58       | 16          |                | Slight                       |

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| Date | Station                                                                                      | Compt   | Phase        | G<br>h | M<br>m | T<br>s                  | $\Delta$<br>km | Remarks                      |
|------|----------------------------------------------------------------------------------------------|---------|--------------|--------|--------|-------------------------|----------------|------------------------------|
| 30   | Shillong                                                                                     | Z       | iP           | 05     | 25     | 39                      |                | Slight, near                 |
| 30   | Shillong                                                                                     | Z       | iPg<br>eSg   | 06     | 13     | 03<br>13 12             | 80             | Slight                       |
|      | Chatra                                                                                       | Z       | iP<br>S      | 06     | 13     | 57<br>14 17             | 160            | Feeble, rarefaction          |
| 30   | Shillong                                                                                     | Z       | iPg          | 07     | 05     | 37                      |                | Slight, near                 |
| 30   | New Delhi                                                                                    | Z       | iP           | 08     | 02     | 11                      |                | Slight, rarefaction          |
| 30   | New Delhi                                                                                    | Z       | iP           | 08     | 46     | 45                      |                | Slight, compression          |
| 30   | New Delhi                                                                                    | Z       | iP           | 08     | 49     | 30                      |                | Tremor, rarefaction          |
| 30   | Dehra Dun                                                                                    | Z       | eP           | 10     | 35     | 44                      |                | Slight                       |
|      | New Delhi                                                                                    | Z       | eP           | 10     | 35     | 52                      |                | Slight                       |
|      | Shillong                                                                                     | Z       | eP           | 10     | 38     | 21                      |                | Slight, distant              |
| 30   | Chatra                                                                                       | Z       | iPg<br>Sg    | 11     | 09     | 12<br>09 23             | 90             | Feeble, compression          |
| 30   | Shillong                                                                                     | Z       | ePg<br>iSg   | 12     | 51     | 23<br>51 32             | 80             | Feeble                       |
| 30   | Shillong                                                                                     | ZE      | iP<br>iS     | 18     | 23     | 50<br>26 00             | 1280           | Slight, compression          |
|      | Chatra                                                                                       | Z       | iP<br>i      | 18     | 24     | 35<br>31 13             |                | Feeble, distant, compression |
| 30   | Shillong                                                                                     | ZE      | eP<br>iS     | 18     | 30     | 28<br>32 33             | 1220           | Slight                       |
| 30   | Shillong                                                                                     | Z       | iP           | 19     | 40     | 00                      |                | Slight, near                 |
| 30   | Shillong                                                                                     | Z       | iPg          | 20     | 35     | 44                      |                | Slight, near                 |
|      | Chatra                                                                                       | Z       | iP<br>S      | 20     | 36     | 28<br>37 25             | 530            | Feeble, compression          |
| 30   | Shillong                                                                                     | ZE      | eP           | 22     | 46     | 14                      |                | Slight, distant              |
| 30   | Shillong                                                                                     | Z       | iP           | 23     | 31     | 38                      |                | Slight, distant, rarefaction |
|      | Chatra                                                                                       | Z       | iP           | 23     | 31     | 47                      |                | Feeble, distant, compression |
| 31   | Epc: 24.5°N, 65.8°E. Off Coast of West Pakistan.<br>- H = 01h 57m 02s. h about 25 km (USCGS) |         |              |        |        |                         |                |                              |
|      | Bombay                                                                                       | E<br>NE | eP<br>e<br>e | 01     | 59     | 09<br>02 00 31<br>01 30 |                | Slight                       |
|      | Poona                                                                                        | Z       | iP           | 01     | 59     | 20                      |                | Slight                       |
|      | New Delhi                                                                                    | ZNE     | eP           | 01     | 59     | 35                      |                | Slight                       |

| Date        | Station                                                         | Compt | Phase   | G  | M  | T  | Δ    | Remarks                                         |
|-------------|-----------------------------------------------------------------|-------|---------|----|----|----|------|-------------------------------------------------|
|             |                                                                 |       |         | h  | m  | s  | km   |                                                 |
| 31<br>Contd | Dehra Dun                                                       | Z     | eP      | 01 | 59 | 52 | 1360 | Slight                                          |
|             |                                                                 |       | iS      | 02 | 02 | 10 |      |                                                 |
|             |                                                                 |       | SS      |    | 02 | 25 |      |                                                 |
|             |                                                                 |       | SSS     |    | 02 | 44 |      |                                                 |
|             |                                                                 |       | M       |    | 03 | 40 |      |                                                 |
|             | Bokaro                                                          | NE    | eP      | 02 | 01 | 12 |      | Slight, distant                                 |
|             |                                                                 |       | i       |    | 07 | 05 |      |                                                 |
|             | Chatra                                                          | Z     | iP      | 02 | 01 | 26 |      | Rarefaction                                     |
|             | Shillong                                                        | Z     | iP      | 02 | 02 | 11 |      | Slight, distant, rarefaction                    |
|             | Calcutta                                                        | E     | e       | 02 | 05 | 00 |      | Slight                                          |
|             |                                                                 |       | i       |    | 08 | 30 |      |                                                 |
| 31          | Epc: 7.7°N, 124°E. Mindanao, Philippine Islands                 |       |         |    |    |    |      |                                                 |
|             | - H = 05h 11m 17s. h about 40 km (USCGS)                        |       |         |    |    |    |      |                                                 |
|             | Shillong                                                        | Z     | iP      | 05 | 18 | 25 |      | Slight, distant, compression                    |
|             | Chatra                                                          | Z     | iP      | 05 | 19 | 04 |      | Feeble, distant, rarefaction                    |
|             | New Delhi                                                       | Z     | eP      | 05 | 20 | 11 |      | Slight                                          |
| 31          | Chatra                                                          | Z     | iP      | 05 | 45 | 27 | 200  | Feeble                                          |
|             |                                                                 |       | eS      |    | 45 | 51 |      |                                                 |
| 31          | Epc: 22.1°N, 142.6°E. Volcano Islands Region. Mag: 6 - 6½ (Pas) |       |         |    |    |    |      |                                                 |
|             | - H = 06h 28m 26s. h about 257 km (USCGS)                       |       |         |    |    |    |      |                                                 |
|             | Shillong                                                        | ZNE   | iP      | 06 | 36 | 29 | 1090 | Compression, initial ground motion towards West |
|             |                                                                 |       | PPP     |    | 36 | 45 |      |                                                 |
|             |                                                                 |       | Lr      |    | 38 | 41 |      |                                                 |
|             |                                                                 |       | M       |    | 39 | 28 |      |                                                 |
|             |                                                                 |       | PcP     |    | 42 | 46 |      |                                                 |
|             |                                                                 |       | i       |    | 44 | 45 |      |                                                 |
|             |                                                                 |       | PcS/ScP |    | 46 | 16 |      |                                                 |
|             |                                                                 |       | ScS     |    | 49 | 51 |      |                                                 |
|             | Calcutta                                                        | E     | e       | 06 | 36 | 53 |      |                                                 |
|             | Chatra                                                          | ZNE   | iP      | 06 | 37 | 00 |      |                                                 |
|             |                                                                 |       | i       |    | 38 | 20 |      |                                                 |
|             |                                                                 |       | i       |    | 40 | 31 |      |                                                 |
|             | Bokaro                                                          | E     | iP      | 06 | 37 | 14 | 7360 | First ground motion towards West                |
|             |                                                                 |       | i       |    | 37 | 28 |      |                                                 |
|             |                                                                 |       | i       |    | 38 | 49 |      |                                                 |
|             |                                                                 |       | eS      |    | 46 | 02 |      |                                                 |
|             |                                                                 |       | i       |    | 46 | 23 |      |                                                 |
|             |                                                                 |       | i       |    | 48 | 38 |      |                                                 |
|             |                                                                 |       | i       |    | 50 | 01 |      |                                                 |
|             | Dehra Dun                                                       | Z     | eP      | 06 | 37 | 54 | 6160 |                                                 |
|             |                                                                 |       | eS      |    | 45 | 38 |      |                                                 |
|             | New Delhi                                                       | ZE    | iP      | 06 | 38 | 00 | 6160 | Compression, initial ground motion West         |
|             |                                                                 |       | PcP     |    | 38 | 54 |      |                                                 |
|             |                                                                 |       | i       |    | 39 | 20 |      |                                                 |
|             |                                                                 |       | PP      |    | 39 | 30 |      |                                                 |
|             |                                                                 |       | PPP     |    | 41 | 25 |      |                                                 |

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| Date         | Station             | Compt | Phase    | G<br>h | M<br>m | T<br>s | Δ<br>km | Remarks                      |
|--------------|---------------------|-------|----------|--------|--------|--------|---------|------------------------------|
| 31<br>Contd. | New Delhi<br>Contd. | ZE    | PcP, ScP | 06     | 42     | 55     |         |                              |
|              |                     | NE    | iS       |        | 45     | 44     |         |                              |
|              |                     | ZNE   | ScS      |        | 47     | 11     |         |                              |
|              |                     | NE    | iS       |        | 45     | 44     |         |                              |
|              |                     | ZNE   | ScS      |        | 47     | 11     |         |                              |
|              |                     | NE    | i        |        | 48     | 03     |         |                              |
|              |                     | E     | i        |        | 49     | 19     |         |                              |
|              |                     | ZNE   | SS       |        | 49     | 38     |         |                              |
|              |                     | E     | SSS      |        | 51     | 43     |         |                              |
|              |                     |       | Madras   | E      | eP     | 06     | 38      | 07                           |
|              |                     |       | e        |        | 38     | 23     |         |                              |
|              |                     |       | PcP      |        | 39     | 17     |         |                              |
|              |                     |       | PP       |        | 40     | 22     |         |                              |
|              |                     |       | PPP      |        | 41     | 42     |         |                              |
|              |                     |       | iS       |        | 46     | 01     |         |                              |
|              |                     |       | PS       |        | 46     | 11     |         |                              |
|              |                     |       | PPS      |        | 46     | 20     |         |                              |
|              |                     |       | ScS      |        | 47     | 57     |         |                              |
|              |                     |       | SS       |        | 49     | 44     |         |                              |
|              |                     |       | Lq       |        | 52     | 10     |         |                              |
|              | Poona               | Z     | iP       | 06     | 38     | 35     | 6770    |                              |
|              |                     | N     | iS       |        | 46     | 53     |         |                              |
|              | Bombay              | NE    | eP       | 06     | 38     | 43     | 6820    |                              |
|              |                     |       | eS       |        | 47     | 03     |         |                              |
|              |                     | N     | e        |        | 48     | 11     |         |                              |
|              |                     | NE    | e        |        | 48     | 43     |         |                              |
| 31           | Shillong            | Z     | iP       | 10     | 24     | 24     |         | Slight, distant, compression |
|              | Chatra              | Z     | iP       | 10     | 24     | 57     |         | Slight                       |
| 31           | Shillong            | Z     | iP       | 11     | 29     | 32     | 240     | Slight                       |
|              |                     |       | iS       |        | 30     | 06     |         |                              |
| 31           | Chatra              | Z     | iP       | 13     | 29     | 32     |         | Slight                       |
|              | Shillong            | Z     | eP       | 13     | 29     | 50     |         | Slight, near                 |
| 31           | Shillong            | Z     | iP       | 16     | 36     | 40     |         | Tremor                       |
| 31           | Shillong            | Z     | eP       | 20     | 28     | 10     |         | Slight, distant              |
| 31           | Shillong            | Z     | eP       | 21     | 39     | 05     |         | Slight, distant              |

**Earthquake Reports  
(Non Instrumental)**

The following is the list of earthquakes that were reported by Voluntary Observers from different stations during the month of May 1962.

| Place    | Date | Time in GMT<br>h. m. | Duration of shocks in<br>secs | No. of shocks | Intensity in R.F. scale | Remarks |
|----------|------|----------------------|-------------------------------|---------------|-------------------------|---------|
| Shillong | 18   | 18 32                | 5                             | 1             | IV                      |         |
| Shillong | 19   | 06 32                | 20                            | 1             | III                     |         |
| Shillong | 19   | 21 30                | 15                            | 1             | IV                      |         |
| Lunding  | 25   | 15 28                | 2                             | 1             | V                       |         |
| Shillong | 26   | 17 30                | 5                             | 1             | V                       |         |
| Shillong | 29   | 04 00                | 10                            | 1             | IV                      |         |

**Microseismic Tabulation**

| Date                     | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec | Date            | Hour GMT | K   | Mean Amplitude in mm     | Mean Period in sec |
|--------------------------|----------|-----|----------------------|--------------------|-----------------|----------|-----|--------------------------|--------------------|
| <i>Station. Shillong</i> |          |     |                      |                    | <i>May 1962</i> |          |     |                          |                    |
|                          |          |     | <i>Compt.</i>        | <i>E. W.</i>       |                 |          |     | <i>Station. Shillong</i> |                    |
| 01                       | 00       | 2   | 0.4                  | 5.0                | 08              | 00       | ... | -                        | -                  |
|                          | 06       | 2   | 0.3                  | 5.0                |                 | 06       | 2   | 0.2                      | 5.6                |
|                          | 12       | 2   | 0.3                  | 4.8                |                 | 12       | 2   | 0.2                      | 5.5                |
|                          | 18       | 2   | 0.3                  | 5.2                |                 | 18       | 2   | 0.3                      | 5.5                |
| 02                       | 00       | 2   | 0.3                  | 5.0                | 09              | 00       | 2   | 0.4                      | 5.2                |
|                          | 06       | 2   | 0.2                  | 5.3                |                 | 06       | ... | -                        | -                  |
|                          | 12       | 2   | 0.3                  | 5.2                |                 | 12       | 2   | -                        | -                  |
|                          | 18       | 2   | 0.4                  | 4.7                |                 | 18       | 2   | -                        | -                  |
| 03                       | 00       | 2   | 0.4                  | 4.5                | 10              | 00       | 2   | -                        | -                  |
|                          | 06       | 2   | 0.3                  | 4.8                |                 | 06       | 2   | 0.3                      | 4.6                |
|                          | 12       | 2   | 0.3                  | 5.4                |                 | 12       | 2   | 0.2                      | 6.0                |
|                          | 18       | 2   | 0.2                  | 5.5                |                 | 18       | 2   | 0.3                      | 5.6                |
| 04                       | 00       | 2   | 0.2                  | 5.2                | 11              | 00       | 2   | 0.2                      | 6.7                |
|                          | 06       | 2   | 0.4                  | 4.8                |                 | 06       | 2   | 0.2                      | -                  |
|                          | 12       | 2   | 0.4                  | 6.0                |                 | 12       | 2   | 0.2                      | -                  |
|                          | 18       | 2   | 0.3                  | 5.5                |                 | 18       | 2   | 0.3                      | 5.0                |
| 05                       | 00       | 2   | 0.4                  | 4.7                | 12              | 00       | 2   | 0.3                      | 5.0                |
|                          | 06       | 3   | 0.3                  | 5.0                |                 | 06       | 2   | 0.4                      | 4.8                |
|                          | 12       | ... | -                    | -                  |                 | 12       | 2   | 0.4                      | 4.8                |
|                          | 18       | 2   | 0.2                  | 4.9                |                 | 18       | 2   | 0.3                      | 4.6                |
| 06                       | 00       | 2   | 0.3                  | 5.4                | 13              | 00       | 2   | 0.4                      | 5.1                |
|                          | 06       | 2   | 0.2                  | 6.0                |                 | 06       | 2   | 0.3                      | 6.0                |
|                          | 12       | 2   | 0.2                  | 5.8                |                 | 12       | 2   | 0.3                      | 5.5                |
|                          | 18       | 2   | 0.2                  | 5.9                |                 | 18       | 2   | 0.3                      | 5.5                |
| 07                       | 00       | 2   | 0.3                  | 5.4                | 14              | 00       | 2   | 0.4                      | 5.0                |
|                          | 06       | 2   | 0.3                  | 5.8                |                 | 06       | 2   | 0.5                      | 5.4                |
|                          | 12       | ... | -                    | -                  |                 | 12       | 3   | 0.6                      | 5.5                |
|                          | 18       | ... | -                    | -                  |                 | 18       | 2   | 0.4                      | 5.7                |



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| Date            | Hour GMT        | K             | Mean Amplitude in mm | Mean Period in sec | Date            | Hour GMT        | K             | Mean Amplitude in mm | Mean Period in sec |
|-----------------|-----------------|---------------|----------------------|--------------------|-----------------|-----------------|---------------|----------------------|--------------------|
| <hr/>           |                 |               |                      |                    | <hr/>           |                 |               |                      |                    |
| <i>Station.</i> | <i>Shillong</i> | <i>Compt.</i> | <i>E. W.</i>         |                    | <i>Station.</i> | <i>Shillong</i> | <i>Compt.</i> | <i>E. W.</i>         |                    |
| 15              | 00              | 2             | 0.4                  | 4.8                | 27              | 00              | 2             | 0.3                  | 5.0                |
|                 | 06              | 2             | 0.2                  | 4.6                |                 | 06              | 2             | -                    | -                  |
|                 | 12              | 2             | 0.2                  | 4.0                |                 | 12              | 2             | -                    | -                  |
|                 | 18              | 2             | 0.2                  | 4.0                |                 | 18              | 2             | -                    | -                  |
| 16              | 00              | 2             | 0.3                  | 5.0                | 28              | 00              | 2             | -                    | -                  |
|                 | 06              | 2             | 0.6                  | 4.2                |                 | 06              | 2             | 0.4                  | 5.2                |
|                 | 12              | 2             | 0.4                  | 5.5                |                 | 12              | 2             | 0.3                  | 5.4                |
|                 | 18              | 2             | 0.5                  | 5.0                |                 | 18              | 2             | 0.3                  | 6.0                |
| 17              | 00              | 2             | 0.5                  | 4.8                | 29              | 00              | 2             | 0.3                  | 5.0                |
|                 | 06              | 2             | 0.6                  | 5.0                |                 | 06              | 2             | 0.4                  | 4.7                |
|                 | 12              | 2             | 0.4                  | 5.6                |                 | 12              | 2             | 0.4                  | 5.0                |
|                 | 18              | 2             | 0.4                  | 5.4                |                 | 18              | 2             | 0.4                  | 5.0                |
| 18              | 00              | 2             | 0.4                  | 5.2                | 30              | 00              | 2             | 0.3                  | 5.0                |
|                 | 06              | 2             | 0.5                  | 4.8                |                 | 06              | 2             | 0.3                  | 5.4                |
|                 | 12              | 2             | 0.3                  | 4.8                |                 | 12              | 2             | 0.4                  | 5.0                |
|                 | 18              | 2             | 0.4                  | 5.0                |                 | 18              | 2             | 0.3                  | 5.5                |
| 19              | 00              | 2             | 0.4                  | 5.2                | 31              | 00              | 2             | 0.3                  | 4.5                |
|                 | 06              | 2             | 0.4                  | 4.3                |                 | 06              | 2             | 0.3                  | 5.5                |
|                 | 12              | 2             | 0.3                  | 4.6                |                 | 12              | 2             | 0.3                  | 4.8                |
|                 | 18              | 2             | 0.3                  | 4.6                |                 | 18              | 2             | 0.3                  | 5.0                |
| 20              | 00              | 2             | 0.2                  | 4.7                | <hr/>           |                 |               |                      |                    |
|                 | 06              | 2             | 0.3                  | 4.3                | <i>Station.</i> | <i>Madras</i>   | <i>Compt.</i> | <i>E. W.</i>         |                    |
|                 | 12              | 2             | 0.4                  | 5.0                | 01              | 00              | 1             | 0.5                  | 2.7                |
|                 | 18              | 2             | 0.4                  | 4.9                |                 | 03              | 1             | 0.4                  | 2.7                |
| 21              | 00              | 2             | 0.4                  | 4.9                |                 | 06              | 1             | 0.4                  | 2.7                |
|                 | 06              | 2             | 0.3                  | 5.5                |                 | 12              | 1             | 0.4                  | 2.7                |
|                 | 12              | 2             | 0.3                  | 5.6                |                 | 18              | 1             | 0.4                  | 2.7                |
|                 | 18              | 2             | 0.2                  | 5.5                | 02              | 00              | 1             | 0.3                  | 2.6                |
| 22              | 00              | 2             | 0.3                  | 4.7                |                 | 03              | 1             | 0.3                  | 2.5                |
|                 | 06              | 2             | 0.3                  | 4.6                |                 | 06              | 3             | 0.3                  | 2.7                |
|                 | 12              | 2             | 0.3                  | 4.8                |                 | 12              | 3             | 0.3                  | 2.7                |
|                 | 18              | 2             | 0.2                  | 5.1                |                 | 18              | 3             | 0.2                  | 2.6                |
| 23              | 00              | 2             | 0.2                  | 5.1                | 03              | 00              | 3             | 0.2                  | 2.5                |
|                 | 06              | 2             | 0.3                  | 5.9                |                 | 03              | 3             | 0.2                  | 2.6                |
|                 | 12              | 2             | 0.4                  | 5.0                |                 | 06              | 3             | 0.2                  | 2.6                |
|                 | 18              | 2             | 0.4                  | 5.5                |                 | 12              | 3             | 0.2                  | 2.7                |
| 24              | 00              | 2             | 0.4                  | 5.0                |                 | 18              | 3             | 0.2                  | 2.6                |
|                 | 06              | 2             | 0.5                  | 5.5                |                 |                 | 3             | 0.1                  | 1.5                |
|                 | 12              | 2             | 0.5                  | 5.3                | 04              | 00              | 3             | 0.2                  | 2.4                |
|                 | 18              | 2             | 0.5                  | 5.4                |                 |                 | 3             | 0.1                  | 1.8                |
| 25              | 00              | 2             | 0.5                  | 4.5                |                 | 03              | 3             | 0.1                  | 1.7                |
|                 | 06              | 2             | 0.6                  | 4.3                |                 |                 | 3             | 0.1                  | 2.3                |
|                 | 12              | 2             | 0.6                  | 4.0                |                 | 06              | 3             | 0.1                  | 2.7                |
|                 | 18              | 2             | 0.6                  | 4.0                |                 | 12              | 3             | 0.1                  | 2.5                |
| 26              | 00              | 2             | 0.5                  | 5.0                |                 | 18              | 3             | 0.1                  | 2.0                |
|                 | 06              | 2             | 0.4                  | 4.3                | 05              | 00              | 3             | 0.1                  | 1.8                |
|                 | 12              | 2             | 0.4                  | 4.6                |                 | 03              | 3             | 0.1                  | 1.8                |
|                 | 18              | 2             | 0.4                  | 5.0                |                 |                 | 3             | 0.1                  | 2.3                |

| Date   | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec | Date | Hour | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|--------|------|-----|-------------------------|-----------------------|------|------|-----|-------------------------|-----------------------|
| 05     | 06   | 3   | 0.1                     | 1.6                   | 13   | 00   | 3   | 0.3                     | 2.7                   |
| Contd. |      | 3   | 0.1                     | 2.3                   |      | 03   | 1   | 0.3                     | 2.5                   |
|        | 12   | 3   | 0.2                     | 2.5                   |      | 06   | 1   | 0.8                     | 2.5                   |
|        | 18   | 3   | 0.1                     | 2.5                   |      | 12   | 1   | 0.5                     | 2.5                   |
|        |      | 3   | 0.1                     | 1.7                   |      | 18   | 1   | 0.5                     | 2.6                   |
| 06     | 00   | 1   | 0.1                     | 1.7                   | 14   | 00   | 1   | 0.5                     | 2.7                   |
|        | 03   | 1   | 0.1                     | 1.6                   |      | 03   | 1   | 0.5                     | 2.7                   |
|        | 06   | 3   | 0.1                     | 1.6                   |      | 06   | 1   | 0.5                     | 2.6                   |
|        | 12   | 3   | 0.1                     | 1.7                   |      | 12   | 1   | 0.4                     | 2.9                   |
|        | 18   | 3   | 0.1                     | 1.8                   |      | 18   | 1   | 0.5                     | 2.9                   |
| 07     | 00   | 3   | 0.1                     | 2.0                   | 15   | 00   | 1   | 0.5                     | 2.8                   |
|        | 03   | 3   | 0.1                     | 1.7                   |      | 03   | 3   | 0.5                     | 2.8                   |
|        |      | 3   | 0.3                     | 3.3                   |      |      | 3   | 0.3                     | 2.0                   |
|        | 06   | 3   | 0.1                     | 1.5                   |      | 06   | ... | -                       | -                     |
|        |      | 3   | 0.3                     | 4.2                   |      | 12   | 3   | 0.6                     | 3.0                   |
|        | 12   | 3   | 0.1                     | 1.4                   |      |      | 3   | 0.3                     | 2.3                   |
|        | 18   | ... | -                       | -                     |      |      | 3   | 0.2                     | 1.7                   |
| 08     | 00   | 3   | 0.2                     | 2.5                   |      | 18   | 1   | 0.7                     | 2.8                   |
|        | 03   | 3   | 0.1                     | 1.6                   |      |      | 3   | 0.4                     | 1.7                   |
|        |      | 3   | 0.2                     | 2.7                   | 16   | 00   | 1   | 0.9                     | 2.8                   |
|        | 06   | 3   | 0.1                     | 1.5                   |      | 03   | 1   | 0.9                     | 2.8                   |
|        |      | 3   | 0.2                     | 2.7                   |      | 06   | 1   | 0.9                     | 3.0                   |
|        | 12   | 3   | 0.2                     | 2.7                   |      | 12   | 1   | 0.7                     | 2.8                   |
|        | 18   | 3   | 0.1                     | 1.5                   |      |      | 1   | 0.7                     | 3.3                   |
|        |      | 3   | 0.2                     | 2.8                   |      | 18   | 1   | 0.7                     | 3.9                   |
|        |      |     |                         |                       |      |      | 1   | 0.5                     | 2.5                   |
| 09     | 00   | 3   | 0.1                     | 1.5                   | 17   | 00   | 1   | 0.8                     | 4.1                   |
|        |      | 3   | 0.2                     | 2.9                   |      |      | 3   | 0.3                     | 2.4                   |
|        | 03   | 3   | 0.1                     | 1.6                   |      | 03   | 1   | 0.9                     | 4.1                   |
|        |      | 3   | 0.2                     | 2.9                   |      | 06   | 1   | 1.1                     | 4.2                   |
|        | 06   | 3   | 0.1                     | 1.5                   |      | 09   | 1   | 1.5                     | 4.3                   |
|        |      | 3   | 0.2                     | 3.0                   |      | 12   | 1   | 1.5                     | 4.3                   |
|        | 12   | 3   | 0.1                     | 1.4                   |      | 15   | 1   | 1.7                     | 4.5                   |
|        |      | 3   | 0.2                     | 2.8                   |      | 18   | 1   | 2.1                     | 4.4                   |
|        | 18   | 1   | 0.1                     | 1.6                   |      | 21   | 1   | 2.0                     | 4.4                   |
|        |      | 3   | 0.2                     | 3.2                   |      |      |     |                         |                       |
| 10     | 00   | 1   | 0.1                     | 1.7                   | 18   | 00   | 1   | 1.9                     | 4.5                   |
|        |      | 3   | 0.2                     | 3.0                   |      | 03   | 1   | 1.7                     | 4.2                   |
|        | 03   | 1   | 0.1                     | 1.8                   |      | 06   | 1   | 1.5                     | 4.2                   |
|        | 06   | 1   | 0.1                     | 1.8                   |      | 12   | 1   | 1.5                     | 4.1                   |
|        | 12   | 1   | 0.1                     | 1.6                   |      | 18   | 1   | 1.7                     | 4.3                   |
|        | 18   | 1   | 0.2                     | 1.7                   | 19   | 00   | 1   | 1.8                     | 4.2                   |
| 11     | 00   | 1   | 0.2                     | 1.7                   |      | 03   | 1   | 1.6                     | 4.2                   |
|        | 03   | 1   | 0.1                     | 1.6                   |      | 06   | 1   | 1.8                     | 4.3                   |
|        | 06   | 1   | 0.1                     | 1.7                   |      | 09   | 1   | 1.7                     | 4.1                   |
|        | 12   | 3   | 0.1                     | 1.8                   |      | 12   | 1   | 1.8                     | 4.2                   |
|        | 18   | 3   | 0.2                     | 1.9                   |      | 15   | 1   | 1.9                     | 4.2                   |
|        |      |     |                         |                       |      | 18   | 1   | 1.9                     | 4.2                   |
| 12     | 00   | 3   | 0.2                     | 2.0                   |      | 21   | 1   | 1.7                     | 4.2                   |
|        | 03   | 3   | 0.2                     | 2.1                   | 20   | 00   | 1   | 1.5                     | 4.0                   |
|        | 06   | 3   | 0.2                     | 2.2                   |      | 03   | 1   | 1.3                     | 4.1                   |
|        | 12   | 3   | 0.3                     | 2.4                   |      | 06   | 1   | 1.0                     | 3.9                   |
|        | 18   | 3   | 0.3                     | 2.6                   |      |      |     |                         |                       |

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Microseismic Tabulation

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| Date                        | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec | Date                        | Hour GMT | K   | Mean Amplitude in mm | Mean Period in mm |
|-----------------------------|----------|-----|----------------------|--------------------|-----------------------------|----------|-----|----------------------|-------------------|
| Station. Madras Compt. E.W. |          |     |                      |                    | Station. Madras Compt. E.W. |          |     |                      |                   |
| 20                          | 12       | 1   | 0.7                  | 3.7                | 27                          | 00       | 3   | 0.9                  | 5.4               |
| Contd.                      | 18       | 1   | 0.6                  | 3.7                |                             |          | 3   | 0.2                  | 2.3               |
|                             |          |     |                      |                    |                             | 03       | 3   | 0.9                  | 5.5               |
| 21                          | 00       | 1   | 0.7                  | 3.3                |                             |          | 3   | 0.2                  | 2.4               |
|                             | 03       | 1   | 0.7                  | 4.1                |                             | 06       | 3   | 0.9                  | 5.4               |
|                             | 06       | 1   | 0.7                  | 4.2                |                             |          | 3   | 0.2                  | 2.7               |
|                             | 12       | 1   | 0.6                  | 4.3                |                             | 12       | 3   | 0.9                  | 5.4               |
|                             | 18       | 1   | 0.6                  | 4.2                |                             |          | 3   | 0.3                  | 2.5               |
|                             |          |     |                      |                    |                             | 18       | 1   | 1.1                  | 5.7               |
| 22                          | 00       | 1   | 0.7                  | 4.5                |                             |          | 3   | 0.2                  | 2.3               |
|                             | 03       | 1   | 0.6                  | 4.5                |                             |          |     |                      |                   |
|                             | 06       | 1   | 0.6                  | 4.5                | 28                          | 00       | 1   | 1.1                  | 5.5               |
|                             | 12       | 1   | 0.7                  | 4.7                |                             |          | 3   | 0.2                  | 1.5               |
|                             | 18       | 1   | 0.8                  | 4.7                |                             | 03       | 1   | 1.1                  | 5.8               |
|                             |          |     |                      |                    |                             |          | 3   | 0.2                  | 2.2               |
| 23                          | 00       | 1   | 0.8                  | 4.6                |                             | 06       | 1   | 1.2                  | 5.6               |
|                             |          | 3   | 0.1                  | 1.5                |                             |          | 3   | 0.2                  | 2.0               |
|                             | 03       | 1   | 0.7                  | 4.6                |                             | 12       | 1   | 1.3                  | 5.9               |
|                             |          | 1   | 0.2                  | 1.4                |                             |          | 3   | 0.2                  | 2.1               |
|                             | 06       | 1   | 0.7                  | 4.4                |                             | 18       | 1   | 1.2                  | 5.6               |
|                             |          | 1   | 0.2                  | 1.8                |                             |          | 3   | 0.2                  | 2.1               |
|                             | 12       | 1   | 0.3                  | 4.8                |                             |          |     |                      |                   |
|                             |          | 3   | 0.2                  | 2.3                | 29                          | 00       | 1   | 1.2                  | 5.6               |
|                             |          | 3   | 0.1                  | 1.7                |                             | 03       | 1   | 1.1                  | 5.6               |
|                             | 18       | 1   | 0.3                  | 5.1                |                             | 06       | 1   | 0.8                  | 5.4               |
|                             |          | 3   | 0.2                  | 2.4                |                             | 12       | 1   | 1.0                  | 5.7               |
|                             |          | 3   | 0.1                  | 1.5                |                             | 18       | 1   | 1.0                  | 5.5               |
| 24                          | 00       | 1   | 0.9                  | 5.3                |                             |          |     |                      |                   |
|                             |          | 3   | 0.2                  | 2.5                | 30                          | 00       | 1   | 0.8                  | 5.4               |
|                             | 03       | 3   | 0.9                  | 5.3                |                             | 03       | 1   | 1.0                  | 5.3               |
|                             |          | 3   | 0.2                  | 2.5                |                             | 06       | 1   | 0.9                  | 5.4               |
|                             |          | 3   | 0.2                  | 1.5                |                             |          | 3   | 0.1                  | 2.1               |
|                             | 06       | 1   | 1.0                  | 5.1                |                             | 12       | 3   | 0.9                  | 5.5               |
|                             |          | 3   | 0.2                  | 2.4                |                             |          | 3   | 0.1                  | 2.3               |
|                             | 12       | 1   | 1.1                  | 5.5                |                             | 18       | 3   | 0.7                  | 4.9               |
|                             |          | 3   | 0.2                  | 2.3                |                             |          | 1   | 0.3                  | 2.5               |
|                             | 18       | 1   | 1.1                  | 5.3                |                             | 21       | 1   | 0.6                  | 2.3               |
|                             |          | 3   | 0.3                  | 2.5                | 31                          | 00       | 1   | 1.0                  | 2.7               |
| 25                          | 00       | 1   | 1.1                  | 5.6                |                             | 03       | 1   | 0.9                  | 2.7               |
|                             |          | 3   | 0.3                  | 2.5                |                             | 06       | ... | -                    | -                 |
|                             | 03       | 1   | 1.0                  | 5.4                |                             | 12       | 1   | 0.5                  | 2.7               |
|                             |          | 3   | 0.2                  | 2.5                |                             | 18       | 3   | 0.4                  | 2.7               |
|                             | 06       | 1   | 1.0                  | 5.5                |                             |          |     |                      |                   |
|                             |          | 3   | 0.3                  | 2.6                |                             |          |     |                      |                   |
|                             | 12       | 1   | 1.1                  | 5.6                |                             |          |     |                      |                   |
|                             |          | 3   | 0.3                  | 2.8                |                             |          |     |                      |                   |
|                             | 18       | 1   | 1.0                  | 5.5                |                             |          |     |                      |                   |
|                             |          | 3   | 0.3                  | 2.7                |                             |          |     |                      |                   |
| 26                          | 00       | 1   | 1.1                  | 5.3                |                             |          |     |                      |                   |
|                             |          | 3   | 0.3                  | 2.9                |                             |          |     |                      |                   |
|                             |          | 3   | 0.1                  | 1.3                |                             |          |     |                      |                   |
|                             | 03       | ... | -                    | -                  |                             |          |     |                      |                   |
|                             | 06       | 3   | 1.0                  | 5.4                |                             |          |     |                      |                   |
|                             |          | 3   | 0.3                  | 2.5                |                             |          |     |                      |                   |
|                             | 12       | 3   | 0.9                  | 5.3                |                             |          |     |                      |                   |
|                             |          | 3   | 0.3                  | 2.7                |                             |          |     |                      |                   |
|                             | 18       | 3   | 0.9                  | 5.4                |                             |          |     |                      |                   |
|                             |          | 3   | 0.2                  | 2.5                |                             |          |     |                      |                   |

Station: Bombay (Colaba) Compt. E.W.

|    |    |   |     |     |
|----|----|---|-----|-----|
| 01 | 00 | 1 | 0.6 | 2.7 |
|    | 03 | 1 | 0.6 | 2.9 |
|    | 06 | 1 | 0.7 | 2.9 |
|    | 09 | 1 | 0.6 | 2.9 |
|    | 12 | 1 | 0.6 | 3.0 |
|    | 15 | 1 | 0.6 | 3.0 |
|    | 18 | 1 | 0.7 | 3.1 |
|    | 21 | 1 | 0.7 | 3.0 |
| 02 | 00 | 1 | 0.6 | 3.1 |
|    | 03 | 1 | 0.7 | 3.0 |
|    | 06 | 1 | 0.7 | 2.9 |
|    | 12 | 1 | 0.6 | 3.1 |
|    | 15 | 1 | 0.6 | 3.1 |
|    | 18 | 1 | 0.7 | 3.0 |

| Date                                         | Hour GMT | K   | Mean Amplitude in mm. | Mean Period in sec | Date                                         | Hour GMT | K   | Mean Amplitude in mm. | Mean Period in sec |
|----------------------------------------------|----------|-----|-----------------------|--------------------|----------------------------------------------|----------|-----|-----------------------|--------------------|
| <i>Station. Bombay (Colaba) Compt. E. W.</i> |          |     |                       |                    | <i>Station. Bombay (Colaba) Compt. E. W.</i> |          |     |                       |                    |
| 02                                           | 21       | 1   | 0.7                   | 3.0                | 09                                           | 09       | 1   | 0.5                   | 2.7                |
| Contd.                                       |          |     |                       |                    | Contd.                                       | 12       | 1   | 0.5                   | 2.8                |
| 03                                           | 00       | 1   | 0.6                   | 2.9                |                                              | 15       | 1   | 0.5                   | 2.7                |
|                                              | 03       | 1   | 0.6                   | 3.1                |                                              | 18       | 1   | 0.4                   | 2.7                |
|                                              | 06       | 1   | 0.6                   | 3.0                |                                              | 21       | 1   | 0.4                   | 2.5                |
|                                              | 09       | 1   | 0.6                   | 3.2                | 10                                           | 00       | 1   | 0.5                   | 2.6                |
|                                              | 12       | 3   | 0.5                   | 3.1                |                                              | 06       | ... | -                     | -                  |
|                                              |          |     | 0.3                   | 1.4                |                                              | 12       | 3   | 0.3                   | 5.3                |
|                                              | 18       | 3   | 0.5                   | 3.0                |                                              |          |     | 0.4                   | 2.3                |
|                                              |          |     | 0.3                   | 1.8                |                                              | 18       | 3   | 0.3                   | 4.8                |
| 04                                           | 00       | 3   | 0.4                   | 2.8                |                                              |          |     | 0.4                   | 2.0                |
|                                              |          |     | 0.3                   | 2.0                | 11                                           | 00       | 3   | 0.4                   | 4.6                |
|                                              | 06       | 3   | 0.5                   | 3.0                |                                              |          |     | 0.4                   | 2.5                |
|                                              |          |     | 0.3                   | 1.8                |                                              | 06       | 3   | 0.4                   | 4.5                |
|                                              | 12       | 3   | 0.5                   | 3.2                |                                              |          |     | 0.4                   | 2.3                |
|                                              |          |     | 0.4                   | 1.5                |                                              | 12       | 3   | 0.5                   | 7.0                |
|                                              | 18       | 3   | 0.5                   | 7.9                |                                              |          |     | 0.6                   | 2.0                |
|                                              |          |     | 0.5                   | 2.0                |                                              | 18       | 1   | 0.5                   | 2.4                |
| 05                                           | 00       | 3   | 0.6                   | 8.0                |                                              | 21       | 1   | 0.6                   | 2.5                |
|                                              |          |     | 0.6                   | 2.3                | 12                                           | 00       | 1   | 0.7                   | 2.5                |
|                                              | 06       | 3   | 0.5                   | 7.2                |                                              | 03       | 1   | 0.7                   | 2.7                |
|                                              |          |     | 0.5                   | 2.4                |                                              | 06       | 1   | 0.6                   | 2.8                |
|                                              | 12       | ... | -                     | -                  |                                              | 09       | 1   | 0.5                   | 2.9                |
|                                              | 18       | 3   | 0.5                   | 7.0                |                                              | 12       | 1   | 0.6                   | 2.7                |
|                                              |          |     | 0.5                   | 2.2                |                                              | 15       | 1   | 0.6                   | 2.6                |
| 06                                           | 00       | 3   | 0.5                   | 7.5                |                                              | 18       | 1   | 0.6                   | 2.7                |
|                                              |          |     | 0.6                   | 2.5                |                                              | 21       | 1   | 0.5                   | 2.5                |
|                                              | 06       | 3   | 0.6                   | 6.5                | 13                                           | 00       | 1   | 0.5                   | 2.5                |
|                                              |          |     | 0.7                   | 2.5                |                                              | 03       | 1   | 0.6                   | 2.5                |
|                                              | 12       | 3   | 0.6                   | 7.0                |                                              | 06       | 1   | 0.7                   | 2.6                |
|                                              |          |     | 0.5                   | 1.5                |                                              | 09       | 1   | 0.7                   | 2.8                |
|                                              | 18       | 3   | 0.5                   | 5.8                |                                              | 12       | 1   | 0.6                   | 2.8                |
|                                              |          |     | 0.5                   | 2.0                |                                              | 15       | 1   | 0.6                   | 2.6                |
| 07                                           | 00       | 3   | 0.4                   | 5.6                |                                              | 18       | 1   | 0.9                   | 2.8                |
|                                              |          |     | 0.5                   | 2.2                |                                              | 21       | 1   | 1.1                   | 3.0                |
|                                              | 06       | 3   | 0.4                   | 5.5                | 14                                           | 00       | 1   | 1.0                   | 3.1                |
|                                              |          |     | 0.5                   | 2.2                |                                              | 03       | 1   | 1.1                   | 3.0                |
|                                              | 12       | 3   | 0.4                   | 5.5                |                                              | 06       | 1   | 1.1                   | 3.1                |
|                                              |          |     | 0.4                   | 2.3                |                                              | 09       | 1   | 1.0                   | 3.1                |
|                                              | 18       | ... | -                     | -                  |                                              | 12       | 1   | 0.8                   | 3.0                |
|                                              | 21       | 1   | 0.6                   | 2.5                |                                              | 15       | 1   | 0.9                   | 3.0                |
| 08                                           | 00       | 1   | 0.6                   | 2.6                |                                              | 18       | 1   | 1.1                   | 2.8                |
|                                              |          |     | 0.6                   | 2.8                |                                              | 21       | 1   | 1.1                   | 2.9                |
|                                              | 03       | 1   | 0.6                   | 2.8                | 15                                           | 00       | 1   | 1.2                   | 3.1                |
|                                              | 06       | 1   | 0.7                   | 2.7                |                                              | 03       | 1   | 1.4                   | 3.1                |
|                                              | 09       | 1   | 0.7                   | 2.7                |                                              | 06       | ... | -                     | -                  |
|                                              | 12       | 3   | 0.5                   | 2.7                |                                              | 09       | 1   | 1.1                   | 3.1                |
|                                              |          |     | 0.3                   | 1.8                |                                              | 12       | 1   | 1.0                   | 3.3                |
|                                              | 18       | 3   | 0.6                   | 2.6                |                                              | 15       | 1   | 0.9                   | 2.9                |
|                                              |          |     | 0.4                   | 2.0                |                                              | 18       | 1   | 0.8                   | 3.0                |
|                                              | 21       | 1   | 0.6                   | 2.5                |                                              | 21       | 1   | 1.0                   | 3.0                |
| 09                                           | 00       | 1   | 0.7                   | 2.7                | 16                                           | 00       | 1   | 1.1                   | 2.9                |
|                                              |          |     | 0.7                   | 2.8                |                                              |          |     |                       |                    |
|                                              | 03       | 1   | 0.7                   | 2.8                |                                              |          |     |                       |                    |
|                                              | 06       | 1   | 0.5                   | 2.8                |                                              |          |     |                       |                    |

May 1962

Microseismic Tabulation

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Date Hour K Mean Mean  
GMT Amplitude Period  
..... in mm ..... in sec

Date Hour K Mean Mean  
GMT Amplitude Period  
..... in mm ..... in sec

Station Bombay (Colaba) Compt. E. W.

Station Bombay (Colaba) Compt. E. W.

|        |    |     |     |     |
|--------|----|-----|-----|-----|
| 16     | 03 | 1   | 1.1 | 3.0 |
| Contd. | 06 | 1   | 1.3 | 3.3 |
|        | 09 | 1   | 1.2 | 3.2 |
|        | 12 | 1   | 1.0 | 3.3 |
|        | 15 | 1   | 1.3 | 3.2 |
|        | 18 | 1   | 1.6 | 3.3 |
|        | 21 | 1   | 1.7 | 3.4 |
| 17     | 00 | 1   | 1.5 | 3.5 |
|        | 03 | 1   | 1.6 | 3.4 |
|        | 06 | 1   | 1.4 | 3.5 |
|        | 09 | 1   | 1.4 | 3.5 |
|        | 12 | 1   | 1.5 | 3.7 |
|        | 15 | 1   | 1.5 | 3.6 |
|        | 18 | 1   | 1.6 | 4.1 |
|        | 21 | 1   | 1.6 | 4.1 |
| 18     | 00 | 1   | 1.5 | 3.8 |
|        | 03 | 1   | 1.4 | 3.9 |
|        | 06 | 1   | 1.5 | 3.7 |
|        | 09 | 1   | 1.3 | 4.0 |
|        | 12 | 1   | 1.2 | 4.2 |
|        | 15 | 1   | 1.2 | 4.0 |
|        | 18 | 1   | 1.2 | 4.0 |
|        | 21 | 1   | 1.2 | 4.0 |
| 19     | 00 | 1   | 1.4 | 4.2 |
|        | 03 | 1   | 1.5 | 3.8 |
|        | 06 | 1   | 1.3 | 4.0 |
|        | 09 | 1   | 1.2 | 3.9 |
|        | 12 | 1   | 1.2 | 4.2 |
|        | 15 | ... | -   | -   |
|        | 18 | 1   | 1.2 | 4.1 |
| 20     | 00 | 1   | 1.4 | 3.3 |
|        | 03 | 1   | 1.1 | 3.3 |
|        | 06 | 1   | 0.9 | 3.5 |
|        | 09 | 1   | 0.8 | 3.4 |
|        | 12 | 3   | 0.8 | 3.5 |
|        |    |     | 0.3 | 1.5 |
|        | 18 | 3   | 0.9 | 3.7 |
|        |    |     | 0.8 | 1.7 |
| 21     | 00 | 3   | 0.8 | 4.0 |
|        |    |     | 0.4 | 2.0 |
|        | 06 | 3   | 0.9 | 4.2 |
|        |    |     | 0.5 | 2.0 |
|        | 12 | 3   | 0.5 | 2.5 |
|        |    |     | 0.7 | 3.8 |
|        | 18 | 3   | 0.9 | 3.8 |
|        |    |     | 0.4 | 2.2 |
| 22     | 00 | 3   | 0.9 | 4.2 |
|        |    |     | 0.5 | 2.3 |
|        | 06 | 3   | 0.8 | 4.5 |
|        |    |     | 0.4 | 2.0 |
|        | 12 | 3   | 1.1 | 4.6 |
|        |    |     | 0.4 | 2.0 |
|        | 18 | 3   | 0.9 | 4.6 |
|        |    |     | 0.4 | 1.5 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 23 | 00 | 3 | 1.2 | 4.6 |
|    |    |   | 0.4 | 2.3 |
|    | 06 | 3 | 0.9 | 4.6 |
|    |    |   | 0.4 | 2.3 |
|    | 12 | 3 | 1.2 | 4.6 |
|    |    |   | 0.3 | 2.2 |
|    | 18 | 3 | 1.1 | 4.2 |
|    |    |   | 0.4 | 2.1 |
| 24 | 00 | 1 | 1.2 | 4.7 |
|    | 03 | 1 | 1.4 | 4.6 |
|    | 06 | 1 | 1.2 | 5.3 |
|    | 09 | 1 | 1.3 | 4.7 |
|    | 12 | 1 | 1.7 | 5.4 |
|    | 15 | 1 | 1.7 | 5.5 |
|    | 18 | 1 | 1.6 | 4.9 |
|    | 21 | 1 | 1.6 | 5.3 |
| 25 | 00 | 1 | 1.7 | 5.0 |
|    | 03 | 1 | 1.7 | 5.5 |
|    | 06 | 1 | 1.7 | 5.2 |
|    | 09 | 1 | 1.6 | 4.8 |
|    | 12 | 1 | 1.7 | 5.4 |
|    | 15 | 1 | 1.8 | 5.1 |
|    | 18 | 1 | 1.7 | 4.9 |
|    | 21 | 1 | 1.6 | 5.3 |
| 26 | 00 | 1 | 1.6 | 5.4 |
|    | 03 | 1 | 1.5 | 5.0 |
|    | 06 | 1 | 1.3 | 5.3 |
|    | 09 | 1 | 1.3 | 5.3 |
|    | 12 | 1 | 1.6 | 4.8 |
|    | 15 | 1 | 1.6 | 4.6 |
|    | 18 | 1 | 1.5 | 4.8 |
|    | 21 | 1 | 1.3 | 4.9 |
| 27 | 00 | 1 | 1.3 | 5.0 |
|    | 06 | 3 | 1.1 | 4.8 |
|    |    |   | 0.5 | 2.4 |
|    | 12 | 3 | 1.1 | 5.2 |
|    |    |   | 0.6 | 2.5 |
|    | 18 | 3 | 1.3 | 4.7 |
|    |    |   | 0.7 | 2.5 |
| 28 | 00 | 3 | 1.5 | 4.9 |
|    |    |   | 0.7 | 2.5 |
|    | 06 | 3 | 1.7 | 5.2 |
|    |    |   | 0.7 | 2.5 |
|    | 12 | 3 | 1.7 | 4.6 |
|    |    |   | 0.7 | 2.4 |
|    | 18 | 3 | 1.6 | 4.9 |
|    |    |   | 0.8 | 2.5 |
| 29 | 00 | 3 | 1.4 | 5.2 |
|    |    |   | 0.6 | 2.2 |
|    | 06 | 3 | 1.7 | 4.8 |
|    |    |   | 0.9 | 2.5 |
|    | 12 | 3 | 1.7 | 5.0 |
|    |    |   | 0.6 | 2.4 |

Microseismic Tabulation

May 1962

Date Hour K Mean Amplitude Mean Period  
GMT in mm in sec

Date Hour K Mean Amplitude Mean Period  
GMT in mm in sec

Station. Bombay (Colaba) Compt. E. W.

Station. Bokaro Compt. E. W.

|       |    |   |     |     |
|-------|----|---|-----|-----|
| 29    | 18 | 3 | 1.9 | 5.2 |
| Contd |    |   | 0.6 | 2.5 |
| 30    | 00 | 3 | 1.5 | 4.9 |
|       |    |   | 0.6 | 2.3 |
|       | 06 | 3 | 1.9 | 4.8 |
|       |    |   | 0.6 | 2.6 |
|       | 12 | 3 | 1.1 | 5.1 |
|       |    |   | 0.6 | 2.4 |
|       | 18 | 3 | 1.4 | 4.5 |
|       |    |   | 0.8 | 2.7 |
| 31    | 00 | 3 | 1.0 | 4.7 |
|       |    |   | 0.6 | 2.4 |
|       | 06 | 3 | 1.2 | 4.3 |
|       |    |   | 0.6 | 2.0 |
|       | 12 | 3 | 1.2 | 4.6 |
|       |    |   | 0.7 | 2.0 |
|       | 18 | 3 | 1.5 | 4.8 |
|       |    |   | 0.7 | 1.9 |

|        |       |     |     |     |
|--------|-------|-----|-----|-----|
| 10     | 12    | 0,0 | -   | -   |
| Contd. | 18    | 0,0 | -   | -   |
| 11     | 00    | 0,0 | -   | -   |
|        | 06    | 0,0 | -   | -   |
|        | 12    | ... | -   | -   |
|        | 18    | 0,0 | -   | -   |
| 12 to  | 00 to |     |     |     |
| 14     | 18    | 0,0 | -   | -   |
| 15     | 00    | 0,0 | -   | -   |
|        | 06    | ... | -   | -   |
|        | 12    | 0,0 | -   | -   |
|        | 18    | 0,0 | -   | -   |
| 16     | 00    | 3   | 0.4 | 4.2 |
|        | 06    | 3   | 0.4 | 4.0 |
|        | 12    | 3   | 0.4 | 4.2 |
|        | 18    | 3   | 0.5 | 4.2 |

Station. Bokaro Component. E. W.

|       |       |     |     |     |
|-------|-------|-----|-----|-----|
| 01    | 00    | 3   | 0.5 | 3.8 |
|       | 06    | 3   | 5.0 | 2.8 |
|       | 12    | 0,0 | -   | -   |
|       | 18    | 0,0 | -   | -   |
| 02    | 00    | 0,0 | -   | -   |
|       | 06    | 3   | 0.4 | 3.0 |
|       | 12    | 3   | 0.5 | 2.3 |
|       | 18    | 3   | 0.5 | 2.5 |
| 03    | 00    | 2   | 1.1 | 3.0 |
|       | 06    | 3   | 1.0 | 2.8 |
|       | 12    | 0,0 | -   | -   |
|       | 18    | 0,0 | -   | -   |
| 04    | 00 to |     |     |     |
|       | 18    | 0,0 | -   | -   |
| 05    | 00    | 0,0 | -   | -   |
|       | 06    | 3   | 0.4 | 2.5 |
|       | 12    | 3   | 0.4 | 3.0 |
|       | 18    | 3   | 0.4 | 2.5 |
| 06    | 00 to |     |     |     |
|       | 18    | 0,0 | -   | -   |
| 07    | 00    | 0,0 | -   | -   |
|       | 06    | 0,0 | -   | -   |
|       | 12    | ... | -   | -   |
|       | 18    | ... | -   | -   |
| 08 to | 00 to |     |     |     |
| 09    | 18    | 0,0 | -   | -   |
| 10    | 00    | 0,0 | -   | -   |
|       | 06    | ... | -   | -   |

|    |       |     |     |     |
|----|-------|-----|-----|-----|
| 17 | 00    | 3   | 0.4 | 4.2 |
|    | 06    | 3   | 0.5 | 4.4 |
|    | 12    | 3   | 0.5 | 4.5 |
|    | 18    | 3   | 0.7 | 5.0 |
| 18 | 00    | 3   | 0.6 | 4.8 |
|    | 06    | 3   | 0.6 | 5.0 |
|    | 12    | 3   | 0.5 | 4.0 |
|    | 18    | 3   | 0.5 | 4.5 |
| 19 | 00    | 3   | 0.6 | 4.4 |
|    | 06    | 3   | 0.6 | 4.2 |
|    | 12    | 3   | 0.6 | 4.4 |
|    | 18    | 3   | 0.6 | 4.5 |
| 20 | 00    | 3   | 0.4 | 4.2 |
|    | 06    | 3   | 0.5 | 4.2 |
|    | 12    | 3   | 0.4 | 4.0 |
|    | 18    | 3   | 0.4 | 4.0 |
| 21 | 00    | 3   | 0.4 | 4.0 |
|    | 06    | 3   | 0.3 | 4.0 |
|    | 12    | 3   | 0.3 | 4.0 |
|    | 18    | 3   | 0.4 | 4.0 |
| 22 | 00    | 3   | 0.4 | 4.2 |
|    | 06    | ... | -   | -   |
|    | 12    | 3   | 0.4 | 4.4 |
|    | 18    | 3   | 0.5 | 4.4 |
| 23 | 00 to | 3   | 0.4 | 5.0 |
|    | 18    |     |     |     |
| 24 | 00    | ... | -   | -   |
|    | 06    | 3   | 0.4 | 5.0 |
|    | 12    | 3   | 0.5 | 5.2 |
|    | 18    | 3   | 0.6 | 5.4 |

May 1962

## Microseismic Tabulation

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| Date                                      | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec | Date                                      | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec |
|-------------------------------------------|----------|-----|----------------------|--------------------|-------------------------------------------|----------|-----|----------------------|--------------------|
| <i>Station. Bokaro Compt. E.W.</i>        |          |     |                      |                    | <i>Station. Visakhapatnam Compt. E.W.</i> |          |     |                      |                    |
| 25                                        | 00       | 3   | 0.5                  | 5.2                | 08                                        | 00       | 0,0 | -                    | -                  |
|                                           | 06       | 3   | 0.5                  | 5.0                |                                           | 06       | 2   | 0.3                  | 5.6                |
|                                           | 12       | 3   | 0.5                  | 5.2                |                                           | 12       | 2   | 0.3                  | 5.6                |
|                                           | 18       | 3   | 0.3                  | 5.2                |                                           | 18       | 2   | 0.3                  | 4.8                |
| 26                                        | 00       | 3   | 0.6                  | 5.4                | 09                                        | 00       | 2   | 0.4                  | 5.7                |
|                                           | 06       | 3   | 0.6                  | 5.5                |                                           | 06       | 2   | 0.3                  | 5.2                |
|                                           | 12       | ... | -                    | -                  |                                           | 12       | 2   | 0.2                  | 5.5                |
|                                           | 18       | 3   | 0.5                  | 5.2                |                                           | 18       | 0,0 | -                    | -                  |
| 27                                        | 00       | 3   | 0.5                  | 4.4                | 10                                        | 00       | 0,0 | -                    | -                  |
|                                           | 06       | ... | -                    | -                  |                                           | 06       | ... | -                    | -                  |
|                                           | 12       | 3   | 0.6                  | 4.5                |                                           | 12       | 2   | 0.3                  | 5.3                |
|                                           | 18       | 3   | 0.5                  | 4.4                |                                           | 18       | 2   | 0.3                  | 5.1                |
| 28                                        | 00       | 3   | 0.5                  | 4.2                | 11                                        | 00       | 2   | 0.3                  | 4.7                |
|                                           | 06       | 3   | 0.5                  | 4.4                |                                           | 06       | 2   | 0.3                  | 5.1                |
|                                           | 12       | 3   | 0.5                  | 4.5                |                                           | 12       | 2   | 0.3                  | 4.6                |
|                                           | 18       | 3   | 0.5                  | 4.8                |                                           | 18       | 2   | 0.2                  | 4.3                |
| 29                                        | 00       | 3   | 0.5                  | 4.8                | 12                                        | 00       | 2   | 0.2                  | 4.7                |
|                                           | 06       | 3   | 0.8                  | 5.5                |                                           | 06       | 2   | 0.3                  | 4.6                |
|                                           | 12       | 3   | 0.7                  | 3.5                |                                           | 12       | 2   | 0.2                  | 2.0                |
|                                           | 18       | 3   | 0.7                  | 3.5                |                                           | 18       | 2   | 0.2                  | 2.5                |
| 30                                        | 00       | 3   | 0.6                  | 3.5                | 13                                        | 00       | 2   | 0.2                  | 2.6                |
|                                           | 06       | 3   | 0.5                  | 4.0                |                                           | 06       | 2   | 0.2                  | 2.5                |
|                                           | 12       | 0,0 | -                    | -                  |                                           | 12       | 2   | 0.2                  | 2.5                |
|                                           | 18       | 3   | 0.5                  | 5.0                |                                           | 18       | 2   | 0.3                  | 2.7                |
| 31                                        | 00       | 0,0 | -                    | -                  | 14                                        | 00       | 2   | 0.2                  | 2.2                |
|                                           | 06       | 0,0 | -                    | -                  |                                           | 06       | 2   | 0.3                  | 2.8                |
|                                           | 12       | 3   | 0.3                  | 2.5                |                                           | 12       | 2   | 0.2                  | 2.8                |
|                                           | 18       | 3   | 0.4                  | 2.7                |                                           | 18       | 2   | 0.2                  | 2.1                |
| <i>Station. Visakhapatnam Compt. E.W.</i> |          |     |                      |                    | 15                                        | 00       | 2   | 0.3                  | 2.6                |
| 01                                        | 00       | 1   | 1.8                  | 3.1                |                                           | 06       | ... | -                    | -                  |
|                                           | 06       | 1   | 0.7                  | 3.1                |                                           | 12       | 2   | 0.3                  | 3.0                |
|                                           | 12       | 2   | 0.4                  | 2.9                |                                           | 18       | 2   | 0.2                  | 3.1                |
|                                           | 18       | 0,0 | -                    | -                  | 16                                        | 00       | 2   | 0.3                  | 3.2                |
| 02                                        | 00 to    |     |                      |                    |                                           | 06       | 2   | 0.3                  | 3.6                |
|                                           | 12       | 0,0 | -                    | -                  |                                           | 12       | 2   | 0.3                  | 3.2                |
|                                           | 18       | 1   | 2.0                  | 3.1                |                                           | 18       | 2   | 0.3                  | 3.4                |
| 03                                        | 00       | 1   | 0.6                  | 2.7                | 17                                        | 00       | 2   | 0.2                  | 3.5                |
|                                           | 06       | 2   | 0.5                  | 2.9                |                                           | 06       | 1   | 0.4                  | 3.9                |
|                                           | 12       | 0,0 | -                    | -                  |                                           | 12       | 1   | 0.5                  | 4.1                |
|                                           | 18       | 0,0 | -                    | -                  |                                           | 18       | 1   | 0.6                  | 4.5                |
| 04 to                                     | 00 to    |     |                      |                    | 18                                        | 00       | 1   | 0.6                  | 4.4                |
| 06                                        | 18       | 0,0 | -                    | -                  |                                           | 06       | 1   | 0.5                  | 4.1                |
|                                           |          |     |                      |                    |                                           | 12       | 1   | 0.4                  | 4.1                |
|                                           |          |     |                      |                    |                                           | 18       | 1   | 0.6                  | 4.3                |
| 07                                        | 00       | 0,0 | -                    | -                  | 19                                        | 00       | 1   | 0.5                  | 4.5                |
|                                           | 06       | 2   | 0.2                  | 4.7                |                                           | 06       | 1   | 0.7                  | 4.3                |
|                                           | 12       | 2   | 0.3                  | 5.3                |                                           | 12       | 1   | 0.7                  | 4.2                |
|                                           | 18       | ... | -                    | -                  |                                           | 18       | 1   | 0.6                  | 3.8                |

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May 1962

| Date                                      | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec |
|-------------------------------------------|----------|-----|----------------------|--------------------|
| <i>Station. Visakhapatnam Compt. E. W</i> |          |     |                      |                    |
| 20                                        | 00       | 2   | 0.5                  | 4.1                |
|                                           | 06       | ... | -                    | -                  |
|                                           | 12       | 2   | 0.2                  | 3.6                |
|                                           | 18       | 2   | 0.3                  | 4.2                |
| 21                                        | 00       | 2   | 0.4                  | 3.4                |
|                                           | 06       | 2   | 0.4                  | 3.8                |
|                                           | 12       | 2   | 0.4                  | 4.4                |
|                                           | 18       | 2   | 0.3                  | 4.5                |
| 22                                        | 00       | 2   | 0.3                  | 4.5                |
|                                           | 06       | 2   | 0.4                  | 4.7                |
|                                           | 12       | 2   | 0.4                  | 4.4                |
|                                           | 18       | 2   | 0.4                  | 4.6                |
| 23                                        | 00       | 2   | 0.3                  | 4.0                |
|                                           | 06 to    |     | -                    | -                  |
|                                           | 18       | ... | -                    | -                  |
| 24                                        | 00       | ... | -                    | -                  |
|                                           | 06       | 2   | 0.6                  | 5.5                |
|                                           | 12       | 1   | 0.2                  | 2.5                |
|                                           | 18       | 1   | 1.0                  | 2.2                |
| 25                                        | 00       | 1   | 0.6                  | 2.2                |
|                                           | 06       | 0,0 | -                    | -                  |
|                                           | 12       | 2   | 0.2                  | 1.5                |
|                                           | 18       | 2   | 0.2                  | 1.5                |
| 26                                        | 00       | 2   | 0.2                  | 1.5                |
|                                           | 06 to    |     | -                    | -                  |
|                                           | 18       | ... | -                    | -                  |
| 27                                        | 00       | 2   | 0.7                  | 3.2                |
|                                           | 06 to    |     | -                    | -                  |
|                                           | 18       | ... | -                    | -                  |
| 28                                        | 00       | ... | -                    | -                  |
|                                           | 06       | 2   | 0.6                  | 3.1                |
|                                           | 12       | ... | -                    | -                  |
|                                           | 18       | ... | -                    | -                  |
| 29                                        | 00       | ... | -                    | -                  |
|                                           | 06       | 2   | 0.7                  | 4.5                |
|                                           | 12       | 2   | 0.6                  | 3.3                |
|                                           | 18       | 2   | 0.5                  | 3.6                |
| 30                                        | 00       | 2   | 0.5                  | 3.0                |
|                                           | 06       | 2   | 0.8                  | 5.6                |
|                                           | 12       | 2   | 0.3                  | 3.1                |
|                                           | 18       | 2   | 0.5                  | 3.7                |
| 31                                        | 00       | 0,0 | -                    | -                  |
|                                           | 06 to    |     | -                    | -                  |
|                                           | 18       | ... | -                    | -                  |

| Date                                    | Hour GMT | K   | Mean Amplitude (Micron) | Mean Period in sec |
|-----------------------------------------|----------|-----|-------------------------|--------------------|
| <i>Station. Port Blair Compt. E. W.</i> |          |     |                         |                    |
| 01                                      | 00       | ... | -                       | -                  |
|                                         | 06       | 1   | 1.0                     | 3.0                |
|                                         | 12       | 1   | 1.0                     | 3.0                |
|                                         | 18       | 0,0 | -                       | -                  |
| 02                                      | 00       | 0,0 | -                       | -                  |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | 0,0 | -                       | -                  |
|                                         | 18       | 0,0 | -                       | -                  |
| 03                                      | 00       | 0,0 | -                       | -                  |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | ... | -                       | -                  |
|                                         | 18       | 0,0 | -                       | -                  |
| 04                                      | 00       | 0,0 | -                       | -                  |
|                                         | 06       | 1   | 1.0                     | 10.0               |
|                                         | 12       | 1   | 1.0                     | 7.0                |
|                                         | 18       | ... | -                       | -                  |
| 05                                      | 00 to    |     | -                       | -                  |
|                                         | 18       | ... | -                       | -                  |
| 06                                      | 00       | 1   | 1.0                     | 7.0                |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | ... | -                       | -                  |
|                                         | 18       | 1   | 1.0                     | 7.0                |
| 07                                      | 00       | 1   | 1.0                     | 7.0                |
|                                         | 06 to    |     | -                       | -                  |
|                                         | 18       | ... | -                       | -                  |
| 08                                      | 00       | 0,0 | -                       | -                  |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | ... | -                       | -                  |
|                                         | 18       | 0,0 | -                       | -                  |
| 09                                      | 00       | 0,0 | -                       | -                  |
|                                         | 06 to    |     | -                       | -                  |
|                                         | 18       | ... | -                       | -                  |
| 10 to                                   | 00 to    |     | -                       | -                  |
| 14                                      | 18       | ... | -                       | -                  |
| 15                                      | 00       | ... | -                       | -                  |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | 3   | 1.0                     | 7.0                |
|                                         | 18       | ... | -                       | -                  |
| 16                                      | 00       | ... | -                       | -                  |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | 0,0 | -                       | -                  |
|                                         | 18       | 0,0 | -                       | -                  |
| 17                                      | 00       | 1   | 1.0                     | 4.0                |
|                                         | 06       | 1   | 1.0                     | 5.0                |



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Microseismic Tabulation

61

Date Hour K Mean Mean  
GMT Amplitude Period  
(Micron) in sec

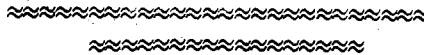
Date Hour K Mean Mean  
GMT Amplitude Period  
(Micron) in sec

Station. Port Blair Compt. E. W.

Station. Port Blair Compt. E. W.

|       |       |      |     |     |
|-------|-------|------|-----|-----|
| 17    | 00    | 1    | 1.0 | 4.0 |
|       | 06    | 1    | 1.0 | 5.0 |
|       | 12    | 1    | 1.0 | 4.0 |
|       | 18    | 0,0  | -   | -   |
| 18    | 00    | 1    | 1.0 | 5.0 |
|       | 06 to |      |     |     |
|       | 18    | ...  | -   | -   |
| 19    | 00 to |      |     |     |
|       | 18    | ...  | -   | -   |
| 20    | 00    | ...  | -   | -   |
|       | 06    | 1    | 1.0 | 5.0 |
|       | 12    | ...  | -   | -   |
|       | 18    | ...  | -   | -   |
| 21 to | 00 to |      |     |     |
| 23    | 18    | .... | -   | -   |
| 24    | 00    | .... | -   | -   |
|       | 06    | 1    | 2.0 | 3.0 |
|       | 12    | 1    | 2.0 | 3.0 |
|       | 18    | 1    | 2.0 | 2.0 |
| 25    | 00 to |      |     |     |
|       | 18    | .... | -   | -   |

|    |       |     |     |     |
|----|-------|-----|-----|-----|
| 26 | 00    | ... | -   | -   |
|    | 06    | 1   | 1.0 | 3.0 |
|    | 12    | 1   | 1.0 | 5.0 |
|    | 18    | 1   | 1.0 | 3.0 |
| 27 | 00    | 1   | 1.0 | 3.0 |
|    | 06 to |     |     |     |
|    | 18    | ... | -   | -   |
| 28 | 00    | ... | -   | -   |
|    | 06    | 1   | 1.0 | 3.0 |
|    | 12    | ... | -   | -   |
|    | 18    | 1   | 1.0 | 5.0 |
| 29 | 00    | 1   | 1.0 | 3.0 |
|    | 06 to |     |     |     |
|    | 18    | 0,0 | -   | -   |
| 30 | 00 to |     |     |     |
|    | 12    | 0,0 | -   | -   |
|    | 18    | ... | -   | -   |
| 31 | 00    | ... | -   | -   |
|    | 06    | 1   | 1.0 | 3.0 |
|    | 12    | 1   | 1.0 | 3.0 |
|    | 18    | 1   | 1.0 | 3.0 |





MAR 3 1965



# SEISMOLOGICAL BULLETIN

JUN 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

| Station                 | Latitude         | Longitude | Height<br>a.s.l.<br>(Metres) | Lithographic<br>foundation                        | Instrument               | Compt      | Period<br>in   |                 | Static<br>Magnifica-<br>tion | Damping<br>ratio | Paper speed<br>mm/min. |   |
|-------------------------|------------------|-----------|------------------------------|---------------------------------------------------|--------------------------|------------|----------------|-----------------|------------------------------|------------------|------------------------|---|
|                         |                  |           |                              |                                                   |                          |            | secs           | secs            |                              |                  |                        |   |
| Agra                    |                  |           |                              |                                                   | Columbia                 | E          | To=15          | Tg=100          |                              |                  | 15                     |   |
|                         |                  |           |                              |                                                   | Long Period              | N          | To=15          | Tg=85           |                              |                  | 15                     |   |
|                         |                  |           |                              |                                                   | - do -                   | Z          | To=15          | Tg=70           |                              |                  | 15                     |   |
| Bombay                  | 18.54°N, 72.40°E |           | 5                            | Deccan Trap                                       | Milne-Shaw               | N          | 12             | 350             |                              | 13:1             | 15                     |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | E          | 12             | 350             |                              | 23:1             | 8                      |   |
| Bokaro                  | 23.50°N, 85.48°E |           |                              | Rock                                              | Sprengnether             | E          | To=Tg=7 secs   |                 |                              |                  | 30                     |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | N          | 12             | 250             |                              | 20:1             | 15                     |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | E          | 12             | 250             |                              | 20:1             | 15                     |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | E          | 0.8            | 950             |                              | h=0.8            | 50                     |   |
| Calcutta                | 22.32°N, 88.22°E |           |                              | (1) 7 Milne-Shaw<br>(2) 6 Omori-Ewing<br>Alluvium | Milne-Shaw               | E          | 12             | 250             |                              | 20:1             | 8                      |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | N          | 2              | 870             |                              | Critical         | 30                     |   |
|                         |                  |           |                              |                                                   | Omori-Ewing              | N          | 15             | 32              |                              | -                | 25.4                   |   |
|                         |                  |           |                              |                                                   | Omori-Ewing              | E          | 21             | 30              |                              | -                | 25.4                   |   |
| Chatra                  | 25.50°N, 87.10°E |           | 151                          | Sand stone                                        | Milne-Shaw               | E          | 12             | 250             |                              | 20:1             | 15                     |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | N          | 1              | 1000            |                              | 30:1             | 50                     |   |
|                         |                  |           |                              |                                                   | Benioff                  | Z          | To=0           | Tg=0.45<br>secs |                              | Critical         | 60                     |   |
|                         |                  |           |                              |                                                   | Wenner-<br>Accelerograph | ZNE        | -              | -               |                              | -                | -                      |   |
| Colombo                 | 05.54°N, 79.52°E |           | 7                            | Beach Sand                                        | Milne-Shaw               | E          | 12             | 250             |                              | 20:1             | -                      |   |
| Dehra Dun               | 30.19°N, 78.02°E |           | 582                          | Gravel                                            | Wood-Anderson            | N          | 0.8            | 950             |                              | Critical         | -                      |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | E          | 0.8            | 850             |                              | Critical         | 50                     |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | N          | 12             | 250             |                              | 20:1             | 8                      |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | E          | 12             | 250             |                              | 20:1             | 8                      |   |
| Hyderabad               | 17.25°N, 78.27°E |           | 535                          | Granite                                           | Milne-Shaw               | E          | 12             | 250             |                              | 20:1             | 8                      |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | N          | 12             | 250             |                              | 20:1             | 8                      |   |
| Kodaikanal              | 10.14°N, 77.28°E |           | 2345                         | Rock                                              | Milne-Shaw               | E          | 10             | 250             |                              | 20:1             | 8                      |   |
| Madras                  | 13.00°N, 80.11°E |           | 15                           | -                                                 | Sprengnether             | E          | To=Tg=7.2 secs |                 |                              | Critical         | 30                     |   |
| New Delhi               | 28.35°N, 77.12°E |           | 207                          | Massive Quartzite                                 |                          |            |                |                 |                              |                  |                        |   |
| Poona                   | 18.32°N, 73.51°E |           | 550                          | Deccan Trap                                       | Sprengnether             | Z          | To=Tg=1.5      |                 |                              | Critical         | 30                     |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | E          | 4              | 1000            |                              |                  | 15                     |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | N          | 12             | 280             |                              | 20:1             | 8                      |   |
| Port Blair              | 11.49°N, 92.43°E |           |                              |                                                   | Wood-Anderson            | N          | 2              | 1000            |                              | 20:1             | 30                     |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | E          | 0.8            | 1000            |                              | 65:1             | 30                     |   |
|                         |                  |           |                              |                                                   | Milne-Shaw               | N          | 12             | 350             |                              | 20:1             | 8                      |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | N          | 0.8            | 980             |                              | Critical         | 30                     |   |
| Sehore                  |                  |           |                              |                                                   |                          |            |                |                 |                              |                  |                        |   |
| Shillong                | 25.34°N, 91.53°E |           | 1500                         | Quartzite                                         | Wood-Anderson            | N          | 0.8            | 1000            |                              | h=0.8            | 30                     |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | E          | 0.8            | 1000            |                              | h=0.8            | 30                     |   |
|                         |                  |           |                              |                                                   | (Shillong<br>Quartzite)  | Milne-Shaw | N              | 12              | 250                          |                  | 20:1                   | 8 |
|                         |                  |           |                              |                                                   | Benioff                  | Z          | To=1.0         | Tg=18           |                              |                  | 50                     |   |
|                         |                  |           |                              |                                                   | Sprengnether             | E          | To=Tg=5.3      |                 |                              | Critical         | 30                     |   |
| Wenner<br>Accelerograph | ZNE              | -         | -                            |                                                   | -                        | -          |                |                 |                              |                  |                        |   |
| Tocklai                 | 28.45°N, 94.45°E |           |                              | Alluvium                                          | Wood-Anderson            | E          | 0.8            | 970             |                              | h=0.8            | 50                     |   |
| Vizianagaram            | 18.07°N, 83.27°E |           |                              |                                                   | Wood-Anderson            | E          | 0.8            | 1000            |                              | h=0.8            | 30                     |   |
|                         |                  |           |                              |                                                   | Wood-Anderson            | N          | 2              | 1000            |                              | 20:1             | 30                     |   |

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June 1962

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Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
01	Chatra	Z	epg i Sg	04	45	02 06 22	170	Feeble, local
01	Chatra	Z	Pg i Sg	04	55	47 50 03	120	Feeble, local
01	Shillong	Z	ep	05	49	28		Slight, near
01	Epc: 6.9°S, 129.2°E. Banda Sea. - H = 09h 07m 56s. h about 140 km (USCGS)							
	Shillong	Z	ip	09	10	28		Slight, distant, rarefaction
	Chatra	Z	ep	09	10	58		Feeble, distant
	Delhi	Z	ip	09	11	57		Slight, compression
01	Epc: 36.6°N, 71.3°E. Hindukush. - H = 09h 29m 08s. h about 201 km (USCGS)							
	Dehra Dun	Z	e	09	31	03		Tremor
	Dehli	Z	ip i	09	31	18 56		Slight, rarefaction
	Chatra	Z	ip	09	31	51		Feeble, distant, rarefaction
	Shillong	Z	ip	09	33	35		Slight, distant, rarefaction
01	Shillong	Z	ip	11	01	37		Slight, distant, compression
01	Shillong	Z	ep	13	27	03		Slight, distant
01	Delhi	Z	ep	13	27	45		Slight, rarefaction
01	Shillong	Z	ep	16	59	31		Slight, distant
01	Shillong	Z	ip	19	16	29		Slight, distant, compression
01	Chatra	Z	epg Sg	21	13	13 35	180	Feeble, local
02	Shillong	Z	ep	02	55	17		Slight, near
02	Epc: 3.5°S, 145.3°E. Bismark Sea. - H = 05h 35m 36.1s. h about 42 km (USCGS)							
	Shillong	ZE	ip	05	45	37		Slight, distant, compression
	Chatra	Z	ip	05	46	05		Feeble, distant, rarefaction
	Dehra Dun	Z	e	05	46	58		Tremor
	Delhi	Z	ip	05	46	59		Slight
02	Shillong	Z	ep	12	04	33		Slight, near
02	Shillong	Z	ep	13	03	04		Slight, near
02	Epc: 29.8°N, 130.6°E. Kyushu, Japan - H = 17h 15m 08.7s. h about 15 km (USCGS)							

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June 1962

Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
02	Chatra	Z	iP	17	22	30		Feeble, distant, compression
02	Bokaro	E	ep	17	22	40	990	Slight
02	Dehra Dun	Z	e(r)	17	22	23	3590	Feeble
		N	e(s)		28	42		
02	Delhi	Z	iP	17	22	37	5210	Slight, rarefaction
		EN	ep		23	37		
		E	PP		25	36		
		EN	iS		30	34		
			SS		34	03		
02	Bombay	ES	e	17	26	24		Feeble
		NES	e		32	16		
		NE	M		51	-		
02	Shillong	ZNE	iP	17	32	09		Slight, distant, compression
03	Shillong	Z	ePg	06	09	41	20	Slight
			eSg		10	16		
03	Shillong	Z	iPg	06	23	09	90	Slight, compression
			iSg		23	20		
03	Dehra Dun	Z	iP	07	09	16	900	Feeble
			iS		10	49		
03	Delhi	Z	iP	07	09	28	1010	Slight, rarefaction
			iS		11	12		
03	Shillong	Z	iP	07	11	45		Slight
03	Shillong	Z	iP	09	12	37		Slight, distant, compression
03	Shillong	Z	iP	10	29	41		Slight, compression
03	Shillong	Z	iP	11	47	47		Slight, compression
03	Chatra	Z	ep	13	48	47	820	Feeble, distant
			S		50	11		
03	Shillong	Z	iP	13	46	45		Slight
			i		47	26		
03	Delhi	ENZ	iP	15	20	53		Slight
03	Bombay	E	e	15	26	40		Feeble
			e		36	30		
			M	16	08	-		
		N	M		12	-		
03	Dehra Dun	Z	e	16	00	58		Feeble
03	Shillong	Z	ep	16	09	26		Slight, near
03	Dehra Dun	Z	e	18	21	59		Tremor
03	Shillong	Z	ep	18	23	09		Slight, distant
04	Epc: 30.3°N, 70°E. West Pakistan. - H = 15h 21m 53s h about 50 km (USCGS)							

June 1962

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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
04	Delhi	Z	iP	15	23	29	730	Slight, compression
	Contd.		iSg		25	25		
04	Dehra Dun	Z	eP	15	23	37	710	Slight
			i		24	08		
			iS		25	31		
04	Bombay	E NE	eP i	15	24	43		Slight, near
					28	06		
04	Shillong	ZE	iP eS	15	26	27	2220	Slight, compression
					30	07		
04	Poona	Z	e	15	28	07		Slight, distant
04	Chatra	Z	eS	15	28	09		Feeble, distant
04	Hyderabad	N E N E N	iS i e e M M	15	29	12		
					29	14		
					29	41		
					29	44		
					31	02		
					31	04		
04	Madras	E	e e	15	32	11		Slight
					33	28		
04	Bokaro	E	e i	16	27	12		Slight, near
					28	59		
04	Delhi	Z	iP	16	47	49		Slight
04	Shillong	Z	ePg eSg	18	15	40		Slight
					15	51		
04	Shillong	Z	iP	18	49	08		Slight, distant, compression
04	Shillong	Z	iP	18	50	41		Slight, distant, compression
04	Shillong	Z	eP	19	10	18		Slight, distant
04	Shillong	Z	iP	22	08	58		Slight, distant, compression rarefaction
04	Shillong	Z	ePg	22	47	44	100	Slight
05	Shillong	Z	eP	01	27	45		Slight, distant
05	Shillong	Z	iP	01	58	37		Slight, distant, rarefaction
05	Shillong	ZNE	iPg	06	56	00		Slight
05	Shillong	Z	iP	09	15	57		Slight, distant, compression
05	Shillong	Z	eP	09	37	00		Slight, distant
05	Epc: 38.9°N, 75.5°E. Sinkiang Province, China - H = 10h 51m 19s. h about 140 km (USCGS)							
	Dehra Dun	Z	eP eS	10	53	22	1150	Feeble
					55	20		

Date	Station	Compt	Phase	G M T h m s	$\Delta$ km	Remarks
05	Delhi	Z	iP iS	10 53 47 55 44	1140	Slight
05	Shillong	Z	iP	10 55 41		Slight, distant, rarefaction
05	Shillong	Z	eP	12 33 03		Slight, distant
05	Shillong	Z	eP	16 05 03		Slight, distant
05	Epc: 7.1°S, 129.2°E. Banda Sea. - H = 16h 43m 44s h about 124 km (USCGS)					
	Shillong	Z	iP	16 52 19		Slight, distant, rarefaction
	Chatra	Z	iP	16 52 50		Distant, rarefaction
	Delhi	Z	iP	16 53 49		Slight, compression
	Dehra Dun	Z	e	16 53 50		Tremor
05	Shillong	Z	iP	16 57 21		Slight, distant, rarefaction
05	Delhi	Z	iP	16 58 16		Slight, rarefaction
05	Shillong	Z	iP	18 30 21		Slight, compression
05	Shillong	Z	iP	22 01 58		Slight, rarefaction
05	Shillong	Z	iP	22 07 24		Slight, distant, rarefaction
05	Chatra	Z	iP	22 23 17		Distant, compression
05	Delhi	Z	iP i	22 34 27 34 40		Slight, compression
06	Shillong	Z	iPg	01 05 21	70	Slight, compression
06	Shillong	Z	eP	02 36 38		Slight, distant
06	Shillong	Z	iP	07 57 23		Slight, distant, compression
06	Shillong	Z	ePg eSg	12 41 01 41 18	140	Slight, near
06	Delhi	Z	iP	16 00 40		Slight, compression
06	Shillong	Z	eP	18 50 56		Slight, near
06	Chatra	Z	eP	18 51 48		Distant, compression
06	Shillong	Z	iP	19 32 31		Slight, distant, rarefaction
06	Epc: 44.7°N, 149°E. Kurile Islands. - H = 19h 38m 13s h about 27 km (USCGS)					
	Shillong	Z	iP	19 47 03		Slight, distant, compression
	Chatra	Z	iP	19 47 23		Distant, compression



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Date	Station	Compt	Phase	G M T	Δ	Remarks
				h m s	km	
06	Delhi	Z	eP	19 48 05		Slight, rarefaction
06	Shillong	Z	eP	20 03 26		Slight, distant
06	Chatra	Z	iP S	20 10 26 11 54	850	Feeble, compression
06	Delhi	Z	iP	20 11 24		Slight, rarefaction
06	Shillong	Z	iP	20 14 48		Slight, distant, compression
06	Chatra	Z	iP S	21 28 47 29 06	160	Feeble, near, rarefaction
06	Shillong	Z	eP	21 29 22		Slight, near
06	Delhi	Z	iP	21 43 18		Slight, rarefaction
06	Shillong	Z	eP	22 32 21		Slight, near
07	Delhi	Z	eP	00 26 41		Slight, compression
07	Delhi	Z	iP	00 44 59		Tremor, rarefaction
07	Shillong	Z	ePg	03 31 53		Slight, near
07	Shillong	Z	iP	05 16 38		Slight, distant, compression
07	Delhi	Z	iP	05 47 11		Slight, compression
07	Delhi	Z	iP	07 17 45		Slight, rarefaction
07	Delhi	Z	iP	08 05 19		Tremor Compression
07	Delhi	Z	iP	09 51 09		Tremor, rarefaction
07	Shillong	Z	iP	18 35 36		Slight, distant, compression
07	Chatra	Z	eP iS	19 16 46 17 41	520	Feeble
07	Shillong	Z	eP	20 04 27		Slight. distant.
07	Epc: 27.5°N, 93.5°E. Assam. - H = 20h 06m 40s. GMT (New Delhi)					
	Tocklai	E	ePg iSg	20 07 12 07 32		Slight
	Shillong	ZNE	eP eS	20 07 18 07 55	330	Slight
07	Chatra	ZNE	iP eS	20 08 13 09 22	680	Feeble, rarefaction
07	Dehra Dun	Z	eP iS	20 10 10 12 47	1550	Feeble
08	Shillong	Z	iP	00 23 32		Slight, distant, compression

Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
08	Epc: 29.1°N, 129.5°E. Ryukyu Islands. - H = 09h 11m 17s. h about 42 km (USCGS)							
	Shillong	Z	iP	09	17	54		Slight, distant, rarefaction
	Chatra	Z	ir	09	13	23		Feeble, distant, compression
08	Delhi	Z	iP	09	19	34		Slight, rarefaction
08	Shillong	Z	epg	11	14	50		Slight, near
08	Shillong	Z	epg	15	04	38		Slight, near
08	Shillong	Z	iP	15	30	29		Slight, distant, rarefaction
08	Shillong	Z	iP	15	55	34		Slight, distant, rarefaction
08	Shillong	Z	ep	16	08	35		Slight, near
08	Epc: 37.9°N, 141.2°E. Honshu, Japan. - H = 17h 04m 24s. h about 56 km GMT (USCGS)							
	Shillong	Z	iP	16	12	22		Slight, distant, rarefaction
	Chatra	Z	ir	16	12	48		Feeble, distant, compression
08	Delhi	Z	iP	16	13	40		Slight, compression
08	Epc: 11.3°N, 126°E. Timor Sea. - H = 19h 17m 23s. h about 60 km (USCGS)							
	Shillong	Z	iP	19	24	14		Slight, distant, compression
	Chatra	Z	iP	19	24	51		Feeble, distant, rarefaction
08	Delhi	Z	iP	19	26	02		Slight, compression
	Dehra Dun	Z	e	19	26	02		Tremor
08	Shillong	Z	iP	19	28	09		Slight, distant, compression
09	Dehra Dun	Z	e	00	30	22		Tremor
09	Delhi	Z	iP iS	00	30	34 32 15	930	Slight, compression
09	Shillong	Z	ep	00	39	22		Slight, near
09	Epc: 9°N, 126.6°E. Mindanao, Philippine Islands. - H = 07h 40m 18s. h about 65 km (USCGS)							
	Shillong	Z	iP	07	47	24		Slight, distant
	Dehra Dun	Z	e	07	49	05		Tremor
09	Delhi	Z	iP	08	49	06		Slight, compression
09	Dehra Dun	Z	ep es	10	46	09 47 47	950	Feeble

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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
09	Delhi	Z	iP iS	10	46	18 48 01	1000	Slight, compression
09	Shillong	Z	eP	10	43	40		Slight, distant
09	Delhi	Z	eP	16	00	27		Tremor
09	Shillong	Z	eP	17	52	07		Slight, distant
09	Shillong	Z	iP	20	16	52		Slight, distant, rarefaction
09	Delhi	Z	iP	21	31	46		Slight, rarefaction
09	Chatra	Z	eP	23	20	39		-
10	Delhi	Z	iP	01	10	56		Slight, rarefaction
10	Shillong	ZNE	eP	04	25	17		Slight, near
10	Chatra	Z	eP	04	27	08		Feeble
10	Shillong	ZNE	eP	05	25	17		Slight, near
10	Chatra	Z	eP	05	26	24		Feeble
10	Shillong	ZNE	eP	05	28	23		Slight, near
10	Chatra	Z	eP	05	30	14		Feeble
10	Chatra	Z	eP	05	32	24		Feeble
10	Chatra	Z	iP iS	09	02	33 03 12	360	Feeble, rarefaction
10	Delhi	Z	eP i	09	04	01 04 36		Slight, rarefaction
10	Shillong	Z	ePg eSg	09	12	48 12 57	80	Slight
10	Shillong	Z	eP	11	13	30		Slight, near
10	Shillong	Z	eP	11	46	12		Slight, near
10	Delhi	Z	iP iS	12	04	01 05 42	980	Slight, compression
10	Shillong	Z	iP	13	07	50		Slight, distant, compression
10	Shillong	Z	iP	14	01	12		Slight, distant, compression
10	Shillong	Z	ePg eSg	14	10	46 10 55	80	Slight
10	Chatra	Z	iPn Sg	17	05	04 05 21	140	Feeble, compression, local
10	Shillong	Z	iP	17	05	45		Slight, near

Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
10	Shillong	Z	iP	17	05	45		Slight, near
10	Delhi	Z	eP	19	00	40		Tremor
10	Shillong	Z	eP	22	15	56		Slight, distant
11	Shillong	Z	ePg eSg	00	07	01 - 10	80	Slight
11	Shillong	Z	iP	05	11	26		Slight, distant, compression
11	Epc: 43.5°N, 18.3°E. Yugoslavia. 10 injured, extensive damage at Sarajovo along adriatic coast to Trieste, - H = 07h 15m 37s. h about 21 km (USCGS)							
	Dehra Dun	Z	eP	07	24	22		
	Delhi	ENZ	iP	07	24	23	5390	
		Z	PeP		25	46		
		EZ	PPP		26	52		
		EN	PcS/ScP		29	39		
		ENZ	iS		31	24		
		Z	PPS		31	32		
		EN	ScS		33	56		
		NEZ	SS		34	23		
		EN	i		35	00		
		NEZ	Lq		35	46		
			SSS		35	54		
		E	Lr		37	51		
	Bombay	N	eP	07	24	50		
			e		25	53		
			e		31	06		
			e		33	34		
11	Chatra	Z	iP	07	25	26		Feeble, distant, compression
			e		21	15		
11	Shillong	ZE	iP	07	25	54	6900	Slight, rarefaction
			iS		34	19		
11	Bokaro	E	iS	07	33	30		Slight, distant
11	Calcutta	E	iS	07	34	13		Slight
11	Chatra	Z	iP	10	07	58		Feeble, distant, rarefaction
11	Shillong	Z	iP	15	28	15		Slight, distant, compression
11	Shillong	Z	iP	15	38	20		Slight, distant, compression
11	Shillong	Z	iP	16	00	57		Slight, distant, compression
11	Shillong	Z	eP	16	58	35		Slight, near
11	Delhi	Z	eP	16	59	28		Slight
11	Dehra Dun	Z	e	16	59	53		Slight

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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
11	Shillong	Z	iP	17	19	15		Slight, distant, compression
11	Shillong	Z	iP	21	55	54		Slight, distant, rarefaction
11	Delhi	Z	iP	21	57	24		Slight, compression
12	Bokaro	NE	iP	11	22	35		Slight
12	Shillong	Z	eP	12	19	51		Slight, distant
12	Shillong	Z	iP	12	57	44		Slight, distant, rarefaction
12	Chatra	Z	iP	22	46	13		Feeble, compression
13	Shillong	Z	iP	04	33	25		Slight, distant, rarefaction
13	Chatra	Z	eP eS	07	50 51	55 50	520	Feeble, near
13	Bokaro	NE	iP	10	52	07		Slight, tremor
13	Delhi	Z	iP	14	25	04		Slight, compression
13	Delhi	Z	iPg eSg	22	52 53	58 17	170	Slight, compression
14	Shillong	Z	ePg eSg	03	51 51	25 40	130	Slight
14	Chatra	Z	iPg Sg	06	13 13	04 17	130	Feeble, rarefaction
14	Epc: 54.2°N, 169.1°E. Near Islands, Aleutian Islands. - H = 07h 51m 51s. h about 34 km (USCGS) Mag: 6-6½ (Pas), 5½ (Brk).							
	Shillong	Z	iP	03	02	13		
	Chatra	Z	iP	08	02	27	2400	
	Dehra Dun	Z	eP	08	02	42	2450	
	Delhi	ENZ E	iP iS	08	02 11	51 25	6370	Slight, rarefaction
	Poona	Z	eP	08	03	51		Slight, distant
	Bombay	N	eP	03	04	13		Slight
14	Epc: 54.2°N, 169.3°E. Near Islands, Aleutian Islands, Mag: 6 (Pas) - H = 07h 55m 48s. h about 56 km (USCGS)							
	Shillong	Z	iP	08	06	09		Slight, distant, rarefaction
	Chatra	Z	iP	08	03	22		
	Dehra Dun	Z	iP	08	03	41		
	Bokaro	NE	eP i	08	03 15	45 34		Slight

Date	Station	C	Compt	Phase	G M T			$\Delta$ km	Remarks
					h	m	s		
14	Delhi		ZNE	iP	08	06	51		
	Poona		Z	iP i e	08	07	55 10 45 22 11		
	Madras		E	e e e	08	07	57 17 56 37 19		
14	Delhi		Z	iP i iS	08	19	47 10 56 21 30	1000	Slight, compression
14	Hyderabad		N	e	09	34	03		
14	Shillong		Z	eP	09	20	40		Slight, near
14	Shillong		Z	iP	17	24	41		Slight, distant, rarefaction
14	Shillong		Z	eP	20	09	26		Slight, distant
14	Shillong		Z	eP	20	37	47		Slight, distant
14	Chatra		Z	iP	20	28	27		Feeble, distant, compression
14	Epc: 26.4°N, 126.3°E. Ryukyu Islands. -- H = 22h 14m 10s. h about 22 km (USCGS)								
	Shillong		Z	iP iS	22	20	22 25 31	3420	Slight, compression
	Chatra		Z	iP i	22	21	03 21 09		Feeble, compression
	Eokaro		NE	eP i e	22	21	19 22 59 35 18		Slight
	Dehra Dun		Z N	eP iS SS Lr M	22	22	07 28 22 31 40 34 25 37 36	4760	Slight
	Delhi		EZ EN N	iP iS SS	22	22	12 28 36 31 48	4740	Slight, rarefaction
	Poona		Z	eP	22	23	00		Slight, distant
14	Bombay		N	e e e	22	29	18 33 26 42 01		Slight
			E	M	42	-	-		
14	Calcutta		E	i	22	31	13		Slight
14	Hyderabad		E	e	22	39	33		

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Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
15	Shillong	Z	eP	01	44	56		Slight, near
15	Epc: 20.4°S, 70.9°W. Near Coast of Northern Chile. Mag: 5 (Pal) - H = 06h 30m 37s. h about 60 km (USCGS)							
15	Poona	Z	iPKP	06	50	16		Distant, rarefaction
15	Delhi	Z	iPKP i	06	50	21 50 25		Rarefaction
15	Dehra Dun	Z	ePKP	06	50	22		
15	Chatra	Z	iPKP	06	51	07		Distant, compression
15	Shillong	Z	iPKP	06	51	27		Distant, compression
15	Dehra Dun	Z	eP e	12	23	53 25 16		Feeble
15	Delhi	Z	iP i	12	24	03 25 35		Slight, rarefaction
15	Shillong	Z	eP	12	26	23		Slight, distant
15	Shillong	Z	iP	13	08	23		Slight, distant, rarefaction
15	Bombay	N	e e	13	42	35 50 36		Feeble
15	Epc: 293°N, 86.5°E. Nepal. - H = 17h 58m 51s.							
	Chatra	Z	iP S	17	59	42 13 00 10	320	Feeble, near, rarefaction
	Shillong	Z	eP	18	00	22		Slight, near
	Dehra Dun	Z	eP	18	00	39		Tremor
15	Delhi	Z	iP	18	00	55		Slight, compression
15	Shillong	Z	iP	19	48	52		Slight, distant, rarefaction
15	Chatra	Z	eP S	20	31	54 32 15	180	Feeble, near
15	Shillong	Z	eP	20	32	13		Slight, near
15	Bokaro	NE	iP	22	43	21		Slight, tremor
16	Shillong	Z	iP	03	55	23		Slight, distant, compression
16	Epc: 26.6°N, 123.4°E. Ryukyu Islands. - H = 05h 21m 12s. h about 38 km (USCGS)							
	Shillong	ZNE	iP	05	27	30		Slight, distant, rarefaction
	Chatra	Z	iP	05	28	06		Feeble, distant, rarefaction
	Dehra Dun	Z	e	05	29	07		Slight, distant

Date	Station	Compt	Phase	G h	M m	S s	$\Delta$ km	Remarks
16	Delhi	Z	iP	05	29	12		Slight, compression
16	Dehra Dun	Z	e e	05	35 38	20 42		Feeble
16	Epc: 0.2°S, 122.8°E. Celebas Region - H = 06h 27m 29s. h about 177 km (USCGS)							
	Shillong	ZE	eP	06	34	47	3920	Slight, rarefaction
	Dehra Dun	Z	e	06	36	26		Slight
	Delhi	Z	iP	06	36	26		Slight, rarefaction
16	Bokaro	NE	iP	09	55	40		Tremor
16	Bokaro	NE	iP	10	27	09		Tremor
16	Shillong	Z	ePg eSg	16	23	01 23	300	Slight
16	Shillong	Z	iP	18	01	22		Slight, distant, compression
16	Shillong	Z	iP	20	07	01		Slight, distant, rarefaction
16	Shillong	Z	eP	21	49	20		Slight, distant
17	Shillong	Z	iP	03	05	23		Slight, distant, rarefaction
17	Delhi	Z	iP	04	39	35		Slight, compression
	Chatra	Z	iP	04	39	35		Feeble, distant, rarefaction
17	Shillong	Z	iP	04	39	39		Slight, distant, compression
17	Epc: 33.3°N, 76.2°E. Kasmir Region - H = 04h 39m 26s. h about 22 km (USCGS) 33°N, 77°E. Kangra in Punjab - H = 04h 39m 30s (Shillong)							
	Dehra Dun	Z	e	04	40	24		Slight
	Delhi	ZNE	iP	04	40	43	630	Rarefaction
			PP		40	53		
		E	PPP		40	58		
		ZNE	i		41	23		
		EN	Lq		41	42		
		ZNE	iS		41	50		
	Sehore	N	iP	04	41	55	1010	Slight
			PP		42	00		
			PPP		42	07		
		NE	Lq		43	31		
			eS		43	39		
		N	SS		43	48		
			SSS		44	03		
		NE	M		44	42		



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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
17	Chatra	Z	eP S	04	42 44	19 23	1210	Slight
17	Bokaro	NE	iP PP iS Lq SS SSS M	04	42 42 44 44 45 45 46	43 53 42 55 07 17 15	1170	Slight
17	Bombay	N NE N	eP eS e M	04	42 45 45 48	52 29 56 33	1550	Slight
17	Poona	Z N E N	iP eS SS SSS Lr	04	42 45 45 46 46	55 44 56 15 32	1680	Slight, compression
17	Shillong	ZNE	iP eS	04	43 45	08 54	1600	Slight, compression
17	Visakhapatnam	E NE	eP iS iSS iSSS	04	43 47 47 47	46 13 37 50	2090	Slight, distant
17	Madras	E	eP PP PPP iS Lq SS SSS Lr M	04	44 44 44 47 47 48 48 48 50	06 23 33 43 50 11 24 41 14	2190	Moderate
17	Hyderabad	E	e e e e	04	45 46 47 48	49 22 37 05		Slight
17	Shillong	Z	eP	09	47	57		Slight, distant
17	Shillong	Z	ePg eSg	11	39 40	40 16	260	Slight
17	Chatra	Z	eP eS	11	40 42	33 00	840	Feeble, distant
17	Epic: 43.2°N, 88°E. Sinkiang Province, China - H = 14h 26m 29s. h about 50 km (USCGS)							
	Delhi	Z	iP	14	30	32		Slight, compression
	Shillong	Z	iP	14	30	39		Slight, rarefaction

Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
17	Delhi	Z	iP	14	53	16		Slight, compression
17	Shillong	Z	iP	14	54	14		Slight, distant, rarefaction
17	Delhi	Z	iP	15	11	42		Slight, compression
17	Shillong	Z	ePg eSg	15	42	34 42 51	140	Slight
17	Delhi	Z	iP	15	54	40		Slight, rarefaction
17	Delhi	Z	iP	16	37	12	570	Slight, compression
17	Delhi	Z	iS		38	12		
17	Delhi	Z	iP	16	47	41		Slight
17	Delhi	Z	iP	16	57	38		Tremor, rarefaction
17	Shillong	Z	ePg	18	11	22	190	Slight
17	Chatra	Z	iP eS	18	12	20 13 19	560	Feeble, rarefaction
17	Epc: 51.7°N, 177°E. Andreev of Islands, Aleutian Islands - H = 22h 28m 04s. h about 22 km (USCGS)							
	Shillong	Z	iP	22	39	01		Slight, rarefaction
	Delhi	Z	iP	22	39	38		Slight, rarefaction
18	Dehra Dun	Z	e	00	32	42		Tremor
18	Delhi	Z	iP iS	00	33	07 34 04	540	Slight, rarefaction
18	Delhi	Z	iP	01	58	29		Slight, compression
18	Shillong	Z	iP	06	32	52		Slight, distant, rarefaction
18	Bokaro	NE	iP	09	23	02		Slight, tremor
18	Shillong	Z	iP	12	38	16		Slight, distant, compression
18	Shillong	Z	ePg eSg	13	01	32 01 50	160	Slight
18	Chatra	Z	iP eS	13	03	00 03 40	370	Feeble, rarefaction
18	Delhi	Z	iP	14	27	03		Slight, compression
18	Dehra Dun	Z	e	16	39	30		Tremor
18	Shillong	Z	iP	17	07	52		Slight, distant, rarefaction
18	Delhi	Z	iP	17	09	27		Slight, rarefaction
18	Delhi	Z	iP	19	09	16		Slight, compression
18	Shillong	Z	eP	19	21	39		Slight, distant

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Date	Station	Compt	Phase	G M T			$\Delta$ km	Remarks
				h	m	s		
18	Epc: 4.8°S, 151.8°E. New Britain. Mag: 6½ (Pas) - H = 23h 42m 31s. h about 47 km (USCGS)							
	Shillong	ZNE	iP iS	23	53	12 00 01 48	7110	Rarefaction
	Chatra	Z	iP	23	53	40		Distant, compression
	Bokaro	E	eP	23	53	51		Distant
	Delhi	ZNE	iP iS	23	54	28 00 04 15	8510	Initial ground motion North, West, compression
	Dehra Dun	Z N	eP i i	23	54	30 00 04 15 05 44		
	Poona	ZE	iP	23	54	39		Distant, compression
19	Delhi	Z	iP iS	02	38	51 39 59	650	Slight, compression
19	Dehra Dun	Z	e	02	39	35		Tremor
19	Shillong	Z	iP	03	00	36		Slight, near
19	Shillong	Z	iP	03	47	37		Slight, distant, rarefaction
19	Shillong	Z	iP	04	53	27		Slight, dist, rarefaction
19	Shillong	Z	iP	06	25	47		Slight, distant, rarefaction
19	Dehra Dun	Z	e	07	42	33		Tremor
19	Delhi	Z	iP	07	42	52		Slight, rarefaction
19	Dehra Dun	Z	e i	08	16	27 18 36		Feeble
19	Delhi	Z	iP	08	13	37		Slight, rarefaction
19	Shillong	Z	eP	08	18	53		Slight, distant
19	Dehra Dun	Z	e i	13	12	47 14 38		Feeble
19	Delhi	Z	eP	13	13	09		Slight, rarefaction
19	Shillong	Z	eP	13	14	38		Slight, near
19	Shillong	Z	iP	16	05	58		Slight, distant, compression
19	Chatra	Z	eP eS	13	06	47 07 34	440	Feeble, near
19	Chatra	Z	eP eS	19	34	28 34 50	180	Feeble, near
19	Shillong	Z	eP	19	34	43		Slight, distant
19	Shillong	Z	eP	22	16	07		Slight, near

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Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
19	Shillong	Z	eP	22	48	25		Slight, distant
20	Shillong	ZE	eP	06	24	31		Slight, distant
20	Chatra	Z	eP eS	06	25	01 27 56	1730	Feeble, distant, compression
20	Delhi	ZN	iP	06	25	02		Slight
20	Dehra Dun	Z	eP PPP iS Lq SS SSS Lr M	06	25	26 25 31 25 58 26 01 26 04 26 07 26 10 26 25	280	Slight
20	Poona	Z	eP	06	29	59		Slight, distant
20	Visakhapatnam	E	e e	06	30	54 31 10		Slight, near
20	Calcutta	E	e	06	31	05		Slight
20	Shillong	ZE	iP	06	32	26		Slight, distant, rarefaction
20	Shillong	Z	iP	13	36	41		Slight, distant, rarefaction
20	Chatra	Z	iP S	14	36	27 37 57	320	Feeble, distant, rarefaction
20	Shillong	Z	eP	14	38	51		Slight, distant
20	Shillong	Z	eP	17	25	57		DSlight, near
20	Shillong	Z	eP	18	04	07		Slight, distant
20	Dehra Dun	Z	eP PP PPP iS SS SSS Lr M	21	20	13 20 23 20 25 20 53 21 10 21 13 21 22 21 43	360	Slight
20	Shillong	Z	eP	21	22	57		Slight, distant
20	Shillong	Z	ePg eSg	22	37	31 37 48	160	Slight
21	Epc: 4.9°N, 122.7°E. Celebes Sea. - H = 03h 23m 21s. h about 600 km (USCGS)							
	Chatra	Z	iP	03	29	16		Feeble, distant, compression
	Shillong	Z	iP	03	29	39		Slight, distant, rarefaction

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Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
21	Dehra Dun	Z	e	03	31	21		Tremor
21	Poona	Z	iP	03	31	23		Slight, distant, rarefaction
21	Poona	Z	iP	05	03	28		Slight, distant, compression
21	Shillong	Z	iP	05	03	28		Slight, distant, compression
21	Chatra	Z	eP	05	03	35		Feeble, distant
21	Shillong	Z	ePg	15	20	47		Slight, near
21	Delhi	Z	iP	19	31	47		Slight, compression
21	Epc: 7.4°S, 130.1°E. Tanimbar Islands Region - H = 22h 52m 52s. h about 52 km (USCGS)							
	Shillong	Z	iP	23	01	40		Slight, distant, rarefaction
	Chatra	Z	eP	23	02	11		Feeble, distant
21	Shillong	Z	iP	23	03	04		Slight, distant, rarefaction
21	Delhi	Z	iP	23	03	06		Slight, compression
22	Shillong	Z	eP	00	49	53		Slight, near
22	Shillong	Z	iP	01	03	03		Slight, distant, rarefaction
22	Delhi	Z	iP	01	04	05		Slight, rarefaction
22	Shillong	Z	eP	06	04	53		Slight, near
22	Shillong	Z	eP	10	23	40		Slight, distant
22	Delhi	Z	iP	11	13	25		Slight, rarefaction
22	Shillong	Z	eP	11	57	04		Slight, near
22	Poona	Z	eP	11	59	17		Slight, distant
22	Dehra Dun	Z	e	12	13	21		Slight
22	Delhi	Z	iP	14	07	15		Slight, compression
22	Epc: 6.9°S, 147°E. Near North Coast of New Guinea, Felt: Lae. - H = 14h 55m 39s. h about 70 km (USCGS)							
	Shillong	Z	iP	15	05	53		Slight, distant, compression
22	Shillong	Z	eP	19	46	09		Slight, near
22	Shillong	Z	eP	20	27	29		Slight, near
22	Shillong	Z	iP	21	22	47		Slight, distant, rarefaction
23	Shillong	Z	eP	00	45	10		Slight, distant
23	Shillong	Z	eP	01	08	17		Slight, distant

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Date	Station	Compt	Phase	G M T			Δ km	Remarks
				h	m	s		
23	Chatra	Z	iP Sg	04	51	24 51 43	160	Feeble, compression
23	Dehra Dun	Z	e	05	10	18		Tremor
23	Shillong	ZNE	ePg eSg	06	50	34 50 38	340	Slight
23	Chatra	Z	iP iS	06	51	27 52 34	630	Feeble, rarefaction
23	Epc: 25.7°N, 128.5°E. Ryukyu Islands. Mag: 5½ (Erk) - H = 09h 44m 37s. h about 36 km (JSCGS)							
	Bokaro	E	iP i PP i PPP iS i i SS Lq SSS Lr M	09	51	00 51 15 52 33 52 44 53 01 57 52 58 10 58 20 10 00 37 00 48 01 11 02 37 06 06	4210	
	Shillong	ZNE	iP iS	09	51	12 56 22	3540	Compression
	Port Blair	E	eP	09	51	43		
	Chatra	Z	iP PP PPP PcP S PcS SS SSS ScS M	09	51	43 52 07 52 31 53 03 57 33 57 51 59 55 10 00 29 01 51 04 05	4100	
	Calcutta	E	iP PP iS SS Lr M	09	51	50 53 17 57 46 10 00 02 01 37 04 12	3950	
	Visakhapatnam	E	iP ePP ePPP NE iS ePS E ePPS	09	52	33 54 14 54 51 58 59 59 08 59 15	4780	

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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
23 Contd.	Dehra Dun	Z	eP	09	52	45	4980	
		N	iS		59	33		
			SS	10	02	35		
			SSS		03	27		
			Lr		05	37		
			M		08	34		
	Delhi	EZ	iP	09	52	55		
		Z	PP		54	47		
		NEZ	iS		59	33		
		EZ	PS		59	37		
		Z	PPS		59	42		
		EZ	SS	10	02	55		
		NEZ	SSS		03	21		
		E	M		05	47		
	Hyderabad	NE	iP	09	53	08	5150	
		E	PP		54	06		
			PPP		55	59		
			PcP		58	47		
		NE	iS		59	56		
			SS	10	02	57		
		E	SSS		04	34		
		NE	Lr		07	02		
		E	n		09	44		
		N	n		09	47		
	Madras	E	iP	09	53	09	5260	
			e		53	18		
			PcP		54	38		
			PP		55	00		
			iS	10	00	08		
			PS		00	14		
			PPS		00	19		
			ScS		03	03		
			SS		03	39		
	Poona	Z	iP	09	53	36	5630	
		NE	iS	10	05	51		
			PPS		01	15		
		N	ScS		03	25		
			Lr M		08 12	09 16		
	Bombay	N	eP	09	53	47	5670	
		ES	PcP		54	24		
		NES	PP		55	48		
			eS	10	01	04		
		ES	PS		01	11		
		NES	PPS		01	18		
			ScS		03	32		
		N	SS M		04 14	38 15		
23	Epc: 19.1°N, 121.4°E. Near Coast of Luzon, Philippine Islands. - H = 09h 58m 26s. h about 40 km (USCGS)							
	Shillong	Z	iP	10	04	16		Slight, distant, compression

Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
23	Chatra	Z	iP	10	04	56		Feeble, distant, compression
Contd.	Madras	Z	eP	10	06	07	4290	Slight
			iS		12	04		
			Lr		16	48		
			M		19	53		
23	Dehra Dun	Z	e	10	38	40		Tremor
23	Shillong	Z	iP	16	23	03		Slight, distant, compression
23	Shillong	Z	iP	20	51	45		Slight, distant
23	Shillong	Z	iP	22	14	21		Slight, distant, compression
23	Dehra Dun	Z	e	22	29	07		Tremor
23	Chatra	Z	eP	23	30	53		Feeble, near
24	Epc: 25.6°N, 101.1°E. Yunan Province, China							
	- H = 01h 21m 18s. h about 35 km (USCGS)							
	Tocklai	E	iP	01	23	00	750	Moderate
			eSg		25	00		
	Shillong	ZNE	iP	01	23	18	780	Moderate, rarefaction
			eSg		25	22		
	Calcutta	E	iP	01	24	09	1310	Moderate
			iS		23	22		
			M		27	59		
	Chatra	Z	iP	01	24	15	1530	Moderate
			PP		24	24		
			PPP		24	37		
			eS		26	50		
			SS		27	01		
			SSS		27	17		
			Lr		27	23		
		E	M		32	33		
			M					
24	Bokaro	E	eP	01	24	35		Moderate
			i		24	44		
			i		25	24		
			i		25	37		
			M		29	10		
			i		30	14		
			i		30	42		
			i		30	57		
			i		31	36		
			i		33	48		
24	Port Blair	N	eP	01	25	03		Moderate
24	Visakhapatnam	NE	eP	01	25	30		Moderate
		E	i		29	36		
24	Dehra Dun	Z	eP	01	25	58	2340	Moderate
		N	P		26	34		



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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
24 Contd.	Dehra Dun Contd.	N	iS	01	29	48		
			Lq		30	07		
			SS		30	21		
			SSS		30	34		
			Lr		31	00		
			M		32	34		
24	Delhi	EZ ENZ N EZ ENZ EN NZ N	iP	01	26	02	2180	Moderate, rarefaction
			iS		26	07		
			PP		26	25		
			PPP		26	29		
			PcP, iS		29	38		
			Lq		29	57		
			SS		30	13		
			SSS		30	29		
24	Hyderabad	NE  E NE N E	iP	01	26	13	2590	Moderate
			PP		26	52		
			iS		30	22		
			SS		31	13		
			Lr		32	29		
			M		34	01		
			n		34	04		
24	Madras	E	eP	01	26	21	2710	Moderate
			e		26	40		
			ePP		27	08		
			iS		30	39		
			Lq		31	12		
			SS		31	31		
			SSS		31	51		
			Lr		32	25		
M		34	28					
24	Poona	Z N	iP	01	26	51	2950	Moderate, rarefaction
			iS		31	24		
			i		31	40		
			SS		32	30		
			Lr		33	28		
			M		35	27		
24	Bombay	NE  ES  NES NE  E N ES N E	eP	01	27	01	2960	Moderate
			e		27	36		
			PP		27	58		
			PPP		28	10		
			e		29	18		
			eS		31	35		
			i		31	56		
			Lq		32	42		
			e		33	00		
			i		33	20		
			M		37	51		
M		39	32					
24	Shillong	Z	iP	03	11	31		Slight, distant, rarefaction
24	Shillong	Z	iP	03	12	07		Slight, distant, compression

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Date	Station	Compt	Phase	G M T			Δ	Remarks
				h	m	s		
24	Epc: 12.5°N, 48.6°E. Gulf of Aden - H = 15h 08m 15s. h about 47 km (USCGS)							
	Shillong	Z	iP	15	16	12		Slight, distant, rarefaction
24	Shillong	Z	eP eSg	16	05	08 05 42	240	Slight
24	Shillong	Z	iP	17	15	33		Slight, distant, rarefaction
24	Shillong	Z	ePg eSg	19	03	42 03 55	110	Slight
24	Chatra	Z	iPg iSg	22	44	23 44 53	290	Feeble, compression
24	Shillong	Z	eP	23	02	40		Slight, near
25	Shillong	Z	ePg eSg	03	41	33 42 03	220	Slight
25	Poona	Z	iP	06	46	27		Slight, distant, compression
25	Shillong	Z	ePg eSg	06	53	05 53 25	170	Slight
25	Epc: 24.3°N, 122.6°E. Off Coast of Formosa. - H = 11h 10m 23s. h about 25 km (USCIS). Mag. = 5½ (Pas), 5½ (Brk).							
	Shillong	ZNE	iP iS	11	16	15 20 56	3060	Rarefaction
	Chatra	Z	iP PP PPP iS PcS Lq SS SSS Lr	11	16	53 17 56 18 19 23 05 23 09 23 58 24 11 24 26 25 28	3570	Rarefaction
		E	M	31	32			
		N	M	31	32			
25	Calcutta	E	eP eS	11	17	01 22 19	3670	
25	Port Blair	E	ep e M	11	17	02 23 39 30 -		
25	Bokaro	E	iP PP PPP i iS i SS/Lq	11	17	05 18 22 18 39 19 41 22 23 23 13 24 18	3670	

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Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
25	Bokaro Contd.	E	SSS	11	24	59		
			Lr		26	09		
			i		28	26		
			M		28	59		
25	Visakhapatnam	E NE	iP	11	17	37	4120	
			iPP		19	07		
			eS		23	24		
			eSSS		26	38		
			eM		31	13		
25	Dehra Dun	Z N	eP	11	17	56	4480	
			PP		19	46		
			PPP		20	15		
			iS		24	04		
			SS		26	52		
			SSS		27	32		
			M		32	50		
25	Delhi	ZNE ZE	iP	11	18	01	4140	Compression
			i		18	17		
			PPP		19	40		
		EN	PcP		20	12		
			iS		23	49		
			i		24	37		
			i		25	21		
		E EN E N	SSS		27	24		
			ScS		28	29		
			Lr		28	26		
			i		29	43		
M		31	52					
25	Madras	E	iP	11	18	12	4510	
			e		19	36		
			PP		19	52		
			PPP		20	16		
			iS		24	23		
			SSS/Lq		27	54		
			ScS		28	16		
			Lr		29	34		
M		32	52					
25	Hyderabad	NE	eP	11	18	14	4540	
			PP		19	44		
			PcP		20	11		
		E	eS		24	23		
			PS		24	46		
			SS		27	38		
		NE E N	Lr		28	34		
			M		33	47		
			M		33	53		
25	Poona	Z N	iP	11	18	44	4980	Compression
			iS		25	22		
			SS		28	39		
			Lq		29	06		
			Lr		31	29		
			M		35	17		
			Mn		36	37		

Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks	
25	Bombay	NE	eP	11	18	52	5110		
			PP			20		42	
		NEs	PcPs			24		15	
			eS			25		37	
		N	PPS			26		02	
		NE	PPScS			28		44	
		N	SS			29		04	
			Lq			29		26	
			SSS			29		56	
			Lr			31		43	
			M			37		55	
E	M			42	47				
25	Kodaikanal	E	eS	11	18	57			
			i			34	40		
25	Chatra	Z	iP	12	54	02	280	Feeble, compression	
		ZN	iS			54			34
25	Shillong	Z	eP	12	55	32		Slight, near	
25	Shillong	Z	eP	12	58	18		Slight, near	
25	Delhi	Z	iP	12	58	56		Slight, rarefaction	
25	Dehra Dun	Z	e	12	58	58		Slight	
25	Shillong	Z	eP	13	03	19		Slight, distant	
25	Chatra	Z	iP	17	20	21	270	Feeble, compression	
		ZNE	Sq			20			52
25	Shillong	Z	eP	17	21	48		Slight, near	
25	Chatra	Z	eP	21	12	58	260	Feeble	
		ZNE	eS			13			28
25	Shillong	Z	eP	21	13	23		Slight, near	
26	Chatra	Z	eP	02	05	06	270	Feeble, rarefaction	
			S			05			37
26	Chatra	Z	eP	02	45	23	290	Feeble, compression	
			S			45			55
26	Shillong	Z	eP	02	46	41		Slight, distant	
26	Epc: 27.9°N, 129.2°E. Ryukyu Islands. - H = 02h 51m 21s. h about 35 km (USCGS)								
	Shillong	Z	iP	02	57	56		Slight, distant	
	Chatra	Z	iP	02	58	37		Slight, distant, compression	
	Delhi	Z	iP	02	59	38		Slight, compression	
26	Chatra	Z	iP	05	24	17	290	Feeble, compression	
			S			24			49

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Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
26	Shillong	Z	eP	05	25	40		Slight, distant
26	Shillong	Z	eP	06	02	02		Slight, near
26	Shillong	Z	eP	06	32	32		Slight, near
26	Chatra	Z	ePg eSg	07	39	42 29 51	80	Feeble
26	Bokaro	NE	iP	08	19	26		Slight, tremor
26	Chatra	Z	iP eS	08	36	04 36 37	290	Feeble, compression
26	Shillong	Z	eP	08	37	30		Slight, distant
26	Delhi	Z	iP	10	06	28		Slight, compression
26	Bokaro	NE	iP	10	18	16		Slight, tremor
26	Shillong	Z	eP	14	05	41		Slight, distant
26	Chatra	Z	eP S	14	06	40 07 53	700	Feeble
26	Chatra	Z	iPg iSg	17	56	27 57 59	290	Slight
26	Shillong	Z	eP	17	57	03		Slight, distant
26	Chatra	Z ZNE	iP iS	19	08	43 09 17	300	Feeble, compression
26	Shillong	Z	iP	19	09	07		Slight, distant, rarefaction
26	Shillong	Z	eP	22	45	30		Slight, near
27	Chatra	Z	ePg Sg	00	55	29 55 45	130	Feeble
27	Bokaro	NE	iP	03	56	57		Slight, tremor
27	Bokaro	NE	iP	07	32	40		Slight, tremor
27	Delhi	Z	iP iS	08	53	20 54 55	920	Slight, rarefaction
27	Shillong	Z	iP	12	32	12		Slight, distant, rarefaction
27	Poona	N	M	14	12	03		Slight, distant
27	Delhi	Z	iP	20	06	48		Slight, compression
27	Delhi	Z	iP iS	21	33	56 35 39	1000	Slight, compression
27	Shillong	Z	iP	21	36	32		Slight, distant, rarefaction
27	Chatra	Z	iPg iSg	21	58	43 58 51	70	Slight, rarefaction

Date	Station	Compt	Phase	G h	M m	T s	Δ km	Remarks
27	Shillong	ZE	iP iS	21 22	59 00	09 11	580	Slight, compression
27	Shillong	Z	eP	23	32	46		Slight, distant, compression
28	Delhi	Z	iP i	04	12 13	42 01		Slight, rarefaction
28	Shillong	Z	eP	05	34	00		Slight, near
28	Chatra	Z	eP eS	06	44 45	34 09	310	Feeble
28	Shillong	Z	ePg iSg	06	45 45	09 43	230	Slight
28	Delhi	Z	iP	06	59	30		Slight, compression
28	Bokaro	NE	iP	07	49	07		Slight, tremor
28	Shillong	Z	eP	09	24	02		Slight, near
28	Chatra	Z	eP	09	24	29		Feeble, distant
28	Shillong	Z	eP	11	10	54		Slight, distant
28	Epc: Lat. 36°N, Long. 95.5°E (China). - H= 11h 13m 46s (New Delhi)							
	Tocklai	E	iP iS	11	16 18	12 02	960	Slight, near
	Shillong	ZE	iP iS	11	16 18	25 28	1200	Slight, compression
	Delhi	Z	iP	11	18	37		Slight, compression
28	Delhi	Z	iP	11	26	02		Slight, compression
28	Shillong	Z	iP	11	27	10		Slight, distant, rarefaction
28	Delhi	Z	iP	18	00	25		Slight, rarefaction
28	Shillong	Z	iP iS	18	58 19	04 07	4390	Slight, rarefaction
28	Visakhapatnam	E	iP i	18	58 19	31 20		Slight, near
28	Chatra	ZNE	eP S	18	58 19	38 08	4850	Slight
28	Madras	E	eP e eS	18	58 19 05	43 39 24		Slight
28	Poona	Z	iP	18	59	03		Slight, distant, rarefaction
28	Delhi	Z	iP	18	59	35		Slight, compression
28	Delhi	EZ	iP	18	59	38	5750	Slight

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Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
28	Delhi	Z	i	19	04	38		
	Contd.	EN	iS		07	00		
28	Calcutta	E	e	19	00	01		Slight
28	Shillong	Z	eP	22	07	42		Slight, distant
28	Delhi	Z	iP	22	09	16		Slight, rarefaction
28	Delhi	Z	iP	22	58	39		Tremor, rarefaction
28	Shillong	Z	eP	23	22	12		Slight, distant
28	Delhi	Z	iP	23	23	24		Slight, rarefaction
28	Shillong	Z	eP	23	28	04		Slight, distant
28	Shillong	ZE	ePg eSg	23	59	23 59 43	130	Slight
29	Shillong	Z	iP	01	49	36		Slight, near, rarefaction
29	Shillong	ZE	iP	01	51	52		Slight, distant, compression
29	Shillong	Z	iP	03	20	12		Slight, distant, compression
29	Delhi	Z	iP i i	03	21 21 22	45 51 15		
29	Delhi	Z	iP	06	01	55		Slight, rarefaction
29	Chatra	Z	iPg eSg	11	23	19 23 34	120	Slight
29	Epc: 7.9°S, 127.3°E. Banda Sea. - H = 13h 49m 16s. h about 80 km (USCGS)							
	Shillong	Z	iP	13	57	51		Slight, distant, compression
	Chatra	Z	iP	13	58	21		Slight, distant, compression
	Delhi	Z	iP	13	59	10		Slight, compression
29	Shillong	Z	iP	15	56	26		Slight, distant, rarefaction
29	Epc: 62.3°N, 152.4°W. Alaska. - H = 16h 28m 04s. h about 39 km (USCGS). Mag.: 4.5 (Pal)							
	Chatra	Z	eP	16	40	00		
	Shillong	Z	iP	16	40	10		Rarefaction
29	Shillong	Z	iP	16	40	14		Compression
29	Poona	E	e	17	04	52		
29	Shillong	Z	eP	21	09	25		Slight, distant
29	Delhi	Z	iP	21	26	32		Tremor, rarefaction
29	Calcutta	E	e	21	31	08		Slight

Date	Station	Compt	Phase	G h	M m	T s	$\Delta$ km	Remarks
29	Shillong	Z	eP	22	10	25		Slight, near
29	Delhi	Z	iP	22	40	59		Compression
29	Epc: 32.1°N, 48.4°E. Iran. Felt: Shushtar and Masjed Soleymon. - H = 22h 35m 40s. h about 25 km (USCGS)							
	Delhi	EZ ZNE	iP iS	22	41	03 45 13	2600	Slight, rarefaction
	Bombay	N	e e	22	41	15 45 38		Slight
	Chatra	Z	eP	22	41	21		Feeble, distant
	Shillong	Z	iP	22	43	05		Slight, distant, rarefaction
29	Calcutta	E	e	22	53	06		Slight
29	Delhi	Z	iP	22	54	10		Slight, compression
30	Delhi	Z	iP	01	19	08		Slight, compression
30	Port Blair	NE	ePg iSg	03	56	37 56 41	40	Slight
30	Shillong	Z	ePg eSg	07	44	31 45 07	200	Slight
30	Bokaro	NE	iP	08	02	39		Slight, tremor
30	Delhi	Z	iP	09	49	53		Slight, rarefaction
30	Shillong	Z	eP	15	09	39		Slight, near
30	Shillong	Z	erg eSg	16	03	03 03 43	270	Slight
30	Shillong	Z	eP	16	07	27		Slight, near
30	Chatra	Z	eP	16	08	23		Feeble, distant
30	Delhi	Z	eP	18	43	50		Slight, rarefaction
30	Epc: 16.5°N, 122°E. Near Coast of Luzon, Philippine Islands - H = 19h 29m 51s. h about 40 km (USCGS)							
	Shillong	NE	eP	19	36	02		Slight, distant
	Chatra	Z	eP	19	36	37		Feeble, distant
	Bokaro	NE	e e e	19	36	45 38 10 47 20		Slight, distant
	Hyderabad	E	eP iS PS Lr M	19	37	04 43 59 44 16 50 49 55 10	5270	Slight



June 1962

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Date	Station	Compt	Phase	G	M	T	Δ	Remarks
				h	m	s	km	
30	Madras	E	eP	19	37	32	4570	Moderate
			PP				39 12	
			PcP				39 27	
			PPP				39 40	
			eS				43 46	
			Lq				46 51	
			Lr				48 52	
			M				51 59	
30	Delhi	ZNE	iP	19	37	50	8890	Slight, compression.
		EZ	i				39 44	
		EN	PP				41 02	
		E	PPP				42 38	
			i				45 10	
		EN	iS				47 54	
			SaS				49 10	
			SS				52 42	
EZ	SSS				57 00			
30	Poona	Z	iP	19	38	23		Slight, distant, rarefaction
		EZ	i				40 03	
30	Bombay	NES	eP	19	38	30	5080	Slight
		NE	e				40 18	
		NES	eS				45 13	
			PFS				45 29	

### Earthquake Reports

(Non-Instrumental)

The following is the list of earthquakes that were reported by voluntary observers from different stations during the month of June 1962.

Station	Date in GMT	Time in GMT	Duration of shocks in secs.	Number of shocks	Intensity in R.F. scale	Remarks
		h. m.				
Srinagar	17	04 38	6	2	IV	From SW
Bhuntar	17	04 40	7	1	V	Thumping sound
Qazigund	17	04 40	10	3	IV	From South
Banihal	17	04 42	30	1	IV	
Shillong	22	20 30	2	1	III	Scaping sound
Shillong	23	06 50	20	1	IV	

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MICROSEISMIC TABULATION

June 1962

| Date     | Hour   | K | Mean Amplitude | Mean Period | Date     | Hour   | K | Mean Amplitude | Mean Period |
|----------|--------|---|----------------|-------------|----------|--------|---|----------------|-------------|
|          | GMI    |   | in mm          | in sec      |          | GMI    |   | in mm          | in sec      |
| Station. | Madras |   | Compt.         | E. W.       | Station. | Madras |   | Compt.         | E. W.       |
| 01       | 00     | 3 | 0.4            | 2.7         | 08       | 03     | 3 | 0.6            | 2.7         |
|          | 03     | 3 | 0.4            | 2.9         | Contd.   |        | 3 | 0.4            | 2.0         |
|          | 06     | 3 | 0.5            | 2.9         |          | 06     | 3 | 0.5            | 2.5         |
|          | 12     | 1 | 0.7            | 3.0         |          |        | 3 | 0.4            | 1.9         |
|          | 18     | 1 | 0.3            | 3.0         |          | 12     | 3 | 0.5            | 2.5         |
|          |        |   |                |             |          | 18     | 3 | 0.6            | 2.6         |
| 02       | 00     | 1 | 1.0            | 3.2         | 09       | 00     | 3 | 0.5            | 2.5         |
|          | 03     | 1 | 1.3            | 3.2         |          |        | 3 | 0.3            | 1.8         |
|          | 06     | 1 | 1.4            | 3.3         |          | 03     | 3 | 0.4            | 2.4         |
|          | 12     | 1 | 1.2            | 3.1         |          |        | 3 | 0.2            | 1.7         |
|          | 18     | 3 | 0.7            | 3.1         |          | 06     | 3 | 0.4            | 2.4         |
| 03       | 00     | 3 | 0.6            | 2.9         |          |        | 3 | 0.2            | 1.7         |
|          | 03     | 3 | 0.5            | 2.9         |          | 12     | 3 | 0.7            | 2.9         |
|          | 06     | 3 | 0.5            | 2.8         |          | 18     | 3 | 0.6            | 2.9         |
|          | 12     | 3 | 0.5            | 2.9         | 10       | 00     | 3 | 0.6            | 3.3         |
|          | 18     | 3 | 0.4            | 2.8         |          |        | 3 | 0.2            | 1.6         |
| 04       | 00     | 3 | 0.6            | 2.9         |          | 03     | 3 | 0.3            | 1.9         |
|          | 03     | 3 | 0.6            | 3.3         |          | 06     | 3 | 0.3            | 2.3         |
|          | 06     | 3 | 0.5            | 3.3         |          | 12     | 3 | 0.6            | 2.6         |
|          |        | 3 | 0.4            | 2.5         |          | 18     | 3 | 0.6            | 2.6         |
|          | 12     | 3 | 0.6            | 3.7         |          |        | 3 | 0.6            | 3.7         |
|          |        | 3 | 0.4            | 2.7         | 11       | 00     | 3 | 0.5            | 2.6         |
|          | 18     | 3 | 0.6            | 3.5         |          |        | 3 | 0.6            | 3.9         |
|          |        | 3 | 0.5            | 2.9         |          | 03     | 3 | 0.2            | 1.9         |
| 05       | 00     | 3 | 0.6            | 3.1         |          | 06     | 3 | 0.3            | 1.7         |
|          | 03     | 1 | 0.7            | 3.0         |          | 12     | 3 | 0.5            | 2.7         |
|          | 06     | 1 | 1.0            | 2.9         |          |        | 3 | 0.6            | 3.8         |
|          | 12     | 1 | 1.1            | 3.0         |          | 18     | 3 | 0.5            | 2.7         |
|          | 18     | 1 | 1.1            | 2.9         |          |        | 3 | 0.7            | 4.1         |
| 06       | 00     | 1 | 1.4            | 3.0         | 12       | 00     | 3 | 0.6            | 3.9         |
|          |        | 1 | 1.3            | 3.4         |          |        | 3 | 0.5            | 2.8         |
|          | 03     | 1 | 1.0            | 2.3         |          |        | 3 | 0.2            | 1.9         |
|          |        | 1 | 1.2            | 3.3         |          | 03     | 3 | 0.6            | 3.8         |
|          | 06     | 3 | 0.8            | 2.8         |          |        | 3 | 0.4            | 2.7         |
|          |        | 3 | 1.2            | 3.3         |          |        | 3 | 0.1            | 1.5         |
|          | 12     | 3 | 0.8            | 2.7         |          | 06     | 3 | 0.6            | 3.7         |
|          |        | 3 | 1.0            | 3.2         |          |        | 3 | 0.4            | 2.8         |
|          | 18     | 3 | 0.0            | 2.7         |          |        | 3 | 0.1            | 1.5         |
|          |        | 3 | 1.0            | 3.3         |          | 12     | 3 | 0.5            | 3.9         |
|          |        |   |                |             |          |        | 3 | 0.4            | 2.7         |
| 07       | 00     | 3 | 1.1            | 3.8         |          |        | 3 | 0.1            | 1.2         |
|          |        | 3 | 0.7            | 2.7         |          | 18     | 3 | 0.4            | 2.3         |
|          | 03     | 3 | 1.1            | 4.0         |          |        | 3 | 0.3            | 1.9         |
|          |        | 3 | 0.8            | 2.9         | 13       | 00     | 3 | 0.4            | 2.6         |
|          | 06     | 3 | 1.0            | 3.9         |          | 03     | 3 | 0.5            | 3.6         |
|          |        | 3 | 0.7            | 2.9         |          |        | 3 | 0.4            | 2.9         |
|          | 12     | 3 | 0.9            | 3.9         |          | 06     | 3 | 0.6            | 3.8         |
|          |        | 3 | 0.6            | 2.8         |          |        | 3 | 0.4            | 2.7         |
|          | 18     | 3 | 0.7            | 3.8         |          | 12     | 3 | 0.6            | 3.4         |
|          |        | 3 | 0.6            | 2.8         |          |        | 3 | 0.4            | 2.6         |
| 08       | 00     | 3 | 0.7            | 3.9         |          | 18     | 3 | 0.6            | 3.0         |
|          |        | 3 | 0.5            | 2.8         |          |        | 3 | 0.4            | 2.2         |
|          |        |   |                |             |          |        | 3 | 0.1            | 1.6         |

June 1962

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| Date                                                                                                              | Hour   | K      | Mean Amplitude<br>in mm | Mean Period<br>in sec | Date     | Hour   | K      | Mean Amplitude<br>in mm | Mean Period<br>in sec |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|-------------------------------------------------------------------------------------------------------------------|--------|--------|-------------------------|-----------------------|----------|--------|--------|-------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------|--|--|--|--|----------|--------|--------|-------|--|
| <table border="0"> <tr> <td>Station.</td> <td>Madras</td> <td>Compt.</td> <td>E. W.</td> <td></td> </tr> </table> |        |        |                         |                       | Station. | Madras | Compt. | E. W.                   |                       | <table border="0"> <tr> <td>Station.</td> <td>Madras</td> <td>Compt.</td> <td>E. W.</td> <td></td> </tr> </table> |  |  |  |  | Station. | Madras | Compt. | E. W. |  |
| Station.                                                                                                          | Madras | Compt. | E. W.                   |                       |          |        |        |                         |                       |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| Station.                                                                                                          | Madras | Compt. | E. W.                   |                       |          |        |        |                         |                       |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| 14                                                                                                                | 00     | 3      | 0.4                     | 2.7                   | 19       | 18     | 3      | 0.6                     | 4.0                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 03     | 3      | 0.6                     | 3.5                   | Contd.   |        | 1      | 0.4                     | 2.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.3                   |          |        |        |                         |                       |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 06     | 3      | 0.6                     | 3.8                   | 20       | 00     | 3      | 0.6                     | 4.2                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.5                     | 2.7                   |          |        | 3      | 0.3                     | 2.7                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 12     | 3      | 0.7                     | 4.2                   |          | 03     | 3      | 0.6                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.5                     | 2.3                   |          |        | 3      | 0.3                     | 2.6                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 18     | 3      | 0.3                     | 2.1                   |          | 06     | 3      | 0.7                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 1      | 0.2                     | 1.5                   |          |        | 3      | 0.3                     | 2.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| 15                                                                                                                | 00     | 3      | 0.5                     | 3.6                   |          | 12     | 3      | 0.7                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 03     | 3      | 0.6                     | 3.3                   |          |        | 3      | 0.2                     | 2.2                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.4                   |          | 18     | 3      | 0.6                     | 4.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.1                     | 1.6                   |          |        | 3      | 0.2                     | 2.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 06     | 3      | 0.6                     | 3.3                   | 21       | 00     | 3      | 0.6                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.5                   |          | 03 to  |        |                         |                       |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 12     | 3      | 0.6                     | 4.3                   |          | 18     | ...    | -                       | -                     |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.5                   |          |        |        |                         |                       |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 18     | 3      | 0.7                     | 4.3                   | 22       | 00     | 3      | 0.4                     | 3.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.2                     | 1.9                   |          |        | 3      | 0.3                     | 2.1                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| 16                                                                                                                | 00     | 3      | 0.6                     | 4.3                   |          | 03     | 3      | 0.6                     | 4.1                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.3                   |          |        | 3      | 0.3                     | 2.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.1                     | 1.2                   |          | 06     | 3      | 0.6                     | 4.2                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 03     | 3      | 0.6                     | 4.2                   |          |        | 3      | 0.3                     | 2.6                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.5                   |          | 12     | 3      | 0.7                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 06     | 3      | 0.5                     | 4.2                   |          |        | 3      | 0.3                     | 2.7                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.3                   |          | 18     | 3      | 0.6                     | 4.6                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 12     | 3      | 0.5                     | 4.0                   |          |        | 3      | 0.2                     | 2.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.3                   | 23       | 00     | 3      | 0.6                     | 4.2                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 18     | 3      | 0.5                     | 3.7                   |          |        | 3      | 0.3                     | 2.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.4                   |          | 03     | 3      | 0.6                     | 4.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| 17                                                                                                                | 00     | 3      | 0.5                     | 3.1                   |          |        | 3      | 0.2                     | 2.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.3                   |          | 06     | ...    | -                       | -                     |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 03     | 3      | 0.5                     | 2.8                   |          | 12     | 3      | 0.6                     | 4.6                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 06     | 3      | 0.5                     | 2.3                   |          |        | 3      | 0.2                     | 2.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 12     | 3      | 0.6                     | 2.3                   |          | 18     | 3      | 0.6                     | 4.9                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 18     | 3      | 0.6                     | 3.3                   | 24       | 00     | 3      | 0.7                     | 4.8                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.6                   |          |        | 3      | 0.2                     | 2.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| 18                                                                                                                | 00     | 3      | 0.5                     | 3.5                   |          |        | 3      | 0.1                     | 1.3                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.7                   |          | 03     | 3      | 0.6                     | 4.6                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 03     | 3      | 0.3                     | 2.7                   |          |        | 3      | 0.1                     | 1.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 06     | 3      | 0.4                     | 2.5                   |          | 06     | 3      | 0.6                     | 4.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.2                     | 1.9                   |          |        | 3      | 0.1                     | 1.7                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 12     | 3      | 0.4                     | 2.5                   |          | 12     | 3      | 0.6                     | 4.5                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.5                     | 3.7                   |          | 18     | 3      | 0.6                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 18     | 3      | 0.6                     | 3.9                   | 25       | 00     | 1      | 0.2                     | 1.8                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.4                     | 2.4                   |          | 03     | 1      | 0.3                     | 1.8                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
| 19                                                                                                                | 00     | 3      | 0.6                     | 3.4                   |          |        | 1      | 0.3                     | 2.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 3      | 0.3                     | 2.5                   |          | 06     | 1      | 0.4                     | 2.6                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 03     | 3      | 0.5                     | 3.8                   |          | 12     | ...    | -                       | -                     |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 1      | 0.5                     | 2.5                   |          | 18     | 1      | 0.8                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 06     | 1      | 0.4                     | 2.4                   | 26       | 00     | 1      | 0.8                     | 4.4                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   | 12     | 3      | 0.5                     | 3.6                   |          |        | 3      | 0.4                     | 2.7                   |                                                                                                                   |  |  |  |  |          |        |        |       |  |
|                                                                                                                   |        | 1      | 0.6                     | 2.4                   |          |        |        |                         |                       |                                                                                                                   |  |  |  |  |          |        |        |       |  |

Date hour R Mean Magnitude Mean Period  
in in in in sec

Date Hour R Mean Magnitude Mean Period  
in in in in sec

Station. Shillong Compt. E. W.

Station. Shillong Compt. E. W.

|        |    |     |     |     |
|--------|----|-----|-----|-----|
| 26     | 02 | 1   | 0.2 | 4.2 |
| Contd. |    | 2   | 0.4 | 2.6 |
|        | 06 | 1   | 0.2 | 4.7 |
|        |    | 2   | 0.2 | 2.5 |
|        | 12 | 1   | 0.7 | 4.7 |
|        |    | 2   | 0.5 | 2.7 |
|        | 18 | 1   | 0.2 | 4.9 |
|        |    | 2   | 0.5 | 2.9 |
| 27     | 00 | 2   | 0.2 | 1.3 |
|        | 03 | 1   | 0.2 | 1.6 |
|        | 06 | 1   | 0.7 | 4.5 |
|        | 12 | 1   | 0.2 | 4.5 |
|        | 15 | 1   | 0.7 | 4.5 |
| 28     | 00 | 2   | 0.2 | 4.5 |
|        |    | 2   | 0.2 | 2.7 |
|        |    | 2   | 0.1 | 1.4 |
|        | 03 | 2   | 0.7 | 4.5 |
|        |    | 2   | 0.4 | 2.7 |
|        |    | 2   | 0.1 | 1.5 |
|        | 06 | 2   | 0.7 | 4.5 |
|        |    | 1   | 0.7 | 2.7 |
|        | 12 | 2   | 0.7 | 4.2 |
|        |    | 1   | 0.7 | 2.7 |
|        | 18 | 1   | 0.2 | 4.4 |
|        |    | 2   | 0.2 | 2.7 |
| 29     | 00 | 1   | 0.7 | 4.5 |
|        |    | 2   | 0.4 | 2.6 |
|        | 03 | 1   | 0.7 | 4.4 |
|        |    | 2   | 0.5 | 2.7 |
|        | 06 | 1   | 0.7 | 4.2 |
|        |    | 2   | 0.2 | 2.2 |
|        | 12 | 1   | 0.7 | 4.5 |
|        |    | 2   | 0.2 | 2.2 |
|        | 18 | 1   | 0.7 | 4.7 |
|        |    | 2   | 0.2 | 2.7 |
| 30     | 00 | 1   | 0.7 | 4.4 |
|        |    | 2   | 0.2 | 2.7 |
|        | 03 | ... | —   | —   |
|        | 06 | 1   | 0.4 | 2.2 |
|        |    | 2   | 0.2 | 4.2 |
|        | 12 | 1   | 0.2 | 2.2 |
|        |    | 1   | 0.2 | 1.5 |
|        | 18 | 2   | 0.7 | 4.7 |
|        |    | 1   | 0.4 | 2.2 |

Station. Shillong Compt. E. W.

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 01 | 00 | co  | —   | —   |
|    | 18 | ... | —   | —   |
| 02 | 00 | ... | —   | —   |
|    | 03 | 2   | 0.2 | 2.0 |
|    | 12 | 2   | 0.4 | 2.0 |
|    | 18 | 2,0 | —   | —   |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 00 | 00 | 2   | 0.4 | 5.2 |
|    | 06 | 2,0 | —   | —   |
|    | 12 | 2   | 0.2 | 5.1 |
|    | 18 | 2   | 0.4 | 3.0 |
| 01 | 00 | 2   | 0.2 | 4.0 |
|    | 06 | 2   | 0.4 | 4.4 |
|    | 12 | 2   | 0.2 | 4.4 |
|    | 18 | 2   | 0.2 | 4.6 |
| 05 | 00 | 2   | 0.2 | 4.4 |
|    | 06 | 2   | 0.2 | 4.4 |
|    | 12 | 2   | 0.2 | 4.0 |
|    | 18 | 2   | 0.2 | 5.2 |
| 06 | 00 | 2   | 0.2 | 4.2 |
|    | 06 | 2   | 0.2 | 4.0 |
|    | 12 | 2   | 0.2 | 5.2 |
|    | 18 | 2   | 0.2 | 4.0 |
| 07 | 00 | 2   | 0.4 | 5.2 |
|    | 06 | 1   | 0.2 | 4.2 |
|    | 12 | 2   | 0.4 | 5.5 |
|    | 18 | 2   | 0.2 | 4.2 |
| 08 | 00 | 2   | 0.4 | 4.2 |
|    | 06 | 2   | 0.2 | 4.0 |
|    | 12 | 2   | 0.2 | 5.0 |
|    | 18 | 2   | 0.2 | 4.2 |
| 09 | 00 | 2   | 0.2 | 4.4 |
|    | 06 | 2   | 0.4 | 4.2 |
|    | 12 | 2   | 0.2 | 4.4 |
|    | 18 | 2   | 0.2 | 4.4 |
| 10 | 00 | 2   | 0.2 | 4.2 |
|    | 06 | 1   | 0.2 | 5.2 |
|    | 12 | 2   | 0.2 | 4.2 |
|    | 18 | 2   | 0.2 | 4.2 |
| 11 | 00 | 2   | 0.2 | 4.2 |
|    | 06 | 2   | 0.2 | 4.4 |
|    | 12 | 2   | 0.2 | 4.0 |
|    | 18 | 2   | 0.2 | 4.2 |
| 12 | 00 | 2   | 0.2 | 4.2 |
|    | 06 | 2   | 0.2 | 5.0 |
|    | 12 | 2   | 0.2 | 4.2 |
|    | 18 | 2   | 0.2 | 4.2 |
| 13 | 00 | 2   | 0.4 | 4.2 |
|    | 06 | 2   | 0.2 | 4.2 |
|    | 12 | 2   | 0.2 | 4.2 |
|    | 18 | 2   | 0.2 | 4.2 |
| 14 | 00 | 2   | 0.4 | 4.2 |
|    | 06 | co  | —   | —   |
|    | 12 | ... | —   | —   |

June 1962

35

| Date | Hour     | K   | Mean Amplitude | Mean Period |
|------|----------|-----|----------------|-------------|
|      | GMT      |     | in mm          | in sec      |
| 15   | 00 to 18 | ... | -              | -           |
| 16   | 00       | 3   | 0.2            | 4.2         |
|      | 06       | 3   | 0.2            | 4.4         |
|      | 12       | 3   | 0.2            | 4.4         |
|      | 18       | 3   | 0.4            | 4.0         |
| 17   | 00       | 3   | 0.2            | 4.0         |
|      | 06       | 2   | 0.3            | 3.3         |
|      | 12       | 2   | 0.4            | 4.2         |
|      | 18       | ... | -              | -           |
| 18   | 00 to 18 | ... | -              | -           |
| 19   | 00       | 3   | 0.3            | 4.6         |
|      | 06       | 3   | 0.2            | 4.6         |
|      | 12       | 3   | 0.2            | 4.6         |
|      | 18       | 3   | 0.2            | 4.8         |
| 20   | 00       | 3   | 0.2            | 4.8         |
|      | 03       | 00  | 0.1            | 4.8         |
|      | 12       | 3   | 0.2            | 4.4         |
|      | 18       | 3   | 0.2            | 4.8         |
| 21   | 00       | 00  | 0.1            | 4.6         |
|      | 06       | ... | -              | -           |
|      | 12       | 3   | 0.2            | 4.2         |
|      | 18       | 3   | 0.3            | 4.2         |
| 22   | 00       | 3   | 0.2            | 4.4         |
|      | 06       | 3   | 0.2            | 4.0         |
|      | 12       | 1   | 0.3            | 4.4         |
|      | 18       | 00  | 0.1            | 4.4         |
| 23   | 00       | 3   | 0.3            | 4.3         |
|      | 06       | 3   | 0.3            | 4.2         |
|      | 12       | 3   | 0.3            | 4.0         |
|      | 18       | 3   | 0.2            | 4.4         |
| 24   | 00       | 00  | 0.1            | 4.0         |
|      | 06       | ... | -              | -           |
|      | 12       | 00  | 0.1            | 4.0         |
|      | 13       | 3   | 0.2            | 4.8         |
| 25   | 00       | 3   | 0.3            | 4.4         |
|      | 06       | 3   | 0.2            | 4.6         |
|      | 12       | ... | -              | -           |
|      | 18       | 3   | 0.2            | 4.8         |
| 26   | 00       | 3   | 0.3            | 4.8         |
|      | 03       | 0,0 | -              | -           |
|      | 12       | 00  | 0.2            | 4.2         |
|      | 18       | 3   | 0.2            | 4.3         |
| 27   | 00       | 3   | 0.3            | 5.0         |
|      | 06       | 3   | 0.3            | 3.4         |

| Date                        | Hour | K   | Mean Amplitude | Mean Period |
|-----------------------------|------|-----|----------------|-------------|
|                             | GMT  |     | in mm          | in sec      |
| 27                          | 12   | 3   | 0.2            | 4.2         |
| Contd.                      | 18   | 3   | 0.2            | 4.4         |
| 28                          | 00   | 00  | 0.1            | 4.2         |
|                             | 06   | 3   | 0.2            | 4.0         |
|                             | 12   | 3   | 0.2            | 3.8         |
|                             | 18   | 3   | 0.3            | 4.6         |
| 29                          | 00   | 3   | 0.2            | 4.6         |
|                             | 06   | 00  | 0.1            | 4.2         |
|                             | 12   | 00  | 0.1            | 4.0         |
|                             | 18   | 00  | 0.1            | 4.2         |
| 30                          | 00   | 00  | 0.1            | 4.1         |
|                             | 06   | 3   | 0.3            | 4.8         |
|                             | 12   | 3   | 0.2            | 4.6         |
|                             | 18   | 2   | 0.2            | 4.4         |
| Station. Bokaro Compt. E.W. |      |     |                |             |
| 01                          | 00   | 3   | 0.3            | 2.5         |
|                             | 06   | 0,0 | -              | -           |
|                             | 12   | 3   | 0.3            | 3.0         |
|                             | 18   | 3   | 0.4            | 4.0         |
| 02                          | 00   | 3   | 0.3            | 3.0         |
|                             | 06   | 3   | 0.5            | 4.3         |
|                             | 12   | 3   | 0.5            | 5.0         |
|                             | 18   | ... | -              | -           |
| 03                          | 00   | 3   | 0.5            | 5.0         |
|                             | 06   | 3   | 0.5            | 5.0         |
|                             | 12   | 3   | 0.4            | 5.0         |
|                             | 18   | 3   | 0.4            | 5.0         |
| 04                          | 00   | 3   | 0.4            | 4.0         |
|                             | 06   | 3   | 0.4            | 4.5         |
|                             | 12   | 3   | 0.4            | 3.5         |
|                             | 18   | 0,0 | -              | -           |
| 05                          | 00   | 0,0 | -              | -           |
|                             | 06   | 3   | 0.5            | 4.0         |
|                             | 12   | 0,0 | -              | -           |
|                             | 18   | 3   | 0.3            | 3.0         |
| 06                          | 00   | 3   | 0.4            | 3.5         |
|                             | 06   | 3   | 0.4            | 4.0         |
|                             | 12   | 3   | 0.5            | 4.0         |
|                             | 13   | 3   | 0.5            | 4.5         |
| 07                          | 00   | 3   | 0.4            | 3.5         |
|                             | 06   | 0,0 | -              | -           |
|                             | 12   | 3   | 0.4            | 3.5         |
|                             | 13   | 3   | 0.4            | 4.0         |
| 08                          | 00   | 3   | 0.5            | 4.0         |
|                             | 06   | 3   | 0.5            | 4.5         |
|                             | 12   | 0,0 | -              | -           |
|                             | 18   | 3   | 0.5            | 4.0         |

| Date                   | Hour  | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|------------------------|-------|-----|-------------------------|-----------------------|
| <i>Station. Bokaro</i> |       |     |                         |                       |
|                        |       |     | <i>Compt.</i>           | <i>E. W.</i>          |
| 09                     | 00    | 3   | 0.5                     | 4.0                   |
|                        | 06    | 3   | 0.5                     | 3.5                   |
|                        | 12    | 3   | 0.6                     | 4.0                   |
|                        | 18    | 3   | 0.6                     | 4.5                   |
| 10                     | 00    | 3   | 0.3                     | 4.4                   |
|                        | 06    | 3   | 0.5                     | 4.5                   |
|                        | 12    | 3   | 0.5                     | 4.0                   |
|                        | 18    | 3   | 0.3                     | 4.3                   |
| 11                     | 00    | 3   | 0.5                     | 4.0                   |
|                        | 06    | 2   | 0.5                     | 4.0                   |
|                        | 12    | 3   | 0.4                     | 4.0                   |
|                        | 18    | 2   | 0.4                     | 3.3                   |
| 12                     | 00    | 2   | 0.4                     | 4.0                   |
|                        | 06    | 3   | 0.5                     | 4.5                   |
|                        | 12    | 3   | 0.5                     | 4.0                   |
|                        | 18    | 3   | 0.5                     | 4.5                   |
| 13                     | 00    | 3   | 0.4                     | 4.0                   |
|                        | 03    | 3   | 0.4                     | 3.3                   |
|                        | 12    | 3   | 0.4                     | 4.0                   |
|                        | 18    | 3   | 0.4                     | 3.3                   |
| 14                     | 00    | 3   | 0.4                     | 3.3                   |
|                        | 06    | 3   | 0.4                     | 4.0                   |
|                        | 12    | 3   | 0.4                     | 4.0                   |
|                        | 18    | 1   | 0.5                     | 4.4                   |
| 15                     | 00    | 1   | 0.5                     | 4.5                   |
|                        | 06    | 3   | 0.5                     | 4.4                   |
|                        | 12    | 3   | 0.5                     | 4.4                   |
|                        | 18    | 3   | 0.5                     | 4.2                   |
| 16                     | 00    | 3   | 0.4                     | 4.2                   |
|                        | 06    | ... | -                       | -                     |
|                        | 12    | 2   | 0.4                     | 2.3                   |
|                        | 18    | 2   | 0.4                     | 3.0                   |
| 17                     | 00    | 2   | 0.4                     | 3.0                   |
|                        | 06    | 3   | 0.5                     | 3.3                   |
|                        | 12    | 3   | 0.5                     | 3.3                   |
|                        | 18    | 3   | 0.5                     | 3.2                   |
| 18                     | 00    | 2   | 0.4                     | 2.8                   |
|                        | 03    | ... | -                       | -                     |
|                        | 12    | 3   | 0.5                     | 3.3                   |
|                        | 18    | 3   | 0.5                     | 4.0                   |
| 19                     | 00    | ... | -                       | -                     |
|                        | 06    | 3   | 0.4                     | 4.0                   |
|                        | 12    | 3   | 0.5                     | 4.5                   |
|                        | 18    | 3   | 0.5                     | 4.0                   |
| 20                     | 00 to |     |                         |                       |
|                        | 18    | 0,0 | -                       | -                     |

| Date                            | Hour  | K   | Mean Amplitude<br>in mm | Mean Period<br>in sec |
|---------------------------------|-------|-----|-------------------------|-----------------------|
| <i>Station. Bokaro</i>          |       |     |                         |                       |
|                                 |       |     | <i>Compt.</i>           | <i>E. W.</i>          |
| 21                              | 00    | 0,0 | -                       | -                     |
|                                 | 06    | 3   | 0.4                     | 5.0                   |
|                                 | 12    | 3   | 0.4                     | 4.0                   |
|                                 | 18    | 3   | 0.5                     | 4.0                   |
| 22                              | 00    | 3   | 0.3                     | 4.2                   |
|                                 | 06    | 3   | 0.4                     | 4.0                   |
|                                 | 12    | 3   | 0.4                     | 4.0                   |
|                                 | 18    | 3   | 0.5                     | 4.0                   |
| 23                              | 00    | 3   | 0.5                     | 4.0                   |
|                                 | 06    | 3   | 0.4                     | 4.2                   |
|                                 | 12    | 0,0 | -                       | -                     |
|                                 | 18    | 0,0 | -                       | -                     |
| 24                              | 00 to |     |                         |                       |
|                                 | 18    | 0,0 | -                       | -                     |
| 25                              | 00    | 0,0 | -                       | -                     |
|                                 | 06    | 3   | 0.4                     | 4.2                   |
|                                 | 12    | ... | -                       | -                     |
|                                 | 18    | 3   | 0.5                     | 4.5                   |
| 26                              | 00    | 3   | 0.5                     | 4.5                   |
|                                 | 06    | 3   | 0.5                     | 4.2                   |
|                                 | 12    | 3   | 0.5                     | 4.4                   |
|                                 | 18    | 3   | 0.5                     | 4.4                   |
| 27                              | 00    | 3   | 0.5                     | 4.2                   |
|                                 | 06    | 3   | 0.5                     | 4.2                   |
|                                 | 12    | 3   | 0.4                     | 4.0                   |
|                                 | 18    | 3   | 0.4                     | 4.0                   |
| 28                              | 00    | 3   | 0.4                     | 4.0                   |
|                                 | 06    | 3   | 0.4                     | 3.8                   |
|                                 | 12    | 3   | 0.5                     | 4.2                   |
|                                 | 18    | 3   | 0.4                     | 4.0                   |
| 29                              | 00    | 3   | 0.4                     | 4.0                   |
|                                 | 06    | 3   | 0.5                     | 4.4                   |
|                                 | 12    | 3   | 0.5                     | 4.6                   |
|                                 | 18    | 3   | 0.5                     | 4.8                   |
| 30                              | 00    | 3   | 0.5                     | 4.2                   |
|                                 | 03    | 3   | 0.5                     | 4.2                   |
|                                 | 12    | 3   | 0.5                     | 4.0                   |
|                                 | 18    | 3   | 0.5                     | 4.0                   |
| <i>Station. Bombay (Colaba)</i> |       |     |                         |                       |
| 01                              | 00    | 3   | 1.4                     | 4.7                   |
|                                 |       |     | 0.7                     | 2.3                   |
|                                 | 06    | 3   | 1.3                     | 4.4                   |
|                                 |       |     | 0.8                     | 2.3                   |
|                                 | 12    | 3   | 0.9                     | 4.5                   |
|                                 |       |     | 0.3                     | 2.0                   |
|                                 | 18    | 3   | 1.2                     | 5.2                   |
|                                 |       |     | 0.6                     | 2.0                   |

June 1962

37

| Date | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|------|----------|---|----------------------|--------------------|
|------|----------|---|----------------------|--------------------|

| Date | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|------|----------|---|----------------------|--------------------|
|------|----------|---|----------------------|--------------------|

Station: Bombay (Colaba)

Compt. E. W.

|     |     |     |     |     |
|-----|-----|-----|-----|-----|
| 02  | 00  | 3   | 0.9 | 5.0 |
|     |     |     | 0.7 | 2.2 |
|     | 06  | 3   | 0.8 | 4.9 |
|     |     |     | 0.6 | 2.0 |
|     | 12  | 3   | 0.3 | 5.2 |
| 18  | ... | -   | -   |     |
|     |     | -   | -   |     |
| 03  | 00  | 3   | 0.9 | 5.0 |
|     |     |     | 0.7 | 2.0 |
|     | 06  | 3   | 1.0 | 5.3 |
|     |     |     | 0.6 | 2.5 |
|     | 12  | 3   | 0.9 | 4.9 |
|     |     |     | 1.0 | 3.0 |
|     |     |     | 0.3 | 2.2 |
| 18  | 3   | 1.0 | 4.9 |     |
|     |     | 0.9 | 3.2 |     |
|     |     | 0.3 | 2.0 |     |
| 04  | 00  | 3   | 0.7 | 5.3 |
|     |     |     | 0.9 | 3.0 |
|     |     |     | 0.3 | 2.0 |
|     | 06  | 3   | 0.8 | 4.8 |
|     |     |     | 0.5 | 3.5 |
|     |     |     | 0.5 | 2.0 |
|     | 12  | 3   | 0.9 | 4.3 |
|     |     |     | 1.0 | 3.5 |
|     |     |     | 0.3 | 2.4 |
|     |     |     | 0.7 | 4.9 |
| 18  | 3   | 0.5 | 3.5 |     |
|     |     | 0.3 | 2.0 |     |
|     |     | 0.3 | 2.0 |     |
| 05  | 00  | 3   | 0.8 | 4.2 |
|     |     |     | 0.5 | 1.8 |
|     | 06  | 3   | 0.7 | 4.3 |
|     |     |     | 0.4 | 2.3 |
|     | 12  | 3   | 0.7 | 4.6 |
|     |     |     | 0.3 | 2.0 |
| 18  | 3   | 0.8 | 4.1 |     |
|     |     | 0.5 | 1.7 |     |
| 06  | 00  | 3   | 0.3 | 4.1 |
|     |     |     | 0.4 | 2.0 |
|     | 06  | 3   | 0.7 | 4.5 |
|     |     |     | 0.4 | 1.7 |
|     | 12  | 3   | 0.7 | 4.4 |
| 0.5 |     |     | 2.2 |     |
| 18  | 3   | 0.8 | 4.9 |     |
|     |     | 0.4 | 1.8 |     |
| 07  | 00  | 3   | 0.8 | 4.5 |
|     |     |     | 0.4 | 2.0 |
|     | 06  | 3   | 0.7 | 4.6 |
|     |     |     | 0.3 | 1.3 |
|     | 12  | 3   | 0.3 | 4.7 |
|     |     |     | 0.4 | 2.2 |
| 18  | 3   | 0.8 | 4.3 |     |
|     |     | 0.4 | 2.0 |     |

|     |    |     |     |     |
|-----|----|-----|-----|-----|
| 08  | 00 | 3   | 0.8 | 4.8 |
|     |    |     | 0.5 | 1.9 |
|     | 06 | 3   | 0.6 | 4.1 |
|     |    |     | 0.6 | 2.0 |
|     | 12 | 3   | 0.9 | 4.7 |
| 0.6 |    |     | 1.8 |     |
| 18  | 3  | 0.9 | 4.0 |     |
|     |    | 0.6 | 2.0 |     |
| 09  | 00 | ... | -   | -   |
|     |    |     | -   | -   |
|     | 06 | 3   | 1.3 | 3.2 |
|     |    |     | 0.7 | 1.7 |
|     | 18 | 3   | 1.8 | 3.4 |
| 0.7 |    |     | 1.7 |     |
| 10  | 00 | 3   | 1.5 | 3.4 |
|     |    |     | 0.5 | 1.8 |
|     | 06 | ... | -   | -   |
|     |    |     | -   | -   |
|     | 18 | 3   | 1.8 | 4.0 |
| 0.6 |    |     | 2.0 |     |
| 11  | 00 | 3   | 1.7 | 3.6 |
|     |    |     | 0.6 | 1.3 |
|     | 06 | 3   | 1.7 | 4.2 |
|     |    |     | 0.7 | 2.3 |
|     | 18 | 3   | 1.6 | 4.2 |
| 0.8 |    |     | 2.3 |     |
| 1.5 |    |     | 3.8 |     |
| 12  | 00 | 3   | 1.5 | 4.0 |
|     |    |     | 0.6 | 2.0 |
|     | 06 | 3   | 1.7 | 3.9 |
|     |    |     | 0.8 | 2.0 |
|     | 18 | 3   | 1.5 | 4.1 |
| 0.7 |    |     | 2.0 |     |
| 1.0 |    |     | 4.6 |     |
| 13  | 00 | ... | -   | -   |
|     |    |     | -   | -   |
|     | 06 | 3   | 0.9 | 4.4 |
|     |    |     | 0.5 | 2.2 |
|     | 12 | 3   | 0.9 | 3.8 |
| 0.6 |    |     | 2.0 |     |
| 18  | 3  | 0.9 | 4.1 |     |
|     |    | 0.6 | 2.1 |     |
| 14  | 00 | 3   | 1.1 | 4.6 |
|     |    |     | 0.6 | 2.3 |
|     | 06 | 3   | 1.3 | 3.7 |
|     |    |     | 0.7 | 2.3 |
|     | 12 | 3   | 1.3 | 3.9 |
|     |    |     | 0.8 | 1.9 |
| 18  | 3  | 1.3 | 3.9 |     |
|     |    | 0.8 | 2.0 |     |

| Date                            | Hour<br>GMT | K | Mean<br>Amplitude<br>in mm | Mean<br>Period<br>in sec |
|---------------------------------|-------------|---|----------------------------|--------------------------|
| <i>Station: Bombay (Colaba)</i> |             |   |                            |                          |
| 15                              | 00          | 3 | 1.2                        | 3.1                      |
|                                 |             |   | 0.7                        | 2.0                      |
|                                 | 06          | 3 | 1.3                        | 4.2                      |
|                                 |             |   | 0.6                        | 2.3                      |
|                                 | 12          | 3 | 1.4                        | 4.3                      |
|                                 |             |   | 0.7                        | 2.0                      |
|                                 | 18          | 3 | 1.4                        | 4.1                      |
|                                 |             |   | 0.7                        | 2.3                      |
| 16                              | 00          | 3 | 0.7                        | 1.3                      |
|                                 |             |   | 0.6                        | 2.1                      |
|                                 | 06          | 3 | 0.9                        | 3.9                      |
|                                 |             |   | 0.5                        | 2.0                      |
|                                 | 12          | 3 | 0.9                        | 4.2                      |
|                                 |             |   | 0.4                        | 2.0                      |
|                                 | 18          | 3 | 1.0                        | 4.0                      |
|                                 |             |   | 0.5                        | 2.1                      |
| 17                              | 00          | 3 | 0.3                        | 1.3                      |
|                                 |             |   | 0.3                        | 1.9                      |
|                                 | 06          | 3 | 1.1                        | 1.3                      |
|                                 |             |   | 0.3                        | 1.8                      |
|                                 | 12          | 3 | 0.3                        | 4.3                      |
|                                 |             |   | 0.5                        | 2.0                      |
|                                 | 18          | 3 | 0.9                        | 4.2                      |
|                                 |             |   | 0.5                        | 2.0                      |
| 18                              | 00          | 3 | 0.7                        | 4.2                      |
|                                 |             |   | 0.6                        | 1.3                      |
|                                 | 06          | 3 | 0.6                        | 2.0                      |
|                                 |             |   | 1.0                        | 3.1                      |
|                                 | 12          | 3 | 1.4                        | 3.7                      |
|                                 |             |   | 0.5                        | 1.3                      |
|                                 | 18          | 3 | 1.5                        | 3.3                      |
|                                 |             |   | 0.4                        | 2.0                      |
| 19                              | 00          | 3 | 1.9                        | 3.9                      |
|                                 |             |   | 0.7                        | 1.3                      |
|                                 | 06          | 3 | 2.0                        | 3.9                      |
|                                 |             |   | 0.8                        | 2.0                      |
|                                 | 12          | 3 | 1.3                        | 3.9                      |
|                                 |             |   | 0.9                        | 2.0                      |
|                                 | 18          | 3 | 1.7                        | 3.3                      |
|                                 |             |   | 0.8                        | 2.0                      |
| 20                              | 00          | 3 | 1.3                        | 4.0                      |
|                                 |             |   | 0.8                        | 2.0                      |
|                                 | 06          | 3 | 1.3                        | 4.4                      |
|                                 |             |   | 0.8                        | 1.9                      |
|                                 | 12          | 3 | 1.5                        | 4.3                      |
|                                 |             |   | 0.5                        | 2.0                      |
|                                 | 18          | 3 | 1.2                        | 4.5                      |
|                                 |             |   | 0.7                        | 2.0                      |
| 21                              | 00          | 3 | 1.4                        | 4.4                      |
|                                 |             |   | 0.7                        | 2.0                      |
|                                 | 06          | 3 | 1.1                        | 4.3                      |
|                                 |             |   | 0.6                        | 2.0                      |

| Date                    | Hour<br>GMT | K   | Mean<br>Amplitude<br>in mm | Mean<br>Period<br>in sec |
|-------------------------|-------------|-----|----------------------------|--------------------------|
| <i>Component: E. W.</i> |             |     |                            |                          |
| 21                      | 12          | 3   | 1.2                        | 4.4                      |
| Contd.                  |             |     | 0.4                        | 2.2                      |
|                         | 18          | 3   | 0.9                        | 4.5                      |
|                         |             |     | 0.4                        | 2.1                      |
| 22                      | 00          | 3   | 1.0                        | 4.8                      |
|                         |             |     | 0.4                        | 2.3                      |
|                         | 06          | 3   | 1.0                        | 4.6                      |
|                         |             |     | 0.5                        | 2.3                      |
|                         | 12          | 3   | 1.3                        | 4.5                      |
|                         |             |     | 0.5                        | 2.3                      |
|                         | 18          | 3   | 1.0                        | 4.6                      |
|                         |             |     | 0.4                        | 2.2                      |
| 23                      | 00          | 3   | 1.0                        | 4.3                      |
|                         |             |     | 0.4                        | 2.3                      |
|                         | 06          | 3   | 0.7                        | 5.0                      |
|                         |             |     | 0.5                        | 2.0                      |
|                         | 12          | 3   | 1.1                        | 4.6                      |
|                         |             |     | 0.5                        | 2.2                      |
|                         | 18          | 3   | 1.0                        | 4.2                      |
|                         |             |     | 0.5                        | 2.0                      |
| 24                      | 00          | 3   | 1.1                        | 4.6                      |
|                         |             |     | 0.4                        | 2.1                      |
|                         | 06          | 3   | 0.9                        | 4.6                      |
|                         |             |     | 0.4                        | 2.0                      |
|                         | 12          | 3   | 1.0                        | 4.9                      |
|                         |             |     | 0.4                        | 2.0                      |
|                         | 18          | 3   | 0.3                        | 4.7                      |
|                         |             |     | 0.4                        | 2.0                      |
| 25                      | 00          | 3   | 1.0                        | 4.2                      |
|                         |             |     | 0.5                        | 2.0                      |
|                         | 06          | 3   | 1.0                        | 4.4                      |
|                         |             |     | 0.5                        | 2.3                      |
|                         | 12          | ... | -                          | -                        |
|                         | 18          | 3   | 1.1                        | 4.5                      |
|                         |             |     | 0.4                        | 2.5                      |
| 26                      | 00          | 3   | 1.1                        | 4.1                      |
|                         |             |     | 0.4                        | 2.4                      |
|                         | 06          | ... | -                          | -                        |
|                         | 12          | 3   | 1.4                        | 4.4                      |
|                         |             |     | 0.4                        | 2.3                      |
|                         | 18          | 3   | 1.1                        | 4.6                      |
|                         |             |     | 0.6                        | 2.3                      |
| 27                      | 00          | 3   | 1.2                        | 4.7                      |
|                         |             |     | 0.6                        | 1.9                      |
|                         | 06          | 3   | 1.5                        | 4.3                      |
|                         |             |     | 0.5                        | 2.0                      |
|                         | 12          | 3   | 1.4                        | 3.7                      |
|                         |             |     | 0.7                        | 1.8                      |
|                         | 18          | 3   | 1.6                        | 3.8                      |
|                         |             |     | 0.6                        | 2.3                      |



June 1962

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| Date | Hour<br>GMT | K | Mean<br>Amplitude<br>in mm | Mean<br>Period<br>in sec |
|------|-------------|---|----------------------------|--------------------------|
|------|-------------|---|----------------------------|--------------------------|

| Date | Hour<br>GMT | K | Mean<br>Amplitude<br>in mm | Mean<br>Period<br>in sec |
|------|-------------|---|----------------------------|--------------------------|
|------|-------------|---|----------------------------|--------------------------|

Station: Bombay (Colaba) Compt. E. W.

Station: Visakhapatnam Compt. E. W.

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 28 | 00 | 3   | 0.5 | 2.0 |
|    |    |     | 1.7 | 3.6 |
|    | 06 | 3   | 1.5 | 3.9 |
|    |    |     | 0.7 | 2.0 |
|    |    |     | 1.6 | 3.3 |
| 18 | 3  | 0.8 | 2.0 |     |
|    |    | 1.5 | 3.8 |     |
|    |    |     | 0.7 | 2.0 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 07 | 00 | 2 | 0.6 | 3.9 |
|    |    |   | 0.3 | 3.9 |
|    |    |   | 0.3 | 3.3 |
|    |    |   | 0.7 | 3.8 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 08 | 00 | 0,0 | -   | -   |
|    |    |     | 0.7 | 3.8 |
|    |    |     | 0.3 | 3.8 |
|    |    |     | 0.7 | 3.4 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 29 | 00 | 3   | 1.2 | 3.9 |
|    |    |     | 0.5 | 2.0 |
|    | 06 | 3   | 1.5 | 4.2 |
|    |    |     | 0.6 | 2.0 |
|    |    |     | 1.4 | 4.6 |
| 18 | 3  | 0.6 | 2.3 |     |
|    |    | 1.5 | 4.1 |     |
|    |    |     | 0.5 | 2.3 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 09 | 00 | 2 | 0.7 | 3.3 |
|    |    |   | 0.6 | 3.6 |
|    |    |   | 0.7 | 3.7 |
|    |    |   | 0.6 | 3.3 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 10 | 00 | 2 | 0.6 | 3.8 |
|    |    |   | 0.7 | 3.6 |
|    |    |   | 0.7 | 3.5 |
|    |    |   | 0.6 | 3.6 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 30 | 00 | 3   | 0.9 | 4.4 |
|    |    |     | 0.7 | 2.2 |
|    | 06 | 3   | 1.1 | 4.4 |
|    |    |     | 0.3 | 2.3 |
|    |    |     | 0.9 | 4.2 |
| 18 | 3  | 0.6 | 2.3 |     |
|    |    | 1.0 | 4.3 |     |
|    |    |     | 0.7 | 2.2 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 11 | 00 | 2 | 0.6 | 3.3 |
|    |    |   | 0.3 | 3.3 |
|    |    |   | 0.8 | 4.0 |
|    |    |   | 0.7 | 4.1 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 12 | 00 | 2 | 0.8 | 3.8 |
|    |    |   | 0.7 | 4.1 |
|    |    |   | 0.3 | 3.9 |
|    |    |   | 0.7 | 3.5 |
|    |    |   | 0.7 | 3.5 |

Station: Visakhapatnam Compt. E. W.

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 01 | 00 | ... | -   | -   |
|    |    |     | 0.4 | 3.2 |
|    |    |     | 0.6 | 3.2 |
|    |    |     | 0.8 | 3.2 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 13 | 00 | 2 | 0.7 | 3.8 |
|    |    |   | 0.6 | 3.6 |
|    |    |   | 0.7 | 3.6 |
|    |    |   | 0.5 | 3.5 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 02 | 00 | 2 | 0.6 | 3.3 |
|    |    |   | 0.7 | 3.8 |
|    |    |   | 0,0 | -   |
|    |    |   | 0.7 | 3.4 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 14 | 00 | 2 | 0.7 | 3.5 |
|    |    |   | 0.7 | 3.9 |
|    |    |   | 0.7 | 4.2 |
|    |    |   | 0.7 | 4.0 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 03 | 00 | 0,0 | -   | -   |
|    |    |     | 0.6 | 4.1 |
|    |    |     | 0.5 | 4.2 |
|    |    |     | 0.3 | 3.6 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 15 | 00 | 2 | 0.5 | 3.4 |
|    |    |   | 0.7 | 3.8 |
|    |    |   | 0.6 | 3.9 |
|    |    |   | 0.6 | 4.0 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 04 | 00 | 0,0 | -   | -   |
|    |    |     | 0.6 | 3.4 |
|    |    |     | 0.5 | 2.0 |
|    |    |     | 0.5 | 3.2 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 16 | 00 | 0,0 | -   | -   |
|    |    |     | 0.7 | 4.0 |
|    |    |     | 0.6 | 3.7 |
|    |    |     | 0.7 | 3.7 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 05 | 00 | 0,0 | -   | -   |
|    |    |     | 0.6 | 3.7 |
|    |    |     | 0.7 | 3.3 |
|    |    |     | 0.7 | 3.7 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 17 | 00 | 2 | 0.6 | 3.4 |
|    |    |   | 0.7 | 3.9 |
|    |    |   | 0.8 | 3.8 |
|    |    |   | 0.9 | 4.0 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 06 | 00 | 0,0 | -   | -   |
|    |    |     | 0.9 | 4.1 |
|    |    |     | 0.7 | 3.7 |
|    |    |     | 0.7 | 4.0 |

|    |    |   |       |     |
|----|----|---|-------|-----|
| 18 | 00 | 2 | 0.6   | 3.8 |
|    |    |   | 06 to | -   |
|    |    |   | 13    | ... |

| Date                                       | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec |
|--------------------------------------------|----------|-----|----------------------|--------------------|
| <i>Station. Visakhapatnam Compt. E. W.</i> |          |     |                      |                    |
| 19                                         | 00       | ... | -                    | -                  |
|                                            | 06       | 2   | 0.7                  | 4.4                |
|                                            | 12       | 2   | 0.5                  | 4.0                |
|                                            | 18       | 2   | 0.6                  | 4.5                |
| 20                                         | 00       | 2   | 0.6                  | 4.5                |
|                                            | 06       | 2   | 0.5                  | 4.2                |
|                                            | 12       | 2   | 0.4                  | 4.5                |
|                                            | 18       | 2   | 0.6                  | 4.3                |
| 21                                         | 00       | 2   | 0.4                  | 4.2                |
|                                            | 06       | 2   | 0.6                  | 3.6                |
|                                            | 12       | 2   | 0.7                  | 4.2                |
|                                            | 18       | 2   | 0.7                  | 3.9                |
| 22                                         | 00       | 0,0 | -                    | -                  |
|                                            | 06       | 2   | 0.6                  | 3.3                |
|                                            | 12       | 2   | 0.5                  | 3.4                |
|                                            | 18       | 0,0 | -                    | -                  |
| 23                                         | 00       | 0,0 | -                    | -                  |
|                                            | 06       | 2   | 0.5                  | 4.0                |
|                                            | 12       | 2   | 0.4                  | 3.9                |
|                                            | 18       | 0,0 | -                    | -                  |
| 24                                         | 00       | 0,0 | -                    | -                  |
|                                            | 06       | 2   | 0.5                  | 3.7                |
|                                            | 12       | 2   | 0.5                  | 3.6                |
|                                            | 18       | 0,0 | -                    | -                  |
| 25                                         | 00       | 0,0 | -                    | -                  |
|                                            | 06       | 2   | 0.4                  | 3.8                |
|                                            | 12       | ... | -                    | -                  |
|                                            | 18       | 2   | 0.5                  | 4.6                |
| 26                                         | 00       | 2   | 0.5                  | 4.0                |
|                                            | 06       | 2   | 0.5                  | 3.9                |
|                                            | 12       | 2   | 0.3                  | 4.0                |
|                                            | 18       | 0,0 | -                    | -                  |
| 27                                         | 00       | 0,0 | -                    | -                  |
|                                            | 06       | 2   | 0.5                  | 3.7                |
|                                            | 12       | 2   | 0.7                  | 4.3                |
|                                            | 18       | 2   | 0.6                  | 4.7                |
| 28                                         | 00       | 2   | 0.5                  | 4.4                |
|                                            | 06       | 2   | 0.6                  | 4.8                |
|                                            | 12       | 2   | 0.4                  | 3.8                |
|                                            | 18       | 0,0 | -                    | -                  |
| 29                                         | 00       | 2   | 0.6                  | 3.8                |
|                                            | 06       | 2   | 0.7                  | 4.9                |
|                                            | 12       | 0,0 | -                    | -                  |
|                                            | 18       | 2   | 0.6                  | 4.1                |
| 30                                         | 00       | 0,0 | -                    | -                  |
|                                            | 06       | 2   | 0.7                  | 4.1                |
|                                            | 12       | 2   | 0.6                  | 4.5                |
|                                            | 18       | ... | -                    | -                  |

| Date                                    | Hour GMT | K   | Mean Amplitude (Micron) | Mean Period in sec |
|-----------------------------------------|----------|-----|-------------------------|--------------------|
| <i>Station. Port Blair Compt. E. W.</i> |          |     |                         |                    |
| 01                                      | 00       | 1   | 2.8                     | 3.0                |
|                                         | 06       | 1   | 3.4                     | 3.0                |
|                                         | 12       | 1   | 2.4                     | 5.0                |
|                                         | 18       | 1   | 2.4                     | 3.0                |
| 02                                      | 00       | 1   | 2.4                     | 3.0                |
|                                         | 06       | 1   | 2.0                     | 3.0                |
|                                         | 12       | 1   | 2.0                     | 3.0                |
|                                         | 18       | 1   | 3.6                     | 3.0                |
| 03                                      | 00       | 1   | 2.8                     | 3.0                |
|                                         | 06       | ... | -                       | -                  |
|                                         | 12       | 1   | 2.4                     | 3.0                |
|                                         | 18       | 1   | 2.0                     | 3.0                |
| 04                                      | 00       | 1   | 2.4                     | 3.0                |
|                                         | 06       | 1   | 2.0                     | 3.0                |
|                                         | 12       | 1   | 2.4                     | 3.0                |
|                                         | 18       | 1   | 3.6                     | 3.0                |
| 05                                      | 00       | 1   | 3.6                     | 3.0                |
|                                         | 06       | 1   | 4.0                     | 3.0                |
|                                         | 12       | 1   | 2.8                     | 3.0                |
|                                         | 18       | 1   | 2.8                     | 3.0                |
| 06                                      | 00       | 1   | 2.4                     | 2.0                |
|                                         | 06       | 1   | 4.0                     | 4.0                |
|                                         | 12       | 1   | 4.0                     | 4.0                |
|                                         | 18       | 1   | 4.0                     | 4.0                |
| 07                                      | 00       | 1   | 3.6                     | 4.0                |
|                                         | 06       | 1   | 2.4                     | 5.0                |
|                                         | 12       | 1   | 3.6                     | 3.0                |
|                                         | 18       | 1   | 2.8                     | 5.0                |
| 08                                      | 00       | 1   | 2.4                     | 5.0                |
|                                         | 06       | 1   | 2.4                     | 3.0                |
|                                         | 12       | 1   | 2.4                     | 5.0                |
|                                         | 18       | ... | -                       | -                  |
| 09                                      | 00       | ... | -                       | -                  |
|                                         | 06       | 1   | 2.4                     | 2.0                |
|                                         | 12       | 1   | 2.0                     | 3.0                |
|                                         | 18       | 1   | 2.4                     | 3.0                |
| 10                                      | 00       | ... | -                       | -                  |
|                                         | 06       | 1   | 3.4                     | 5.0                |
|                                         | 12       | 1   | 2.4                     | 5.0                |
|                                         | 18       | 1   | 2.4                     | 3.0                |
| 11                                      | 00       | 1   | 2.4                     | 3.0                |
|                                         | 03 to    |     |                         |                    |
|                                         | 18       | ... | -                       | -                  |
| 12                                      | 00       | 1   | 2.4                     | 2.0                |
|                                         | 06       | 1   | 2.0                     | 2.0                |
|                                         | 12       | 1   | 2.0                     | 3.0                |
|                                         | 18       | 1   | 2.4                     | 3.0                |

June 1962

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| Date | Hour GMT | K | Mean Amplitude (Micron) | Mean Period in sec |
|------|----------|---|-------------------------|--------------------|
|------|----------|---|-------------------------|--------------------|

| Date | Hour GMT | K | Mean Amplitude (Micron) | Mean period in sec |
|------|----------|---|-------------------------|--------------------|
|------|----------|---|-------------------------|--------------------|

| Station. | Port Blair | Compt. | E. W. |
|----------|------------|--------|-------|
|----------|------------|--------|-------|

| Station. | Port Blair | Compt. | E. W. |
|----------|------------|--------|-------|
|----------|------------|--------|-------|

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 13 | 00 | 1   | 3.6 | 3.0 |
|    | 06 | 1   | 2.4 | 3.0 |
|    | 12 | ... | -   | -   |
|    | 18 | ... | -   | -   |
| 14 | 00 | ... | -   | -   |
|    | 06 | 3   | 0.4 | 4.0 |
|    | 12 | 3   | 0.4 | 4.0 |
|    | 18 | 1   | 0.5 | 4.4 |
| 15 | 00 | 1   | 0.5 | 4.5 |
|    | 06 | 3   | 0.5 | 4.4 |
|    | 12 | 3   | 0.5 | 4.4 |
|    | 18 | 3   | 0.5 | 4.2 |
| 16 | 00 | 3   | 0.4 | 4.2 |
|    | 06 | ... | -   | -   |
|    | 12 | 2   | 0.4 | 2.6 |
|    | 18 | 2   | 0.4 | 3.0 |
| 17 | 00 | 2   | 0.4 | 3.0 |
|    | 06 | 3   | 0.5 | 3.8 |
|    | 12 | 3   | 0.5 | 3.3 |
|    | 18 | 3   | 0.5 | 3.2 |
| 18 | 00 | 2   | 0.4 | 2.8 |
|    | 06 | ... | -   | -   |
|    | 12 | 3   | 0.5 | 3.8 |
|    | 18 | 3   | 0.5 | 4.0 |
| 19 | 00 | ... | -   | -   |
|    | 06 | 3   | 0.4 | 4.0 |
|    | 12 | 3   | 0.5 | 4.5 |
|    | 18 | 3   | 0.5 | 4.0 |
| 20 | 00 | 0,0 | -   | -   |
|    | 06 | 0,0 | -   | -   |
|    | 12 | 0,0 | -   | -   |
|    | 18 | 0,0 | -   | -   |
| 21 | 00 | 0,0 | -   | -   |
|    | 06 | 3   | 0.4 | 5.0 |
|    | 12 | 3   | 0.4 | 4.0 |
|    | 18 | 3   | 0.5 | 4.0 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 22 | 00 | ... | -   | -   |
|    | 06 | ... | -   | -   |
|    | 12 | 1   | 1.2 | 3.0 |
|    | 18 | 1   | 1.2 | 3.0 |
| 23 | 00 | 1   | 1.2 | 2.0 |
|    | 06 | 1   | 1.2 | 3.0 |
|    | 12 | 1   | 1.2 | 3.0 |
|    | 18 | ... | -   | -   |
| 24 | 00 | ... | -   | -   |
|    | 06 | 1   | 2.0 | 3.0 |
|    | 12 | 1   | 2.0 | 3.0 |
|    | 18 | 1   | 1.2 | 3.0 |
| 25 | 00 | 0,0 | -   | -   |
|    | 06 | ... | -   | -   |
|    | 12 | ... | -   | -   |
|    | 18 | 1   | 0.8 | 3.0 |
| 26 | 00 | ... | -   | -   |
|    | 06 | ... | -   | -   |
|    | 12 | ... | -   | -   |
|    | 18 | ... | -   | -   |
| 27 | 00 | ... | -   | -   |
|    | 06 | 1   | 1.0 | 3.0 |
|    | 12 | 1   | 0.8 | 3.0 |
|    | 18 | 1   | 0.8 | 3.0 |
| 28 | 00 | ... | -   | -   |
|    | 06 | 1   | 0.8 | 3.0 |
|    | 12 | 1   | 0.8 | 3.0 |
|    | 18 | 1   | 0.8 | 2.0 |
| 29 | 00 | 1   | 1.0 | 2.0 |
|    | 06 | 1   | 0.8 | 3.0 |
|    | 12 | 1   | 0.8 | 3.0 |
|    | 18 | 1   | 0.4 | 3.0 |
| 30 | 00 | 1   | 0.4 | 3.0 |
|    | 06 | 1   | 0.4 | 3.0 |
|    | 12 | 1   | 0.4 | 3.0 |
|    | 18 | 0,0 | -   | -   |

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MAR 3 1965



# SEISMOLOGICAL BULLETIN

JUL 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

Station	Latitude	Longitude	Height a.s.l. (Metres)	Lithographic foundation	Instrument	Compt	Period in secs	Static Magnifica- tion	Damping ratio	Paper speed mm/min.	
Agra					Columbia Long Period	E	T <sub>0</sub> =15 T <sub>g</sub> =100			15	
					- do -	N	T <sub>0</sub> =15 T <sub>g</sub> =85		15		
					- do -	Z	T <sub>0</sub> =15 T <sub>g</sub> =70		15		
Bombay	18.54°N, 72.40°E		5	Deccan Trap	Milne-Shaw	N	12 350	13:1		16	
					Milne-Shaw	E	12 350	23:1		8	
Bokaro	23.50°N, 85.48°E			Rock	Sprengnether	E	T <sub>0</sub> =T <sub>g</sub> =7 secs			30	
					Milne-Shaw	N	12 250	20:1		15	
Calcutta	22.32°N, 88.22°E			Alluvium	Milne-Shaw	E	12 250	20:1		8	
					Wood-Anderson	N	2 870	Critical		30	
					Omori-Ewing	N	15 32	-		25.4	
					Omori-Ewing	E	21 30	-		25.4	
Chatra	25.50°N, 87.10°E		151	Sand stone	Milne-Shaw	E	12 250	20:1		16	
					Wood-Anderson	N	1 1000	30:1		60	
					Benioff	Z	T <sub>0</sub> =0 T <sub>g</sub> =0.45 secs	Critical		60	
					Wenner-Accelerograph	ZNE	-	-	-	-	
Colombo	05.54°N, 79.52°E		7	Beach Sand	Milne-Shaw	E	12 250	20:1		-	
Dehra Dun	30.19°N, 78.02°E		582	Gravel	Wood-Anderson	N	0.8 950	Critical			
					Wood-Anderson	E	0.8 850	Critical		50	
					Milne-Shaw	N	12 250	20:1		8	
					Milne-Shaw	E	12 250	20:1		8	
Hyderabad	17.24°N, 78.27°E		536	Granite	Milne-Shaw	E	12 250	20:1		8	
					Milne-Shaw	N	12 250	20:1		8	
Kodikenal	10.14°N, 77.28°E		2245	Rock	Milne-Shaw	E	10 250	20:1		8	
Madras	13.00°N, 80.11°E		15	-	Sprengnether	E	T <sub>0</sub> =T <sub>g</sub> =72 secs	Critical		30	
New Delhi	28.35°N, 77.12°E		207	Massive Quartzite							
Poona	18.32°N, 73.51°E		560	Deccan Trap	Sprengnether	Z	T <sub>0</sub> =T <sub>g</sub> =1.5	Critical		30	
					Wood-Anderson	E	4 1000		16		
					Milne-Shaw	N	12 280	20:1		8	
Port Blair	11.49°N, 92.43°E				Wood-Anderson	N	2 1000	20:1		30	
					Wood-Anderson	E	0.8 1000	65:1		30	
					Milne-Shaw	N	12 350	20:1		8	
					Wood-Anderson	N	0.8 980	Critical		30	
Sehore					Wood-Anderson	N	0.8 980	Critical		30	
Shillong	25.34°N, 91.53°E		1500	Quartzite	Wood-Anderson	N	0.8 1000	h <sub>1</sub> =0.8		30	
					Wood-Anderson	E	0.8 1000	h <sub>1</sub> =0.8		30	
					(Shillong Quartzite)	Milne-Shaw	N	12 250	20:1		8
					Benioff	Z	T <sub>0</sub> =1.0 T <sub>g</sub> =18		50		
					Sprengnether	E	T <sub>0</sub> =T <sub>g</sub> =5.3	Critical		30	
					Wenner Accelerograph	ZNE	-	-	-	-	
Tocklai	28.45°N, 94.45°E			Alluvium	Wood-Anderson	E	0.8 970	h <sub>1</sub> =0.8		50	
Vizianagram	18.07°N, 83.27°E				Wood-Anderson	E	0.8 1000	h <sub>1</sub> =0.8		30	
					Wood-Anderson	N	2 1000	20:1		30	

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List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude                        | Longitude | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation            | Instrument    | Compt | Period<br>in<br>secs | Static<br>Magnifi-<br>cation | Damping<br>ratio | Paper<br>speed<br>mm/min   |
|---------------|---------------------------------|-----------|--------------------------------|---------------------------------------|---------------|-------|----------------------|------------------------------|------------------|----------------------------|
| Bombay        | 18.54°N, 72.40°E                |           |                                | Deccan Trap                           | Milne-Shaw    | N     | 12                   | 350                          | 21:1             | 8                          |
|               |                                 |           |                                |                                       | Milne-Shaw    | E     | 12                   | 250                          | 21:1             | 8                          |
|               |                                 |           |                                |                                       | Sprengnether  | E     | To=7.3               | 5000                         | 2.30:1           | 30                         |
|               |                                 |           |                                |                                       |               |       | Tg=7.3               |                              |                  |                            |
|               |                                 |           |                                |                                       |               |       |                      |                              |                  |                            |
|               |                                 |           |                                |                                       | Benioff       | Z     | -                    | -                            | -                | 50 for S.P.<br>30 for L.P. |
| Bokaro        | 23.50°N, 85.48°E                |           |                                | Rock                                  | Sprengnether  | E     | To=Tg=5.5            | 5200                         | 2.33:1           | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 0.8                  | 930                          | Critical         | 50                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 830                          | Critical         | 50                         |
|               |                                 |           |                                |                                       | Milne-Shaw    | E     | 12                   | 270                          | 20:1             | 15                         |
|               |                                 |           |                                |                                       | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 15                         |
| Calcutta      | 22.32°N, 88.22°E (1) 7<br>(2) 5 |           |                                | Miine-Shaw<br>Omori-Ewing<br>Alluvium | Milne-Shaw    | E     | 12                   | 300                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Milne-Shaw    | N     | 2                    | 1000                         | Critical         | 30                         |
|               |                                 |           |                                |                                       | Omori-Ewing   | E     | 10                   | 30                           |                  | 25.4                       |
|               |                                 |           |                                |                                       | Omori-Ewing   | N     | 15                   | 32                           |                  | 25.4                       |
| Chatra        | 25.50°N, 87.10°E                |           | 151                            | Sand Stone                            | Milne-Shaw    | N     | 10                   | 250                          | 20:1             | 15                         |
|               |                                 |           |                                |                                       | Milne-Shaw    | E     | 10                   | 250                          | 20:1             | 15                         |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 0.8                  | 940                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 970                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Benioff (S.P) | Z     | To=0.72              | -                            | Es=23:1          | 60                         |
|               |                                 |           |                                |                                       |               |       | Tg=0.45              |                              | Eg=Critical      |                            |
| Delhi         | 28.41°N, 77.13°E                |           | 207                            | Quartzite<br>Sand Stone               | Sprengnether  | E     | To=Tg=7.5            | 5000                         | Critical         | 30                         |
|               |                                 |           |                                |                                       | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |           |                                |                                       | Benioff       | Z     | To=Tg=1.0            | -                            | -                | 60                         |
|               |                                 |           |                                |                                       | Press Ewing   | Z     | To=30                | Tg=100                       | -                | 15                         |
|               |                                 |           |                                |                                       | Press Ewing   | N     | To=30                | Tg=100                       | -                | 15                         |
| Press Ewing   | E                               | To=30     | Tg=100                         | -                                     | 15            |       |                      |                              |                  |                            |
| Dehra Dun     | 30.19°N, 78.02°E                |           | 592                            | Gravel                                | Wilson Lamson | Z     | To=Tg=1.5            | -                            | -                | 50                         |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |           |                                |                                       | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Milne-Shaw    | E     | 12                   | 250                          | 20:1             | 8                          |
| Hyderabad     | 17.25°N, 78.27°E                |           |                                | Granite                               | Milne-Shaw    | E     | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                          |
| Kodaikanal    | 10.14°N, 77.29°E                |           | 2345                           | Rock                                  | Milne-Shaw    | E     | 10                   | 250                          | 20:1             | 8                          |
| Madras        | 13.00°N, 80.11°E                |           | 15                             |                                       | Sprengnether  | E     | To=Tg=7.5            | 5000                         | 23:1             | 30                         |
| Poona         | 18.32°N, 73.51°E                |           | 550                            | Deccan Trap                           | Milne-Shaw    | N     | 12                   | 280                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 4.0                  | 1000                         | 20:1             | 15                         |
|               |                                 |           |                                |                                       | Sprengnether  | Z     | 1.5                  | 3000                         | 2.1:1            | 30                         |
| Port Blair    | 11.49°N, 92.43°E                |           |                                |                                       | Milne-Shaw    | F     | 12                   | 290                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 2.0                  | 950                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 970                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Benioff       | Z     | To=1.9               | Tg=1.5                       | -                | 30                         |
| Sehore        | 23.10°N, 77.08°E                |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 840                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 0.8                  | 900                          | Critical         | 30                         |
| Shillong      | 25.34°N, 91.53°E                |           |                                | Quartzite<br>Sand Stone               | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |           |                                |                                       | Benioff       | Z     | To=1.0               | Tg=1.0                       | -                | 50                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 900                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | 0.8                  | 970                          | Critical         | 30                         |
| Tockisi       | 28.45°N, 94.45°E                |           |                                | Alluvium                              | Sprengnether  | E     | To=5.5<br>Tg=5.5     | 3900                         | 2.4:1            | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | 0.8                  | 970                          | h=0.8            | 60                         |
| Visakhapatnam | 18.07°N, 83.27°E                |           |                                |                                       | Sprengnether  | E     | To=Tg=5.9            | 5000                         | 1.2:1            | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | N     | To=2.0               | 970                          | Critical         | 30                         |
|               |                                 |           |                                |                                       | Wood-Anderson | E     | To=0.8               | 970                          | Critical         | 30                         |



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| Date | Station                                                                                          | Compt | Phase          | G<br>h | M<br>m | T<br>s               | $\Delta$<br>km | Remarks                            |
|------|--------------------------------------------------------------------------------------------------|-------|----------------|--------|--------|----------------------|----------------|------------------------------------|
| 01   | Shillong                                                                                         | ZE    | ep<br>iPg      | 01     | 41     | 23<br>41 56          | 220            | Slight, local                      |
| 01   | Shillong                                                                                         | Z     | i              | 01     | 53     | 28                   |                | Slight, near                       |
| 01   | Shillong                                                                                         | Z     | i              | 02     | 07     | 00                   |                | Slight, local                      |
| 01   | Epc: 30.1°N, 102.8°E. Sinkiang Province, China<br>- H = 03h 37m 23.2s. h about 25 km (USCGS)     |       |                |        |        |                      |                |                                    |
|      | Shillong                                                                                         | Z     | ep             | 03     | 40     | 11                   |                | Slight                             |
| 01   | Chatra                                                                                           | Z     | ep             | 03     | 41     | 04                   |                | Feeble                             |
| 01   | Delhi                                                                                            | Z     | iP             | 03     | 42     | 40                   |                | Slight, rarefaction                |
| 01   | Delhi                                                                                            | Z     | ep             | 04     | 30     | 10                   |                | Tremor                             |
| 01   | Shillong                                                                                         | Z     | iP             | 03     | 23     | 04                   |                | Slight, distant, rarefaction       |
| 01   | Shillong                                                                                         | Z     | ep             | 11     | 15     | 15                   |                | Slight, local                      |
| 01   | Delhi                                                                                            | Z     | iP             | 11     | 51     | 57                   |                | Slight, compression                |
| 01   | Epc: 40.3°N, 49.9°E. Off Coast of Azerbaijan, S.S.R.<br>- H = 11h 43m 29s. h about 46 km (USCGS) |       |                |        |        |                      |                |                                    |
|      | Shillong                                                                                         | Z     | iP             | 11     | 53     | 44                   |                | Slight, rarefaction, distant       |
| 01   | Delhi                                                                                            | Z     | iP             | 12     | 03     | 38                   |                | Slight, rarefaction                |
| 01   | Shillong                                                                                         | Z     | iPg<br>iSg     | 13     | 10     | 05<br>10 12          | 70             | Slight                             |
| 01   | Chatra                                                                                           | Z     | ep             | 13     | 11     | 53                   |                | Feeble, distant                    |
| 01   | Chatra                                                                                           | Z     | iP<br>iS       | 15     | 36     | 27<br>37 18          | 470            | Rarefaction, feeble                |
| 01   | Shillong                                                                                         | Z     | iP<br>i        | 17     | 16     | 26<br>16 47          |                |                                    |
| 01   | Delhi                                                                                            | Z     | iP             | 19     | 20     | 34                   |                | Tremor, compression                |
| 01   | Chatra                                                                                           | Z     | ep             | 20     | 49     | 01                   |                | Feeble, distant                    |
| 01   | Epc: 40°N, 75.4°E. Sinkiang Province, China<br>- H = 21h 23m 41.7s. h about 25 kms (USCGS)       |       |                |        |        |                      |                |                                    |
|      | Delhi                                                                                            | N     | iP<br>i        | 21     | 26     | 13<br>23 18          | 1170           | Slight, first ground motion North, |
|      |                                                                                                  | NEZ   | e<br>eS        |        |        | 29 17<br>29 37       |                | rarefaction.                       |
|      |                                                                                                  | NZ    | SSS, Lr<br>PeP |        |        | 29 51<br>31 05       |                |                                    |
| 01   | Chatra                                                                                           | Z     | iP<br>eS       | 21     | 27     | 26<br>30 17          | 1700           | Compression, slight                |
| 01   | Bokaro                                                                                           | NE    | ep<br>i<br>e   | 21     | 23     | 04<br>20 56<br>34 05 |                | Slight                             |

| Date | Station                                                               | Compt   | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                  |
|------|-----------------------------------------------------------------------|---------|-------|--------|--------|--------|----------------|--------------------------|
| 01   | Shillong                                                              | Z       | iP    | 21     | 28     | 11     | 2220           | Slight, compression      |
|      |                                                                       |         | PP    |        | 28     | 23     |                |                          |
|      |                                                                       |         | PPP   |        | 28     | 33     |                |                          |
|      |                                                                       |         | iS    |        | 31     | 51     |                |                          |
|      |                                                                       |         | Lq    |        | 31     | 58     |                |                          |
|      |                                                                       |         | SS    |        | 32     | 19     |                |                          |
|      |                                                                       |         | SSS   |        | 32     | 35     |                |                          |
|      |                                                                       |         | Lr    |        | 32     | 57     |                |                          |
| M    |                                                                       | 34      | 37    |        |        |        |                |                          |
| 01   | Bombay                                                                | N       | eP    | 21     | 28     | 26     | 2420           | Slight                   |
|      |                                                                       |         | eS    |        | 32     | 22     |                |                          |
|      |                                                                       | E       | e     |        | 32     | 36     |                |                          |
|      |                                                                       | N       | e     |        | 34     | 50     |                |                          |
|      |                                                                       |         | e     |        | 36     | 27     |                |                          |
| 01   | Poona                                                                 | ZN      | iP    | 21     | 28     | 29     | 2430           | Slight, rarefaction      |
|      |                                                                       |         | iS    |        | 32     | 26     |                |                          |
|      |                                                                       |         | i     |        | 34     | 42     |                |                          |
|      |                                                                       |         | i     |        | 36     | 35     |                |                          |
| 01   | Calcutta                                                              | E       | e     | 21     | 28     | 53     |                | Slight                   |
|      |                                                                       |         | eS    |        | 32     | 03     |                |                          |
|      |                                                                       |         | i     |        | 33     | 01     |                |                          |
| 01   | Visakhapatnam                                                         | E<br>NE | eP    | 21     | 28     | 59     | 2450           | Moderate                 |
|      |                                                                       |         | iS    |        | 32     | 58     |                |                          |
|      |                                                                       |         | e     |        | 34     | 47     |                |                          |
| 01   | Madras                                                                | E       | e     | 22     | 34     | 36     |                |                          |
|      |                                                                       |         | e     |        | 36     | 17     |                |                          |
|      |                                                                       |         | e     |        | 38     | 10     |                |                          |
| 01   | Delhi                                                                 | Z       | eP    | 22     | 43     | 11     |                | Slight, rarefaction      |
|      |                                                                       |         | i     |        | 45     | 11     |                |                          |
| 02   | Delhi                                                                 | Z       | iP    | 00     | 22     | 37     |                | Slight, rarefaction      |
| 02   | Shillong                                                              | Z       | iP    | 00     | 55     | 14     |                | Slight, near             |
|      |                                                                       |         | i     |        | 55     | 55     |                |                          |
| 02   | Delhi                                                                 | Z       | eP    | 02     | 06     | 36     |                | Slight, compression      |
| 02   | Delhi                                                                 | Z       | iP    | 03     | 42     | 38     |                | Slight                   |
| 02   | Delhi                                                                 | Z       | iP    | 03     | 44     | 33     |                | Slight, compression      |
| 02   | Chatra                                                                | Z       | iP    | 04     | 07     | 27     |                | Very feeble, rarefaction |
| 02   | Epc: 30°N, 83.5°E. Nepal-Tibet border. - H = 04h 21m 00s. (New Delhi) |         |       |        |        |        |                |                          |
|      | Chatra                                                                | Z       | eP    | 04     | 22     | 11     | 460            | Feeble                   |
|      |                                                                       | ZNE     | eSg   |        | 23     | 15     |                |                          |
| 02   | Delhi                                                                 | Z       | iP    | 04     | 22     | 21     | 510            | Slight, compression      |
|      |                                                                       |         | iS    |        | 23     | 15     |                |                          |
| 02   | Bokaro                                                                | NE      | eP    | 04     | 22     | 39     | 690            | Slight                   |
|      |                                                                       |         | iS    |        | 23     | 51     |                |                          |

July 1962

| Date | Station                                                                                                  | Compt          | Phase                                  | G  | M  | T  | Δ    | Remarks                                 |
|------|----------------------------------------------------------------------------------------------------------|----------------|----------------------------------------|----|----|----|------|-----------------------------------------|
|      |                                                                                                          |                |                                        | h  | m  | s  | km   |                                         |
| 02   | Shillong                                                                                                 | Z              | iP<br>iS                               | 04 | 23 | 08 | 880  | Slight, compression                     |
|      |                                                                                                          |                |                                        |    | 24 | 41 |      |                                         |
| 02   | Shillong                                                                                                 | Z              | iP                                     | 04 | 59 | 11 |      | Rarefaction, feeble                     |
| 02   | Chatra                                                                                                   | Z              | iP<br>eS                               | 05 | 47 | 11 | 300  | Feeble, compression, near               |
|      |                                                                                                          |                |                                        |    | 43 | 15 |      |                                         |
| 02   | Shillong                                                                                                 | Z              | i                                      | 05 | 49 | 10 |      | Slight, distant                         |
| 02   | Delhi                                                                                                    | Z              | iP                                     | 07 | 03 | 56 |      | Slight, compression                     |
| 02   | Delhi                                                                                                    | Z              | iP                                     | 07 | 10 | 36 |      | Slight, rarefaction                     |
| 02   | Shillong                                                                                                 | Z              | e                                      | 08 | 25 | 26 |      | Slight, distant                         |
| 02   | Epc: 10.9°S, 135.9°E. Santa Cruz Islands.<br>- H = 09h 32m 32.9s. h about 50 km (USCGS). Mag : 6½ (Brk). |                |                                        |    |    |    |      |                                         |
|      | Shillong                                                                                                 | ZE             | iP                                     | 08 | 44 | 45 | 3800 |                                         |
|      |                                                                                                          | E              | Per                                    |    | 44 | 51 |      |                                         |
|      |                                                                                                          |                | PP                                     |    | 47 | 49 |      |                                         |
|      |                                                                                                          |                | PPP                                    |    | 49 | 41 |      |                                         |
|      |                                                                                                          |                | iS                                     |    | 54 | 45 |      |                                         |
|      |                                                                                                          |                | SKS                                    |    | 54 | 51 |      |                                         |
|      |                                                                                                          |                | ScS                                    |    | 55 | 00 |      |                                         |
|      |                                                                                                          |                | PS                                     |    | 55 | 32 |      |                                         |
|      |                                                                                                          |                | SS                                     | 03 | 00 | 01 |      |                                         |
|      |                                                                                                          |                | SSS                                    | 03 | 23 |    |      |                                         |
| 02   | Chatra                                                                                                   | ZNE            | iP                                     | 08 | 45 | 03 |      | Compression                             |
| 02   | Madras                                                                                                   | E              | iP<br>e<br>SKS<br>eS<br>ScS<br>PS<br>e | 08 | 45 | 24 | 9400 | Initial ground motion West.             |
|      |                                                                                                          |                |                                        |    | 45 | 50 |      |                                         |
|      |                                                                                                          |                |                                        |    | 55 | 44 |      |                                         |
|      |                                                                                                          |                |                                        |    | 55 | 51 |      |                                         |
|      |                                                                                                          |                |                                        |    | 56 | 03 |      |                                         |
|      |                                                                                                          |                |                                        |    | 56 | 50 |      |                                         |
|      |                                                                                                          |                |                                        |    | 57 | 15 |      |                                         |
| 02   | Delhi                                                                                                    | EZ<br>ZNE<br>Z | iP<br>i<br>i                           | 08 | 45 | 46 |      | Compression, initial ground motion West |
|      |                                                                                                          |                |                                        |    | 53 | 10 |      |                                         |
|      |                                                                                                          |                |                                        |    | 58 | 40 |      |                                         |
| 02   | Calcutta                                                                                                 | E              | i                                      | 08 | 55 | 07 |      |                                         |
| 02   | Hyderabad                                                                                                | E              | M                                      | 08 | 55 | 57 |      | Per.: 8 sec, Amp.=3                     |
| 02   | Bombay                                                                                                   | NE             | e<br>e                                 | 08 | 56 | 26 |      |                                         |
|      |                                                                                                          |                |                                        |    | 57 | 12 |      |                                         |
| 02   | Shillong                                                                                                 | Z              | iP                                     | 12 | 10 | 27 |      | Slight, distant, compression            |
| 02   | Epc: 0.2°S, 123.1°E. Celebes Region.<br>- H = 15h 42m 22.1s. h about 136 km (USCGS)                      |                |                                        |    |    |    |      |                                         |
|      | Shillong                                                                                                 | Z              | iP                                     | 15 | 49 | 41 |      | Slight, rarefaction                     |
| 02   | Chatra                                                                                                   | Z              | eP                                     | 15 | 50 | 25 |      | Feeble                                  |
| 02   | Shillong                                                                                                 | Z              | eP                                     | 16 | 30 | 27 |      | Slight, near                            |

| Date | Station                                                                               | Compt | Phase      | G<br>h | M<br>m   | T<br>s   | $\Delta$<br>km | Remarks                      |
|------|---------------------------------------------------------------------------------------|-------|------------|--------|----------|----------|----------------|------------------------------|
| 02   | Shillong                                                                              | Z     | iP         | 20     | 59       | 21       |                | Slight, distant              |
| 02   | Shillong                                                                              | Z     | iP         | 21     | 59       | 38       |                | Slight, distant              |
| 03   | Epc: 36.7°N, 70.9°E. Hindukush. - H = 03h 13m 55.6s<br>h about 200 km (USCGS)         |       |            |        |          |          |                |                              |
|      | Chatra                                                                                | Z     | eP         | 03     | 20       | 41       |                | Feeble, distant              |
| 03   | Shillong                                                                              | Z     | iP         | 03     | 21       | 25       |                | Slight, compression          |
| 03   | Epc: 28.6°N, 56.2°E. Iran. -H = 06h 31m 03.5s. h about 25 km (USCGS)                  |       |            |        |          |          |                |                              |
|      | Delhi                                                                                 | Z     | eP         | 06     | 35       | 25       |                | Slight, compression          |
| 03   | Chatra                                                                                | Z     | iPg<br>eSg | 07     | 33<br>33 | 43<br>56 |                | 110 Compression, feeble      |
| 03   | Lokaro                                                                                | E     | i          | 10     | 56       | 44       |                | Slight, distant              |
| 03   | Chatra                                                                                | Z     | iP<br>eS   | 11     | 11<br>12 | 59<br>30 |                | 230 Compression, feeble      |
| 03   | Shillong                                                                              | Z     | eP         | 11     | 12       | 37       |                | Slight, distant              |
| 03   | Shillong                                                                              | Z     | iP         | 12     | 44       | 25       |                | Slight, distant, compression |
| 03   | Shillong                                                                              | Z     | iP         | 12     | 46       | 18       |                | Slight, near                 |
| 03   | Chatra                                                                                | Z     | iP         | 12     | 48       | 57       |                | Feeble, distant, compression |
| 03   | Chatra                                                                                | Z     | iP         | 14     | 15       | 29       |                | Feeble, distant, compression |
| 03   | Chatra                                                                                | Z     | iP         | 14     | 39       | 57       |                | Feeble, distant, rarefaction |
| 03   | Shillong                                                                              | Z     | iP<br>i    | 18     | 18<br>18 | 04<br>34 |                | Slight, near                 |
| 03   | Epc: 54.6°S, 132.3°W. South Pacific Ocean<br>- H = 18h 23m 03s. h about 25 km (USCGS) |       |            |        |          |          |                |                              |
|      | Shillong                                                                              | Z     | eP         | 18     | 32       | 43       |                | Slight, distant              |
|      | Delhi                                                                                 | Z     | eP         | 18     | 33       | 06       |                | Tremor, rarefaction          |
| 03   | Delhi                                                                                 | Z     | iP         | 18     | 41       | 44       |                | Slight, rarefaction          |
| 03   | Bombay                                                                                | E     | e          | 19     | 30       | 00       |                | Distant                      |
| 03   | Chatra                                                                                | Z     | iP         | 23     | 19       | 43       |                |                              |
| 04   | Delhi                                                                                 | Z     | iP         | 04     | 21       | 17       |                | Slight, rarefaction          |
| 04   | Delhi                                                                                 | Z     | eP         | 03     | 04       | 48       |                | Slight, rarefaction          |
| 04   | Shillong                                                                              | Z     | iP         | 09     | 06       | 46       |                | Slight, distant, compression |
| 04   | Chatra                                                                                | Z     | iPn<br>iSg | 12     | 48<br>49 | 57<br>17 |                | 130 Feeble, compression      |
| 04   | Shillong                                                                              | Z     | iP         | 12     | 49       | 23       |                | Slight, distant              |

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| Date | Station                                                                                    | Compt                  | Phase                                                                        | G<br>h | M<br>m | T<br>s                                                      | $\Delta$<br>km | Remarks                            |
|------|--------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------|--------|--------|-------------------------------------------------------------|----------------|------------------------------------|
| 04   | Shillong                                                                                   | Z                      | eP                                                                           | 14     | 27     | 53                                                          |                | Slight, distant                    |
| 04   | Shillong                                                                                   | Z                      | iP <sub>g</sub><br>iS <sub>g</sub>                                           | 14     | 42     | 23<br>42 37                                                 | 110            | Slight                             |
| 04   | Epc: 14.9°S, 167.8°E. New Hebrides Islands<br>- H = 17h 00m 53.5s. h about 32 km (USCGS)   |                        |                                                                              |        |        |                                                             |                |                                    |
|      | Shillong                                                                                   | Z                      | iP                                                                           | 17     | 13     | 22                                                          |                | Slight, distant, rarefaction       |
| 04   | Shillong                                                                                   | Z                      | iP                                                                           | 18     | 27     | 02                                                          |                | Slight, distant, compression       |
| 04   | Chatra                                                                                     | Z                      | eP                                                                           | 23     | 19     | 47                                                          |                | Feeble, distant                    |
| 04   | Delhi                                                                                      | Z                      | iP <sub>n</sub><br>iP <sub>g</sub><br>iS <sub>n</sub><br>S<br>S <sub>g</sub> | 23     | 32     | 54<br>33 03<br>33 29<br>33 34<br>33 39                      | 310            | Slight, rarefaction                |
| 04   | Shillong                                                                                   | Z                      | iP                                                                           | 23     | 34     | 53                                                          |                | Slight, distant, compression       |
| 05   | Visakhapatnam                                                                              | E<br>NE<br>E<br>N<br>E | iP<br>PP<br>PPP<br>iS <sub>l</sub><br>eS <sub>l</sub><br>SSS                 | 02     | 17     | 42<br>18 23<br>18 42<br>22 15<br>23 48                      | 2950           | Moderate, first ground motion West |
| 05   | Delhi                                                                                      | Z                      | eP                                                                           | 05     | 49     | 37                                                          |                | Tremor, compression                |
| 05   | Shillong                                                                                   | Z                      | eP                                                                           | 09     | 12     | 33                                                          |                | Slight, distant                    |
| 05   | Chatra                                                                                     | Z                      | eP<br>iS <sub>g</sub>                                                        | 09     | 19     | 45<br>20 03                                                 | 200            | Feeble                             |
| 05   | Shillong                                                                                   | Z                      | eP                                                                           | 03     | 20     | 03                                                          |                | Slight, near                       |
| 05   | Epc: 0.6°S, 139°E. New Guinea. - H = 10h 32m 28.3s<br>h about 25 km (USCGS)                |                        |                                                                              |        |        |                                                             |                |                                    |
|      | Shillong                                                                                   | Z                      | iP                                                                           | 10     | 41     | 42                                                          |                | Slight, distant                    |
| 05   | Delhi                                                                                      | Z                      | iP                                                                           | 10     | 43     | 13                                                          |                | Tremor, compression                |
| 05   | Epc: 30.9°N, 141.4°E. South of Honshu, Japan<br>- H = 17h 40m 55.3s. h about 23 km (USCGS) |                        |                                                                              |        |        |                                                             |                |                                    |
|      | Shillong                                                                                   | Z                      | iP<br>PP<br>PPP<br>iS<br>ScS<br>SS<br>SSS                                    | 17     | 49     | 01<br>50 53<br>51 45<br>55 57<br>58 34<br>59 16<br>18 00 52 | 5300           | Slight, compression                |
| 05   | Chatra                                                                                     | Z                      | iP                                                                           | 17     | 49     | 41                                                          |                | Feeble, distant, compression       |
| 05   | Delhi                                                                                      | Z                      | iP                                                                           | 17     | 50     | 26                                                          |                | Slight, compression                |
| 05   | Delhi                                                                                      | Z                      | eP                                                                           | 13     | 45     | 00                                                          |                | Tremor, compression                |

| Date | Station                                                                                        | Comp    | Phase                                              | G<br>h | M<br>m   | T<br>s                                             | $\Delta$<br>km | Remarks                                                                                 |
|------|------------------------------------------------------------------------------------------------|---------|----------------------------------------------------|--------|----------|----------------------------------------------------|----------------|-----------------------------------------------------------------------------------------|
| 06   | Chatra                                                                                         | Z       | iP<br>iS                                           | 00     | 36<br>37 | 56<br>29                                           | 300            | Feeble, rarefaction                                                                     |
| 06   | Shillong                                                                                       | Z       | eP                                                 | 00     | 37       | 20                                                 |                | Slight, dFstart                                                                         |
| 06   | Shillong                                                                                       | Z       | eP                                                 | 00     | 44       | 43                                                 |                | Slight, dFstart                                                                         |
| 06   | Epic: 32.6°N, 139.7°E. South of Honshu, Japan<br>- H = 01h 15m 34.8s. h about 62 km (USCGS)    |         |                                                    |        |          |                                                    |                |                                                                                         |
|      | Delhi                                                                                          | Z       | iP                                                 | 01     | 24       | 48                                                 |                | Slight, rarefaction                                                                     |
| 06   | Shillong                                                                                       | Z       | iP                                                 | 02     | 09       | 11                                                 |                | Slight, dFstart, compression                                                            |
| 06   | Delhi                                                                                          | Z       | eP                                                 | 02     | 10       | 05                                                 |                | Tremor, compression                                                                     |
| 06   | Epic: 13.3°N, 58°E. Arabian Sea, East of Socotra<br>- H = 02h 12m 19.9s. h about 30 km (USCGS) |         |                                                    |        |          |                                                    |                |                                                                                         |
|      | Bombay                                                                                         | E       | iP<br>FP<br>e<br>eS<br>Lr                          | 02     | 16       | 00<br>23<br>51<br>17<br>17                         | 1930           | Slight                                                                                  |
|      | Poona                                                                                          | ZE      | iP<br>PP<br>PPP<br>iS<br>SS<br>SSS<br>Lr<br>E<br>M | 02     | 16       | 10<br>25<br>38<br>34<br>56<br>09<br>28<br>07       | 2060           | Slight, compression, first ground movement East.                                        |
|      | Hyderabad                                                                                      | NE      | iP<br>iS<br>SS<br>Lr<br>N<br>E<br>M<br>M           | 02     | 16       | 54<br>00<br>47<br>13<br>54<br>33                   | 2540           | Moderate, first ground motion South, East<br>Per.=12 sec, Amp.=9<br>Per.=13 sec, Amp.=9 |
|      | Delhi                                                                                          | NEZ     | iP<br>i<br>iS<br>i<br>SS<br>SSS<br>Lr<br>i<br>M    | 02     | 17       | 35<br>47<br>00<br>22<br>18<br>36<br>53<br>23<br>06 | 2830           | Moderate, compression, first ground motion North, East.<br>Per.=16 sec, Amp.=12.5 mm    |
| 06   | Bokaro                                                                                         | E       | eP<br>iS                                           | 02     | 18       | 13<br>11                                           | 3340           | Slight                                                                                  |
| 06   | Chatra                                                                                         | Z       | iP<br>eS                                           | 02     | 18       | 36<br>51                                           | 3600           | Compression, slight                                                                     |
| 06   | Shillong                                                                                       | ZE<br>E | iP<br>PP<br>PPP                                    | 02     | 19       | 03<br>22<br>44                                     | 3960           | Slight, compression                                                                     |

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| Date   | Station                                                                                      | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|--------|----------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------|
| 06     | Shillong                                                                                     | E     | iS    | 02     | 24     | 39     |                |                              |
| Contd. | Contd.                                                                                       |       | SS    |        | 27     | 05     |                |                              |
|        |                                                                                              |       | LQ    |        | 27     | 12     |                |                              |
|        |                                                                                              |       | SSS   |        | 27     | 39     |                |                              |
|        |                                                                                              |       | Lr    |        | 29     | 01     |                |                              |
|        |                                                                                              |       | M     |        | 32     | 07     |                |                              |
| 06     | Kodaikanal                                                                                   | E     | iS?   | 02     | 21     | 30     |                | Slight, distant              |
|        |                                                                                              |       | i     |        | 22     | 00     |                |                              |
| 06     | Epc: 38°N, 20.2°E. Ionian Sea. - H = 09h 13m 15s<br>h about 30 km. Mag. = 5 (Pal) (USCGS)    |       |       |        |        |        |                |                              |
|        | Delhi                                                                                        | Z     | iP    | 09     | 24     | 51     | 5330           | Compression                  |
|        |                                                                                              | NE    | eP    |        | 24     | 51     |                |                              |
|        |                                                                                              | E     | iS    |        | 31     | 52     |                |                              |
|        | Poona                                                                                        | Z     | iP    | 09     | 25     | 14     |                | Rarefaction                  |
|        | Bokaro                                                                                       | NE    | eP    | 09     | 26     | 07     | 6330           |                              |
|        |                                                                                              | E     | i     |        | 27     | 09     |                |                              |
|        |                                                                                              | NE    | iS    |        | 34     | 01     |                |                              |
| 06     | Shillong                                                                                     | Z     | iP    | 09     | 26     | 24     |                | Compression                  |
| 06     | Chatra                                                                                       | Z     | iP    | 09     | 33     | 55     |                | Compression                  |
| 06     | Calcutta                                                                                     | E     | i     | 09     | 34     | 35     |                |                              |
| 06     | Delhi                                                                                        | Z     | iP    | 09     | 45     | 17     |                | Compression                  |
| 06     | Delhi                                                                                        | Z     | iP    | 09     | 55     | 17     |                | Compression                  |
| 06     | Shillong                                                                                     | Z     | iP    | 10     | 24     | 57     |                | Compression                  |
| 06     | Shillong                                                                                     | Z     | iP    | 14     | 43     | 53     |                |                              |
| 06     | Epc: 30.5°N, 130.8°E. Northern Ryukyu Islands<br>- H = 15h 11m 21.3s. h about 25 km (USCGS)  |       |       |        |        |        |                |                              |
|        | Shillong                                                                                     | Z     | iP    | 15     | 18     | 10     |                | Slight, distant, rarefaction |
|        | Delhi                                                                                        | Z     | iP    | 15     | 19     | 45     |                | Slight, rarefaction          |
| 06     | Epc: 37.2°N, 19.4°E. Ionian Sea. - H = 15h 54m 20s. h about 25 km (USCGS)                    |       |       |        |        |        |                |                              |
|        | Delhi                                                                                        | Z     | iP    | 16     | 03     | 02     |                | Slight, compression          |
|        | Shillong                                                                                     | Z     | eP    | 13     | 04     | 27     |                | Slight, distant              |
| 06     | Shillong                                                                                     | Z     | eP    | 17     | 50     | 52     |                | Slight, distant              |
| 06     | Epc: 60.3°N, 152.1°W. Kanai Peninsula, Alaska.<br>- H = 13h 40m 59.4s. h about 67 km (USCGS) |       |       |        |        |        |                |                              |
|        | Delhi                                                                                        | Z     | iP    | 13     | 53     | 18     |                | Slight, rarefaction          |
| 06     | Shillong                                                                                     | Z     | iP    | 21     | 29     | 30     |                | Slight, distant, compression |
| 06     | Shillong                                                                                     | Z     | iP    | 21     | 40     | 59     |                | Slight, distant, compression |

| Date | Station                                                                                                                                                                                     | Compt                              | Phase                                               | G  | M  | T  | Δ    | Remarks                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------|----|----|----|------|---------------------------------------------------------------------------------------------|
|      |                                                                                                                                                                                             |                                    |                                                     | h  | m  | s  | km   |                                                                                             |
| 06   | Epc: 37°N, 72°E. - h = 23h 05m 15s (Shillong)<br>36.6°N, 70.4°E Hindukush - Felt Afghanistan, Pakistan,<br>Tadzhukstan, S.S.R. - H = 23h 05m 32.2s. Δ about 203 km (USCGS)<br>Minor damage. |                                    |                                                     |    |    |    |      |                                                                                             |
|      | Dehra Dun                                                                                                                                                                                   | Z<br>N                             | eP<br>PP<br>PPP<br>iS<br>SS<br>SSS<br>M             | 23 | 07 | 33 | 930  | Great                                                                                       |
|      | Delhi                                                                                                                                                                                       | ENZ<br>N<br>EN                     | iP<br>Lq<br>iS                                      | 23 | 07 | 45 | 980  | Great - First ground motion Northwest, Rarefaction                                          |
|      | Sehore                                                                                                                                                                                      | NE<br>N                            | iP<br>eS                                            | 23 | 08 | 49 | 1520 | Great                                                                                       |
|      | Chatra                                                                                                                                                                                      | ZNE                                | iP<br>iS                                            | 23 | 09 | 23 | 1820 | Slight, rarefaction                                                                         |
|      | Tocklai                                                                                                                                                                                     | E                                  | el<br>iS                                            | 23 | 10 | 20 | 2630 | Moderate                                                                                    |
| 06   | Bombay                                                                                                                                                                                      | N                                  | iP<br>SP<br>iS                                      | 23 | 09 | 23 | 2210 | Moderate                                                                                    |
|      | Poona                                                                                                                                                                                       | NEZ<br><br>N                       | iP<br>PP<br>PPP<br>iS<br>SS<br>SSS<br>Lr<br>M<br>Mn | 23 | 09 | 32 | 2060 | Great, rarefaction, initial ground movement North and West<br><br>Per. = 5 sec, μ = 119.6   |
|      | Bokaro                                                                                                                                                                                      | NE                                 | iP<br>eS                                            | 23 | 09 | 51 | 2230 | Great, first ground motion North and West                                                   |
|      | Hyderabad                                                                                                                                                                                   | NE<br>N<br>NE<br>N<br>NE<br>N<br>E | iP<br>PP<br>iS<br>SS<br>Lr<br>M<br>M                | 23 | 09 | 54 | 2230 | Great, first ground motion North, West.<br><br>Per. = 6 sec, μ = 12<br>Per. = 7 sec, μ = 15 |
|      | Calcutta                                                                                                                                                                                    | N                                  | iP<br>iS                                            | 23 | 10 | 00 | 2230 | Great, initial ground movement North                                                        |
|      | Shillong                                                                                                                                                                                    | ZE<br>NE                           | iP<br>iS                                            | 23 | 10 | 04 | 2230 | Great, rarefaction                                                                          |
|      | Visakhapatnam                                                                                                                                                                               | E<br>N                             | iP<br>iP<br>iPP<br>iPPP<br>iS                       | 23 | 10 | 13 | 2340 | Moderate, first ground motion North, West                                                   |



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| Date   | Station                                                                                       | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                       |
|--------|-----------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|-----------------------------------------------|
| 06     | Visakhapatnam N                                                                               |       | iSS   | 23     | 14     | 43     |                |                                               |
| Contd. | Contd.                                                                                        |       | iSSS  |        | 14     | 57     |                |                                               |
| 06     | Madras                                                                                        | E     | iP    | 23     | 10     | 39     | 2780           | Great, initial ground movement West           |
|        |                                                                                               |       | PP    |        | 11     | 17     |                |                                               |
|        |                                                                                               |       | PPP   |        | 11     | 26     |                |                                               |
|        |                                                                                               |       | iS    |        | 15     | 01     |                |                                               |
|        |                                                                                               |       | Lq    |        | 15     | 42     |                |                                               |
|        |                                                                                               |       | SS    |        | 15     | 57     |                |                                               |
|        |                                                                                               |       | SSS   |        | 16     | 09     |                |                                               |
| 06     | Kodaikanal                                                                                    | E     | eP    | 23     | 10     | 49     |                | Moderate, distant                             |
|        |                                                                                               |       | i     |        | 11     | 34     |                |                                               |
| 06     | Port Blair                                                                                    | NE    | iP    | 23     | 11     | 41     | 3320           | Moderate, first ground motion North, West     |
|        |                                                                                               | N     | i     |        | 12     | 46     |                |                                               |
|        |                                                                                               |       | PPP   |        | 12     | 54     |                |                                               |
|        |                                                                                               |       | PcP   |        | 14     | 34     |                |                                               |
|        |                                                                                               | NE    | iS    |        | 16     | 38     |                |                                               |
|        |                                                                                               | N     | Lq    |        | 18     | 02     |                |                                               |
|        |                                                                                               |       | SS    |        | 18     | 12     |                |                                               |
|        |                                                                                               |       | SSS   |        | 18     | 30     |                |                                               |
|        |                                                                                               |       | i     |        | 18     | 37     |                |                                               |
|        |                                                                                               |       | Lr    |        | 19     | 30     |                |                                               |
| 07     | Shillong                                                                                      | Z     | iP    | 00     | 21     | 49     |                | Slight, near                                  |
| 07     | Shillong                                                                                      | Z     | e     | 00     | 26     | 30     |                | Slight, distant                               |
| 07     | Chatra                                                                                        | Z     | eP    | 03     | 01     | 35     | 780            | Feeble                                        |
|        |                                                                                               | NEZ   | eS    |        | 02     | 53     |                |                                               |
| 07     | Epc: 30°.7 N, 84.4°E, Tibet. H = 03h 00m 22.3s. h about 25 km (USCGS)                         |       |       |        |        |        |                |                                               |
|        | Dehra Dun                                                                                     | Z     | eP    | 03     | 01     | 45     |                | Feeble                                        |
|        |                                                                                               |       | e     |        | 02     | 25     |                |                                               |
|        | Delhi                                                                                         | Z     | iP    | 03     | 01     | 59     |                | Slight, rarefaction                           |
|        | Shillong                                                                                      | Z     | iP    | 03     | 02     | 23     |                | Slight, distant, compression                  |
| 07     | Epc: 51.3°N, 178.6°E. Rat Islands, Aleutian Islands. H = 06h 12m 48.9s. h about 60 km (USCGS) |       |       |        |        |        |                |                                               |
|        | Shillong                                                                                      | Z     | iP    | 06     | 23     | 47     |                | Slight, distant, compression                  |
|        | Chatra                                                                                        | NEZ   | iP    | 06     | 24     | 00     | 7920           | Compression, slight                           |
|        |                                                                                               |       | eS    |        | 33     | 17     |                |                                               |
|        | Dehra Dun                                                                                     | Z     | eP    | 06     | 24     | 13     | 8150           | Slight                                        |
|        |                                                                                               | N     | iS    |        | 33     | 42     |                |                                               |
|        | Delhi                                                                                         | EZ    | iP    | 06     | 24     | 23     |                | Slight, West, compression                     |
| 07     | Poona                                                                                         | EZ    | iP    | 06     | 25     | 12     | 9680           | Slight, compression, first ground motion West |
|        |                                                                                               | N     | SKS   |        | 35     | 43     |                |                                               |
|        |                                                                                               |       | iS    |        | 35     | 53     |                |                                               |
| 07     | Shillong                                                                                      | Z     | iP    | 10     | 30     | 36     |                | Slight, distant, rarefaction                  |

| Date | Station                                                                                           | Compt | Phase      | G  | M  | T  | Δ   | Remarks                      |
|------|---------------------------------------------------------------------------------------------------|-------|------------|----|----|----|-----|------------------------------|
|      |                                                                                                   |       |            | h  | m  | s  | km  |                              |
| 07   | Epc: 7.3°S, 128.3°E. Banda Sea.<br>- H = 11h 47m 19.4s. h about 30 km (JSCGS)                     |       |            |    |    |    |     |                              |
|      | Shillong                                                                                          | Z     | iP         | 11 | 56 | 00 |     | Slight, distant, compression |
|      | Chatra                                                                                            | Z     | iP         | 11 | 56 | 31 |     | Feeble, compression, distant |
|      | Delhi                                                                                             | Z     | iP         | 11 | 57 | 28 |     | Slight, compression          |
| 07   | Shillong                                                                                          | Z     | iPg<br>iSg | 15 | 02 | 53 | 90  | Slight                       |
|      |                                                                                                   |       |            |    | 03 | 02 |     |                              |
| 07   | Shillong                                                                                          | Z     | iP<br>i    | 21 | 30 | 21 |     | Slight, near                 |
|      |                                                                                                   |       |            |    | 30 | 36 |     |                              |
| 07   | Shillong                                                                                          | Z     | eP         | 22 | 43 | 46 |     | Slight, distant              |
| 07   | Shillong                                                                                          | Z     | eP         | 23 | 23 | 27 |     | Slight, near                 |
| 08   | Shillong                                                                                          | Z     | iP         | 00 | 15 | 13 |     | Slight, distant, compression |
| 08   | Shillong                                                                                          | Z     | eP         | 01 | 00 | 49 |     | Slight, near                 |
| 08   | Epc: 51.5°N, 178.5°E. Rat Islands, Aleutian Islands<br>- H = 03h 22m 03.8s. h about 60 km (USCGS) |       |            |    |    |    |     |                              |
|      | Shillong                                                                                          | Z     | iP         | 03 | 33 | 01 |     | Slight, distant, rarefaction |
|      | Dehra Dun                                                                                         | Z     | e          | 03 | 33 | 30 |     | Tremor                       |
|      | Delhi                                                                                             | Z     | iP         | 03 | 33 | 37 |     | Slight, rarefaction          |
| 08   | Shillong                                                                                          | Z     | iP         | 07 | 47 | 32 |     | Slight, local                |
| 08   | Shillong                                                                                          | Z     | iP         | 09 | 10 | 51 |     | Slight, distant, rarefaction |
| 08   | Chatra                                                                                            | Z     | iP         | 17 | 00 | 11 |     | Feeble, distant, rarefaction |
| 08   | Epc: 03°S, 121.8°E. Celebes.<br>- H = 17h 20m 01.2s. h about 58 km (JSCGS)                        |       |            |    |    |    |     |                              |
|      | Shillong                                                                                          | Z     | iP         | 17 | 27 | 25 |     | Slight, distant, compression |
| 08   | Shillong                                                                                          | Z     | iP         | 19 | 02 | 02 |     | Slight, distant, compression |
| 08   | Dehra Dun                                                                                         | Z     | e          | 20 | 43 | 04 |     | Feeble                       |
| 08   | Shillong                                                                                          | Z     | iP         | 22 | 03 | 35 |     | Slight, distant, rarefaction |
| 08   | Epc: 23°N, 94°E. West Coast of Burma.<br>- H = 23h 53m 03s (New Delhi)                            |       |            |    |    |    |     |                              |
|      | Shillong                                                                                          | ZE    | iP         | 23 | 53 | 53 | 330 | Slight                       |
|      |                                                                                                   | E     | PP         |    | 54 | 01 |     |                              |
|      |                                                                                                   |       | PPP        |    | 54 | 07 |     |                              |
|      |                                                                                                   |       | iQ         |    | 54 | 13 |     |                              |
|      |                                                                                                   |       | iS         |    | 54 | 30 |     |                              |
|      |                                                                                                   |       | S,M        |    | 54 | 40 |     |                              |
|      |                                                                                                   |       | SSS        |    | 54 | 51 |     |                              |

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| Date | Station                                                                                                                                | Compt           | Phase                                   | G<br>h | M<br>m | T<br>s                                 | $\Delta$<br>km | Remarks                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------|--------|--------|----------------------------------------|----------------|---------------------------------------------------------------------------------------|
| 08   | Tocklai                                                                                                                                | E               | iP<br>PP<br>iS                          | 23     | 54     | 01<br>09<br>51                         | 330            | Slight                                                                                |
| 08   | Chatra                                                                                                                                 | Z               | iP<br>eS                                | 23     | 54     | 49<br>11                               | 790            | Feeble, compression                                                                   |
| 08   | Dehra Dun                                                                                                                              | Z               | e                                       | 23     | 58     | 49                                     |                | Tremor                                                                                |
| 09   | Shillong                                                                                                                               | Z               | iP<br>i                                 | 00     | 09     | 07<br>20                               |                | Slight, near                                                                          |
| 09   | Dehra Dun                                                                                                                              | Z               | e                                       | 04     | 11     | 56                                     |                | Tremor                                                                                |
| 09   | Shillong                                                                                                                               | Z               | iP                                      | 13     | 29     | 51                                     |                | Slight, distant, compression                                                          |
| 09   | Shillong                                                                                                                               | Z               | eP                                      | 14     | 29     | 53                                     |                | Slight, distant                                                                       |
| 09   | Hyderabad                                                                                                                              | N               | M                                       | 14     | 46     | 28                                     |                | Per.=18 sec, $\mu = 6$                                                                |
| 10   | Shillong                                                                                                                               | Z               | iP                                      | 00     | 12     | 39                                     |                | Slight, local                                                                         |
| 10   | Shillong                                                                                                                               | Z               | eP                                      | 00     | 14     | 39                                     |                | Slight, distant                                                                       |
| 10   | Dehra Dun                                                                                                                              | Z               | e                                       | 05     | 10     | 03                                     |                | Tremor                                                                                |
| 10   | Epc: 38.4°N, 25.9°E. Aegean Sea. - H = 10h 06m 02.9s<br>h about 25 km (USCGS)                                                          |                 |                                         |        |        |                                        |                |                                                                                       |
|      | Chatra                                                                                                                                 | Z               | iP                                      | 10     | 15     | 13                                     |                | Feeble, distant, rarefaction                                                          |
|      | Shillong                                                                                                                               | Z               | e                                       | 10     | 15     | 43                                     |                | Slight, distant                                                                       |
| 10   | Shillong                                                                                                                               | Z               | e                                       | 17     | 04     | 49                                     |                | Slight, distant                                                                       |
| 10   | Shillong                                                                                                                               | Z               | iP<br>iSg                               | 18     | 23     | 57<br>23                               | 220            | Slight, rarefaction                                                                   |
| 10   | Chatra                                                                                                                                 | Z               | iP                                      | 18     | 25     | 13                                     |                | Feeble, distant, compression                                                          |
| 10   | Shillong                                                                                                                               | Z               | eP<br>iSg                               | 18     | 36     | 35<br>52                               | 130            | Slight                                                                                |
| 11   | Epc: 32°N, 66°E. Afghanistan, - H = 01h 03m 50s (Shillong)<br>31.9°N, 66.9°E. Afghanistan - H = 01h 03m 59.3s<br>h about 25 km (USCGS) |                 |                                         |        |        |                                        |                |                                                                                       |
|      | Delhi                                                                                                                                  | NEZ<br>E<br>NEZ | iP<br>iS<br>M                           | 01     | 06     | 10<br>59<br>19                         | 1060           | Moderate, first ground motion<br>South, West, rarefaction<br>Per.=15 secs, Amp.=80 mm |
|      | Dehra Dun                                                                                                                              | Z<br>N          | eP<br>PPP<br>iS<br>SS<br>Lr<br>SSS<br>M | 01     | 06     | 12<br>26<br>55<br>03<br>11<br>19<br>55 | 1000           | Slight                                                                                |

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| Date | Station       | Compt         | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                       |
|------|---------------|---------------|-------|--------|--------|--------|----------------|-----------------------------------------------|
| 11   | Hyderabad     | E             | eP    | 01     | 08     | 08     | 2180           | Slight                                        |
|      |               |               | eS    |        |        | 11 44  |                |                                               |
|      |               |               | Lr    |        |        | 13 13  |                |                                               |
|      |               |               | M     |        |        | 13 39  |                |                                               |
|      |               |               | i     |        |        | 13 42  |                |                                               |
|      |               |               |       |        |        |        |                | Per.=9 sec, $\mu = 7$                         |
| 11   | Chatra        | NEZ           | eP    | 01     | 08     | 11     | 2170           | Slight                                        |
|      |               |               | eS    |        |        | 11 45  |                |                                               |
| 11   | Bokaro        | NE            | eP    | 01     | 03     | 19     | 1090           | Slight                                        |
|      |               |               | PP    |        |        | 03 36  |                |                                               |
|      |               |               | e     |        |        | 03 56  |                |                                               |
|      |               |               | eS    |        |        | 11 46  |                |                                               |
|      |               |               | SS    |        |        | 11 55  |                |                                               |
|      |               |               | SSS   |        |        | 12 17  |                |                                               |
|      |               |               | Lr    |        |        | 12 34  |                |                                               |
| M    |               |               | 14 05 |        |        |        |                |                                               |
| 11   | Visakhapatnam | E             | eP    | 01     | 03     | 39     | 2280           | Slight                                        |
|      |               |               | eS    |        |        | 12 24  |                |                                               |
| 11   | Bombay        | N<br>E<br>NE  | e     | 01     | 03     | 41     |                | Slight                                        |
|      |               |               | eS    |        |        | 09 43  |                |                                               |
|      |               |               | e     |        |        | 13 00  |                |                                               |
|      |               |               | e     |        |        | 15 18  |                |                                               |
| 11   | Madras        | E             | eP    | 01     | 03     | 55     | 2520           | Moderate                                      |
|      |               |               | PP    |        |        | 09 21  |                |                                               |
|      |               |               | PPP   |        |        | 09 33  |                |                                               |
|      |               |               | eS    |        |        | 13 00  |                |                                               |
|      |               |               | Lq    |        |        | 13 19  |                |                                               |
|      |               |               | Lr    |        |        | 14 25  |                |                                               |
|      |               |               | M     |        |        | 13 06  |                |                                               |
| 11   | Poona         | Z<br>NEZ<br>N | e     | 01     | 08     | 55     |                | Slight, distant                               |
|      |               |               | e     |        |        | 13 06  |                |                                               |
|      |               |               | e     |        |        | 13 25  |                |                                               |
|      |               |               | e     |        |        | 13 43  |                |                                               |
|      |               |               | e     |        |        | 14 33  |                |                                               |
|      |               |               | e     |        |        | 16 13  |                |                                               |
| 11   | Shillong      | EZ<br>NE      | iP    | 01     | 08     | 56     | 2550           | Slight, compression, first ground motion East |
|      |               |               | iS    |        |        | 13 03  |                |                                               |
| 11   | Sehore        | E             | iS    | 01     | 09     | 03     |                | Slight                                        |
|      |               |               | e     |        |        | 11 41  |                |                                               |
|      |               |               | e     |        |        | 11 59  |                |                                               |
| 11   | Calcutta      | E             | iS    | 01     | 12     | 33     |                | Slight                                        |
| 11   | Port Blair    | E             | e     | 01     | 24     | 30     |                |                                               |
| 11   | Chatra        | NEZ           | iPn   | 04     | 20     | 08     | 270            | Feeble, rarefaction                           |
|      |               |               | Sn    |        |        | 20 39  |                |                                               |
| 11   | Chatra        | NEZ           | ePn   | 04     | 27     | 09     | 270            | Feeble                                        |
|      |               |               | iSn   |        |        | 27 40  |                |                                               |
| 11   | Chatra        | Z             | eP    | 04     | 47     | 40     |                | Feeble, rarefaction                           |

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| Date | Station                                                                                       | Compt   | Phase                                                                  | G<br>h | M<br>m | T<br>s                                                         | $\Delta$<br>km | Remarks                      |
|------|-----------------------------------------------------------------------------------------------|---------|------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------|----------------|------------------------------|
| 11   | Chatra                                                                                        | NEZ     | iPn<br>iSn                                                             | 04     | 56     | 05<br>37                                                       | 280            | Slight, rarefaction          |
| 11   | Shillong                                                                                      | Z       | iP                                                                     | 01     | 56     | 31                                                             |                | Slight, local                |
| 11   | Dehra Dun                                                                                     | ZE      | e                                                                      | 04     | 57     | 39                                                             |                | Tremor                       |
| 11   | Chatra                                                                                        | Z       | iPn<br>iSn                                                             | 05     | 05     | 39<br>12                                                       | 290            | Feeble, compression          |
|      | Shillong                                                                                      | Z       | eP                                                                     | 05     | 05     | 39                                                             |                | Slight, near                 |
| 11   | Chatra                                                                                        | Z       | iPn<br>iSn                                                             | 07     | 14     | 23<br>00                                                       | 280            | Feeble, rarefaction          |
| 11   | Epc: 53.2°N, 159.6°E. Kamchatka. - H = 07h 17m 27.4s<br>h about 69 km (USCGS)                 |         |                                                                        |        |        |                                                                |                |                              |
|      | Bokaro                                                                                        | NE      | eP                                                                     | 07     | 23     | 11                                                             |                | Slight, tremor               |
| 11   | Chatra                                                                                        | Z       | ePn<br>iSn                                                             | 07     | 38     | 54<br>26                                                       | 280            | Feeble, near                 |
| 11   | Chatra                                                                                        | Z       | ePn<br>iSn                                                             | 08     | 27     | 03<br>47                                                       | 410            | Feeble, near                 |
| 11   | Shillong                                                                                      | Z       | iP                                                                     | 11     | 07     | 18                                                             |                | Slight, distant, rarefaction |
| 11   | Epc: 11.9°N, 122.1°E. Panay, Philippine Islands<br>- H = 12h 40m 30.7s. h about 25 km (USCGS) |         |                                                                        |        |        |                                                                |                |                              |
|      | Shillong                                                                                      | ZE<br>E | ir<br>FP<br>PPP<br>PcP<br>iS<br>ScP<br>SSS/Lq<br>SSS<br>Lr<br>ScS<br>M | 12     | 46     | 52<br>06<br>26<br>16<br>10<br>57<br>19<br>47<br>50<br>53<br>40 | 3660           | Slight, rarefaction          |
| 11   | Chatra                                                                                        | Z       | iP<br>S                                                                | 12     | 46     | 34<br>05                                                       | 4870           | Slight, rarefaction          |
| 11   | Dehra Dun                                                                                     | Z<br>N  | eP<br>iS<br>i                                                          | 12     | 48     | 41<br>02<br>45                                                 | 4690           | Slight                       |
| 11   | Bombay                                                                                        | NE      | eS<br>e<br>e                                                           | 12     | 58     | 07<br>00<br>51                                                 |                | Slight                       |
| 11   | Port Blair                                                                                    | E       | i                                                                      | 12     | 58     | 01                                                             |                |                              |
| 11   | Calcutta                                                                                      | E       | i                                                                      | 12     | 58     | 12                                                             |                | Slight                       |
| 11   | Hyderabad                                                                                     | E       | M                                                                      | 13     | 06     | 23                                                             |                | Per.: 17 sec, $\mu = 5$      |

| Date | Station   | Compt | Phase      | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                      |
|------|-----------|-------|------------|--------|--------|-------------|----------------|------------------------------|
| 11   | Shillong  | Z     | iP         | 13     | 12     | 39          |                | Slight, distant              |
| 11   | Dehra Dun | Z     | e          | 13     | 42     | 09          |                | Tremor                       |
| 11   | Chatra    | ZNE   | iPn<br>iSg | 14     | 46     | 21<br>46 40 | 160            | Feeble, compression          |
| 11   | Shillong  | Z     | eP         | 14     | 46     | 25          |                | Slight, local                |
| 11   | Shillong  | Z     | eP         | 15     | 44     | 36          |                | Slight, distant              |
| 11   | Shillong  | Z     | eP         | 15     | 46     | 34          |                | Slight, near                 |
| 11   | Chatra    | NEZ   | iP<br>iS   | 16     | 34     | 01<br>34 33 | 290            | Feeble, rarefaction          |
| 11   | Shillong  | Z     | iP         | 16     | 34     | 26          |                | Slight, local                |
| 11   | Chatra    | NEZ   | iPn<br>iSn | 16     | 54     | 04<br>54 35 | 280            |                              |
| 11   | Shillong  | Z     | iP         | 16     | 55     | 23          |                | Slight, local                |
| 11   | Delhi     | Z     | iP         | 16     | 56     | 45          |                | Slight, rarefaction          |
| 11   | Shillong  | Z     | iPg<br>iSg | 18     | 33     | 52<br>39 00 | 90             | Slight                       |
| 11   | Chatra    | Z     | eP         | 18     | 40     | 34          |                | Feeble, rarefaction          |
| 11   | Shillong  | Z     | iP         | 18     | 47     | 45          |                | Slight, local                |
| 11   | Shillong  | Z     | iP         | 19     | 30     | 47          |                | Slight, distant, rarefaction |
| 11   | Chatra    | Z     | ern<br>Sn  | 19     | 31     | 13<br>32 50 | 940            | Feeble                       |
| 11   | Shillong  | Z     | eP         | 19     | 39     | 56          |                | Slight, distant              |
| 11   | Shillong  | Z     | eP         | 20     | 23     | 43          |                | Slight, distant              |
| 11   | Shillong  | Z     | eP         | 22     | 07     | 40          |                | Slight, distant              |
| 12   | Shillong  | Z     | eP         | 04     | 29     | 24          |                | Slight, local                |
| 12   | Bokaro    | NE    | eP         | 07     | 19     | 47          |                | Slight, tremor               |
| 12   | Shillong  | Z     | iP         | 12     | 10     | 35          |                | Slight, distant, rarefaction |
| 12   | Shillong  | Z     | eP         | 15     | 10     | 30          |                | Slight, distant              |
| 12   | Shillong  | Z     | iP         | 17     | 37     | 43          |                | Slight, distant, compression |
| 12   | Chatra    | Z     | iP<br>iS   | 17     | 48     | 17<br>48 51 | 310            | Feeble                       |
| 12   | Shillong  | Z     | eP         | 17     | 48     | 43          |                | Slight, distant              |
| 12   | Shillong  | Z     | iP         | 17     | 53     | 17          |                | Slight, distant              |

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| Date | Station                                                                                                                                 | Compt    | Phase                              | G<br>h | M<br>m | T<br>s                                 | $\Delta$<br>km | Remarks                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------|--------|--------|----------------------------------------|----------------|------------------------------------------------------|
| 12   | Shillong                                                                                                                                | Z        | iP                                 | 19     | 03     | 05                                     |                | Slight, distant                                      |
| 12   | Shillong                                                                                                                                | Z        | eP                                 | 19     | 11     | 39                                     |                | Slight, distant                                      |
| 12   | Chatra                                                                                                                                  | Z<br>NEZ | eP<br>iS                           | 20     | 31     | 11<br>45                               | 310            | Feeble                                               |
| 12   | Shillong                                                                                                                                | Z        | iP                                 | 20     | 31     | 37                                     |                | Slight, distant, compression                         |
| 12   | Shillong                                                                                                                                | Z        | eP                                 | 21     | 20     | 39                                     |                | Slight, distant                                      |
| 12   | Shillong                                                                                                                                | Z        | eP                                 | 21     | 31     | 19                                     |                | Slight, distant                                      |
| 12   | Shillong                                                                                                                                | Z        | iP                                 | 22     | 03     | 24                                     |                | Slight, distant, compression                         |
| 13   | Chatra                                                                                                                                  | Z        | eP<br>iS                           | 01     | 22     | 33<br>10                               | 310            | Feeble                                               |
| 13   | Shillong                                                                                                                                | Z        | eP                                 | 01     | 23     | 03                                     |                | Slight, distant                                      |
| 13   | Epc: 10.2°N, 121.7°E. Panay, Philippines. Felt: Dipolog, Roxas city, Iloilo, Cuyo, Palwal. -- H = 03h 22m 12.6s. h about 157 km (USCGS) |          |                                    |        |        |                                        |                |                                                      |
|      | Chatra                                                                                                                                  | Z        | iP                                 | 03     | 33     | 09                                     |                | Feeble, distant, compression                         |
|      | Shillong                                                                                                                                | ZE<br>E  | eP<br>PP<br>iS<br>SSS<br>Lr<br>M   | 03     | 33     | 23<br>41<br>00<br>46<br>16<br>30<br>17 | 3620           | Moderate                                             |
|      | Dehra Dun                                                                                                                               | Z        | eP<br>iS                           | 03     | 40     | 20<br>58                               | 4930           | Slight                                               |
| 13   | Calcutta                                                                                                                                | E        | e                                  | 03     | 47     | 20                                     |                | Slight                                               |
| 13   | Port Blair                                                                                                                              | E        | e                                  | 03     | 47     | 42                                     |                |                                                      |
| 13   | Dehra Dun                                                                                                                               |          | eP<br>i                            | 04     | 56     | 33<br>51                               |                | Feeble                                               |
| 13   | Epc: 30.5°N, 79.6°E. Tibet-India border. -- H = 05h 01m 08.6s<br>30°N, 80°E. h about 25 km (USCGS) -- H = 05h 01m 10s (Shillong)        |          |                                    |        |        |                                        |                |                                                      |
|      | Dehra Dun                                                                                                                               | Z<br>N   | eP<br>PP<br>PPP<br>iS<br>SS<br>SSS | 05     | 01     | 33<br>40<br>40<br>50<br>00<br>12       | 130            | Moderate                                             |
| 13   | Delhi                                                                                                                                   | NEZ      | iPn<br>iSn                         | 05     | 01     | 52<br>32                               | 370            | Slight, rarefaction, first ground motion North, East |
| 13   | Sehore                                                                                                                                  | E<br>EN  | eP<br>eS<br>M                      | 05     | 03     | 02<br>22<br>16                         | 770            | Slight                                               |

| Date | Station                                                                                       | Compt       | Phase                                 | G  | M  | T                                                        | $\Delta$ | Remarks                                |
|------|-----------------------------------------------------------------------------------------------|-------------|---------------------------------------|----|----|----------------------------------------------------------|----------|----------------------------------------|
|      |                                                                                               |             |                                       | h  | m  | s                                                        | km       |                                        |
| 13   | Chatra                                                                                        | Z<br>NEZ    | ir<br>es                              | 05 | 03 | 03<br>04 28                                              | 810      | Feeble, rarefaction                    |
| 13   | Dokaro                                                                                        | NE          | er<br>e<br>Lq<br>es<br>SS<br>SSS<br>A | 05 | 03 | 17<br>04 13<br>04 43<br>04 54<br>05 04<br>05 13<br>05 48 | 950      | Slight                                 |
| 13   | Shillong                                                                                      | EZ<br>E     | iP<br>iS<br>M                         | 05 | 03 | 53<br>06 06<br>07 27                                     | 1250     | Moderate                               |
| 13   | Poona                                                                                         | Z           | ep<br>Lq<br>iS<br>SS<br>Lr<br>M       | 05 | 04 | 12<br>06 30<br>06 33<br>06 50<br>07 06<br>07 56          | 1390     | Slight                                 |
| 13   | Hyderabad                                                                                     | E<br><br>N  | ep<br>e<br>i<br>M                     | 05 | 04 | 19<br>07 19<br>07 58<br>09 10                            |          | Slight<br><br>Per. = 12 sec, $\mu = 5$ |
| 13   | Visakhapatnam                                                                                 | E<br>N<br>E | er<br>iS<br>es<br>iSS                 | 05 | 04 | 43<br>07 29<br>07 29<br>07 44                            | 1610     | Slight                                 |
| 13   | Bombay                                                                                        | E<br>NE     | e<br>e                                | 05 | 05 | 41<br>07 39                                              |          | Slight                                 |
| 13   | Calcutta                                                                                      | E           |                                       | 05 | 06 | 12                                                       |          | Slight                                 |
| 13   | Madras                                                                                        | E           | es/Lq<br>Lr<br>M                      | 05 | 03 | 13<br>08 55<br>10 20                                     |          | Slight                                 |
| 13   | Delhi                                                                                         | Z           | iP<br>i                               | 07 | 55 | 06<br>55 38                                              | 230      | Slight, rarefaction                    |
| 13   | Dehra Dun                                                                                     | Z           | e                                     | 08 | 54 | 38                                                       |          | Tremor                                 |
| 13   | Shillong                                                                                      | Z           | ep                                    | 10 | 57 | 52                                                       |          | Slight, distant                        |
| 13   | Chatra                                                                                        | Z           | ep                                    | 16 | 41 | 01                                                       |          | Feeble                                 |
| 13   | Shillong                                                                                      | Z           | ep                                    | 21 | 44 | 48                                                       |          | Slight, distant                        |
| 13   | Epc: 56.2°N, 164°E. Komandorskie Islands region<br>- H = 22h 19m 23.3s. h about 59 km (JSCGS) |             |                                       |    |    |                                                          |          |                                        |
|      | Shillong                                                                                      | Z           | iP                                    | 22 | 29 | 19                                                       |          | Slight, distant                        |
|      | Chatra                                                                                        | Z           | iP                                    | 22 | 29 | 32                                                       |          | Feeble, distant, compression           |



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| Date | Station                                                                                                                         | Compt | Phase  | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------|-------|--------|--------|--------|--------|----------------|--------------------------------------------------------|
| 13   | Dehra Dun                                                                                                                       | Z     | er     | 22     | 23     | 30     |                | Tremor                                                 |
| 13   | Dehra Dun                                                                                                                       | Z     | eP     | 23     | 15     | 33     |                | Tremor                                                 |
| 14   | Epc: 51.5°N, 179.0°E. Rat Islands, Aleutian Islands.<br>- H = 01h 02m 51.5s. h about 25 km (USCGS)                              |       |        |        |        |        |                |                                                        |
|      | Shillong                                                                                                                        | Z     | iP     | 01     | 13     | 51     |                | Slight, rarefaction, distant                           |
|      | Chatra                                                                                                                          | Z     | iP     | 01     | 14     | 09     |                | Feeble, distant                                        |
|      | Delhi                                                                                                                           | Z     | iP     | 01     | 14     | 31     |                | Slight, rarefaction                                    |
| 14   | Delhi                                                                                                                           | Z     | er     | 06     | 28     | 44     |                | Slight, compression                                    |
| 14   | Epc: 17.3°N, 56.7°E. Iran. - H = 06h 44m 26.5s.<br>h about 30 km. (USCGS)                                                       |       |        |        |        |        |                |                                                        |
|      | Delhi                                                                                                                           | Z     | eP     | 06     | 43     | 45     |                | Slight, rarefaction                                    |
| 14   | Delhi                                                                                                                           | Z     | er     | 15     | 11     | 47     |                | Tremor, compression                                    |
| 14   | Epc: 30.4°N, 79.5°E. Tibet-India border. - H = 15h 53m 53.7s (USCGS)<br>30°N, 80°E. (Shillong) - H = 15h 58m 55s. h about 40 km |       |        |        |        |        |                |                                                        |
|      | Dehra Dun                                                                                                                       | N     | eP     | 15     | 59     | 17     | 120            | Slight                                                 |
|      |                                                                                                                                 |       | Pp     |        | 59     | 25     |                |                                                        |
|      |                                                                                                                                 |       | PrP    |        | 59     | 30     |                |                                                        |
|      |                                                                                                                                 |       | iS     |        | 59     | 33     |                |                                                        |
|      |                                                                                                                                 |       | SS     |        | 59     | 43     |                |                                                        |
|      |                                                                                                                                 |       | SSS    |        | 59     | 55     |                |                                                        |
|      | Delhi                                                                                                                           | NEZ   | iPn    | 15     | 59     | 38     | 360            | Moderate, rarefaction, first ground motion North, East |
|      |                                                                                                                                 |       | e      |        | 59     | 44     |                |                                                        |
|      |                                                                                                                                 |       | Pg     |        | 59     | 49     |                |                                                        |
|      |                                                                                                                                 |       | iSn    | 16     | 00     | 17     |                |                                                        |
|      |                                                                                                                                 | Z     | iSg    |        | 00     | 34     |                |                                                        |
|      | Sehore                                                                                                                          | E     | eP     | 16     | 00     | 44     | 780            | Slight                                                 |
|      |                                                                                                                                 | EN    | iS     |        | 02     | 05     |                |                                                        |
|      |                                                                                                                                 | E     | Lr     |        | 02     | 15     |                |                                                        |
|      |                                                                                                                                 | EN    | SS     |        | 02     | 17     |                |                                                        |
|      |                                                                                                                                 | E     | SSS    |        | 02     | 23     |                |                                                        |
|      |                                                                                                                                 | E     | NM     |        | 02     | 51     |                |                                                        |
|      | Bokaro                                                                                                                          | NE    | er     | 16     | 01     | 03     | 920            | Slight, first ground motion North.                     |
|      |                                                                                                                                 |       | i      |        | 01     | 44     |                |                                                        |
|      |                                                                                                                                 |       | Lq     |        | 02     | 27     |                |                                                        |
|      |                                                                                                                                 |       | iS     |        | 02     | 38     |                |                                                        |
|      |                                                                                                                                 |       | SS     |        | 02     | 51     |                |                                                        |
|      |                                                                                                                                 |       | SSS    |        | 03     | 04     |                |                                                        |
|      |                                                                                                                                 |       | M      |        | 03     | 34     |                |                                                        |
|      | Shillong                                                                                                                        | ZE    | iP     | 16     | 01     | 43     | 1240           | Moderate                                               |
|      |                                                                                                                                 | E     | iS     |        | 03     | 50     |                |                                                        |
|      | Poona                                                                                                                           | Z     | eP     | 16     | 01     | 53     | 1370           | Slight                                                 |
|      |                                                                                                                                 |       | iS     |        | 04     | 11     |                |                                                        |
|      |                                                                                                                                 |       | SS     |        | 04     | 25     |                |                                                        |
|      |                                                                                                                                 |       | SSS/Lr |        | 04     | 37     |                |                                                        |
|      |                                                                                                                                 |       | M      |        | 05     | 43     |                |                                                        |

| Date | Station                                                                              | Compt | phase | G<br>h | M<br>m | T<br>s                 | $\Delta$<br>km | Remarks                      |
|------|--------------------------------------------------------------------------------------|-------|-------|--------|--------|------------------------|----------------|------------------------------|
| 14   | Bombay                                                                               | N     | eP    | 16     | 02     | 00                     | 1500           | Slight                       |
|      |                                                                                      | NE    | eS    |        | 04     | 32                     |                |                              |
|      |                                                                                      |       | e     |        | 04     | 48                     |                |                              |
| 14   | Visakhapatnam                                                                        | E     | eP    | 16     | 02     | 12                     | 1610           | Slight                       |
|      |                                                                                      | N     | iS    |        | 04     | 55                     |                |                              |
|      |                                                                                      | E     | eS    |        | 04     | 55                     |                |                              |
|      |                                                                                      |       | iSS   |        | 05     | 10                     |                |                              |
| 14   | Hyderabad                                                                            | N     | eP    | 16     | 02     | 12                     |                | Slight                       |
|      |                                                                                      |       | i     |        | 05     | 10                     |                |                              |
|      |                                                                                      |       | i     |        | 05     | 42                     |                |                              |
|      |                                                                                      |       | Lr    |        | 06     | 52                     |                |                              |
|      |                                                                                      |       | M     |        | 08     | 10                     |                |                              |
|      |                                                                                      |       |       |        |        | Per.: 6 sec, $\mu = 3$ |                |                              |
| 14   | Madras                                                                               | E     | eS/Lq | 16     | 05     | 56                     |                | Moderate                     |
|      |                                                                                      |       | Lr    |        | 06     | 36                     |                |                              |
|      |                                                                                      |       | M     |        | 08     | 06                     |                |                              |
| 14   | Delhi                                                                                | Z     | eP    | 16     | 25     | 46                     |                | Tremor, compression          |
| 14   | Dehra Dun                                                                            | Z     | eP    | 16     | 44     | 45                     |                | Tremor                       |
| 14   | Delhi                                                                                | Z     | eP    | 16     | 45     | 33                     |                | Slight, compression          |
| 14   | Shillong                                                                             | Z     | iP    | 16     | 45     | 40                     |                | Slight, local                |
| 14   | Delhi                                                                                | Z     | eP    | 13     | 57     | 56                     |                | Tremor, rarefaction          |
| 14   | Shillong                                                                             | Z     | eP    | 18     | 27     | 14                     |                | Slight, distant              |
| 14   | Epc: 50.2°N, 155.3°E. Kurile Islands. - H = 20h 38m 01.3s<br>h about 60 km (USCGS)   |       |       |        |        |                        |                |                              |
|      | Shillong                                                                             | Z     | iP    | 20     | 47     | 22                     |                | Slight, distant, rarefaction |
|      | Delhi                                                                                | Z     | eP    | 20     | 47     | 39                     |                | Slight, rarefaction          |
| 14   | Epc: 18.7°N, 145.5°E. Mariana Islands. - H = 23h 34m 33.7s<br>h about 198 km (JSCGS) |       |       |        |        |                        |                |                              |
|      | Shillong                                                                             | Z     | eP    | 23     | 43     | 09                     |                | Slight, distant              |
| 15   | Delhi                                                                                | Z     | eP    | 03     | 01     | 18                     |                | Slight, compression          |
| 15   | Shillong                                                                             | Z     | eP    | 03     | 49     | 50                     |                | Slight, distant              |
| 15   | Chatra                                                                               | Z     | eP    | 03     | 52     | 20                     | 330            | Feeble, near                 |
|      |                                                                                      |       | eS    |        | 52     | 57                     |                |                              |
| 15   | Epc: 39.3°N, 140.9°E. Hanshu, Japan. - H = 06h 47m 22.5s<br>h about 103 km (USCGS)   |       |       |        |        |                        |                |                              |
|      | Chatra                                                                               | Z     | iP    | 06     | 55     | 39.4                   |                | Feeble, distant, rarefaction |
|      | Poona                                                                                | Z     | e     | 06     | 56     | 01                     |                | Slight                       |
| 15   | Poona                                                                                | Z     | iP    | 06     | 57     | 26                     |                | Slight, distant, rarefaction |
| 15   | Delhi                                                                                | Z     | iP    | 06     | 57     | 29                     |                | Slight, rarefaction          |

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| Date | Station                                                                                                  | Compt | Phase | G  | M  | T    | $\Delta$ | Remarks                      |
|------|----------------------------------------------------------------------------------------------------------|-------|-------|----|----|------|----------|------------------------------|
|      |                                                                                                          |       |       | h  | m  | s    | km       |                              |
| 15   | Bokaro                                                                                                   | NE    | eP    | 07 | 35 | 28   |          | Slight, tremor               |
| 15   | Epc: 14.7°N, 146.3°E. Mariana Islands region<br>- H = 09h 33m 39.3s. h about 25 km (USCGS)               |       |       |    |    |      |          |                              |
|      | Chatra                                                                                                   | Z     | iP    | 09 | 43 | 24   |          | Feeble, distant, rarefaction |
|      | Delhi                                                                                                    | Z     | eP    | 09 | 44 | 20   |          | Slight, rarefaction          |
| 15   | Chatra                                                                                                   | Z     | ePg   | 12 | 46 | 19   | 180      | Feeble                       |
|      |                                                                                                          | NEZ   | iSg   |    | 46 | 42   |          |                              |
| 15   | Bokaro                                                                                                   | NE    | eP    | 12 | 47 | 54   |          | Slight, tremor               |
| 15   | Delhi                                                                                                    | Z     | eP    | 12 | 51 | 54   |          | Slight                       |
| 15   | Chatra                                                                                                   | Z     | ePg   | 14 | 43 | 17   | 140      | Feeble, local                |
|      |                                                                                                          |       | iSg   |    | 43 | 34   |          |                              |
| 15   | Epc: 40.2°N, 142.4°E. Honshu, Japan. - H = 15h 12m 44.1s<br>h about 55 km (USCGS)                        |       |       |    |    |      |          |                              |
|      | Shillong                                                                                                 | Z     | eP    | 15 | 20 | 50   |          | Slight, distant              |
|      | Chatra                                                                                                   | Z     | iP    | 15 | 21 | 15.6 |          | Feeble, distant, compression |
| 15   | Delhi                                                                                                    | Z     | iP    | 15 | 22 | 03   |          | Slight, compression          |
| 15   | Epc: 51.3°N, 178.4°W. Andrean of Islands, Aleutian Islands<br>- H = 17h 03m 13.9s. h about 25 km (USCGS) |       |       |    |    |      |          |                              |
| 15   | Shillong                                                                                                 | Z     | iP    | 17 | 14 | 27   |          | Slight, distant, rarefaction |
| 15   | Chatra                                                                                                   | Z     | iP    | 17 | 14 | 41   |          | Feeble, compression, distant |
| 15   | Delhi                                                                                                    | Z     | iP    | 20 | 04 | 03   |          | Tremor, compression          |
| 15   | Epc: 13.4°N, 53.1°E. Gulf of Aden. - H = 21h 52m 13.7s<br>h about 25 km (USCGS)                          |       |       |    |    |      |          |                              |
|      | Delhi                                                                                                    | Z     | eP    | 21 | 57 | 57   |          | Slight, compression          |
|      |                                                                                                          |       | e     | 22 | 01 | 44   |          |                              |
| 15   | Chatra                                                                                                   | Z     | eP    | 21 | 58 | 03   |          | Feeble, distant              |
| 15   | Shillong                                                                                                 | Z     | e     | 22 | 00 | 36   |          | Slight, distant              |
| 15   | Dehra Dun                                                                                                | NE    | e     | 22 | 03 | 15   |          | Feeble                       |
| 16   | Epc: 52.1°S, 138.9°E. South of Tasmania. - H = 02h 04m 52.6s<br>h about 14 km (USCGS)                    |       |       |    |    |      |          |                              |
|      | Shillong                                                                                                 | Z     | iP    | 02 | 17 | 43   |          | Slight, distant, compression |
| 16   | Delhi                                                                                                    | Z     | iP    | 05 | 09 | 20   |          | Slight, rarefaction          |
| 16   | Epc: 28.2°N, 142.5°E. Bonin Islands region<br>- H = 06h 17m 04s. h about 38 km (USCGS)                   |       |       |    |    |      |          |                              |

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| Date   | Station                                                                                | Compt   | Phase    | G<br>h   | M<br>m   | T<br>s   | $\Delta$<br>km | Remarks                      |
|--------|----------------------------------------------------------------------------------------|---------|----------|----------|----------|----------|----------------|------------------------------|
| 16     | Shillong                                                                               | Z       | iP       | 06       | 25       | 17       |                | Slight, distant, rarefaction |
| Contd. | Delhi                                                                                  | Z       | iP       | 06       | 26       | 43       |                | Tremor, rarefaction          |
| 16     | Epc: 11.8°S, 166.4°E. Santa Cruz Islands. - H = 08h 28m 10.8s<br>h about 57 km (USCGS) |         |          |          |          |          |                |                              |
|        | Shillong                                                                               | Z       | eP       | 08       | 40       | 14       |                | Slight, distant              |
| 16     | Epc: 62.3°N, 153.1°W. Alaska. - H = 12h 54m 40.6s. h about 39 km (USCGS)               |         |          |          |          |          |                |                              |
|        | Chatra                                                                                 | Z       | iP       | 13       | 06       | 47       |                | Feeble, distant, compression |
|        | Delhi                                                                                  | Z       | eP       | 13       | 06       | 51       |                | Slight, compression          |
| 16     | Delhi                                                                                  | Z       | eP       | 13       | 33       | 31       |                | Tremor, rarefaction          |
| 16     | Delhi                                                                                  | Z       | eP       | 13       | 38       | 18       |                | Slight, rarefaction          |
| 16     | Dehra Dun                                                                              | Z       | e        | 15       | 06       | 46       |                | Feeble                       |
| 16     | Shillong                                                                               | Z       | eP       | 15       | 40       | 26       |                | Slight, near                 |
| 16     | Shillong                                                                               | Z       | eP       | 16       | 43       | 12       |                | Slight, distant              |
| 16     | Shillong                                                                               | Z       | eP       | 18       | 24       | 04       |                | Slight, near                 |
| 16     | Shillong                                                                               | Z       | eP       | 20       | 47       | 10       |                | Slight, near                 |
| 16     | Delhi                                                                                  | Z       | iP<br>iS | 21<br>09 | 08<br>09 | 06<br>43 | 950            | Slight, rarefaction          |
| 16     | Shillong                                                                               | Z       | iP       | 21       | 10       | 35       |                | Slight, distant              |
| 16     | Shillong                                                                               | Z       | i        | 21       | 14       | 56       |                | Slight, near                 |
| 16     | Shillong                                                                               | Z       | iP       | 22       | 33       | 02       |                | Slight, distant              |
| 17     | Dehra Dun                                                                              | Z       | e        | 00       | 54       | 44       |                | Feeble                       |
| 17     | Chatra                                                                                 | Z       | iP<br>iS | 00<br>59 | 59<br>09 | 09<br>38 | 210            | Feeble, rarefaction          |
| 17     | Shillong                                                                               | EZ<br>E | iP<br>iS | 00<br>01 | 59<br>00 | 34<br>27 | 500            | Moderate                     |
| 17     | Bokaro                                                                                 | NE      | eP       | 00       | 59       | 59       |                | Slight                       |
| 17     | Delhi                                                                                  | Z       | eP       | 01       | 00       | 50       |                | Slight, rarefaction          |
| 17     | Chatra                                                                                 | Z       | iP<br>iS | 04<br>55 | 54<br>08 | 16<br>08 | 490            | Feeble, rarefaction          |
| 17     | Shillong                                                                               | Z       | iP       | 04       | 54       | 49       |                | Slight, near                 |
| 17     | Dehra Dun                                                                              | Z       | e        | 04       | 54       | 59       |                | Tremor                       |
| 17     | Delhi                                                                                  | Z       | iP<br>iS | 04<br>56 | 55<br>50 | 14<br>50 | 930            | Slight, rarefaction          |

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| Date | Station                                                                             | Compt         | Phase                            | G<br>h | M<br>m | T<br>s                                          | $\Delta$<br>km | Remarks                                       |
|------|-------------------------------------------------------------------------------------|---------------|----------------------------------|--------|--------|-------------------------------------------------|----------------|-----------------------------------------------|
| 17   | Poona                                                                               | Z             | iP                               | 05     | 51     | 43                                              |                | Slight, distant, rarefaction                  |
| 17   | Delhi                                                                               | Z             | er                               | 05     | 51     | 58                                              |                | Slight, rarefaction                           |
| 17   | Dehra Dun                                                                           | Z             | er                               | 05     | 52     | 02                                              |                | Tremor                                        |
| 17   | Shillong                                                                            | Z             | ep                               | 05     | 52     | 07                                              |                | Slight, distant                               |
| 17   | Chatra                                                                              | Z             | ep                               | 05     | 52     | 17                                              |                | Feeble, distant                               |
| 17   | Delhi                                                                               | Z             | er                               | 08     | 08     | 50                                              |                | Tremor, compression                           |
| 17   | Chatra                                                                              | Z             | er<br>i                          | 10     | 48     | 05<br>48 25                                     |                | Feeble                                        |
| 17   | Shillong                                                                            | Z             | iP                               | 11     | 45     | 45                                              |                | Slight, near, compression                     |
| 17   | Shillong                                                                            | Z             | iP<br>iSg                        | 12     | 13     | 23<br>13 43                                     | 160            |                                               |
| 17   | Chatra                                                                              | Z             | e                                | 12     | 14     | 15                                              |                |                                               |
| 17   | Dehra Dun                                                                           | Z             | e                                | 15     | 12     | 12                                              |                | Tremor                                        |
| 17   | Delhi                                                                               | Z             | iP                               | 15     | 13     | 20                                              |                | Tremor, rarefaction                           |
| 17   | Chatra                                                                              | Z             | ep                               | 15     | 39     | 49                                              |                | Feeble, distant                               |
| 17   | Dehra Dun                                                                           | Z             | ep                               | 16     | 25     | 04                                              |                | Tremor                                        |
| 17   | Delhi                                                                               | Z             | ep                               | 16     | 25     | 09                                              |                | Slight, rarefaction                           |
| 17   | Chatra                                                                              | Z             | ep                               | 16     | 35     | 41                                              |                | Feeble, distant                               |
| 17   | Epc: 43.1°N, 144.5°E. Hokkaido, Japan. - H = 17h 20m 22.9s<br>h about 30 km (USCGS) |               |                                  |        |        |                                                 |                |                                               |
|      | Shillong                                                                            | Z             | iP<br>i                          | 17     | 28     | 47<br>28 55                                     |                | Slight, distant, compression                  |
| 17   | Chatra                                                                              | Z             | iP<br>eS                         | 17     | 29     | 11<br>36 11                                     | 5390           | Slight, compression                           |
| 17   | Dehra Dun                                                                           | Z<br>N        | ep<br>PP<br>iS<br>SS<br>SSS<br>M | 17     | 29     | 45<br>31 43<br>37 14<br>41 10<br>42 50<br>49 39 | 5890           | Slight                                        |
| 17   | Delhi                                                                               | EZ<br>Z<br>EZ | iP<br>PP<br>PcS/ScP<br>e<br>iS   | 17     | 29     | 55<br>32 03<br>34 54<br>37 29<br>37 35          | 6090           | Slight, compression, first ground motion West |
| 17   | Poona                                                                               | Z             | iP                               | 17     | 31     | 06                                              |                | Slight, distant                               |

| Date | Station                                                                                    | Compt   | Phase        | G  | M  | T  | A   | Remarks                      |
|------|--------------------------------------------------------------------------------------------|---------|--------------|----|----|----|-----|------------------------------|
|      |                                                                                            |         |              | h  | m  | s  | km  |                              |
| 17   | Bokaro                                                                                     | E<br>NE | iP<br>i<br>i | 17 | 31 | 34 |     | Slight, distant              |
|      |                                                                                            |         |              |    | 37 | 12 |     |                              |
|      |                                                                                            |         |              |    | 39 | 42 |     |                              |
| 17   | Bombay                                                                                     | N       | e<br>e       | 17 | 42 | 16 |     | Slight                       |
|      |                                                                                            |         |              |    | 52 | 00 |     |                              |
| 17   | Delhi                                                                                      | Z       | irg<br>isg   | 17 | 29 | 55 | 110 | Slight, compression          |
|      |                                                                                            |         |              |    | 30 | 03 |     |                              |
| 17   | Chatra                                                                                     | Z       | er<br>i      | 20 | 47 | 51 |     |                              |
|      |                                                                                            |         |              |    | 43 | 00 |     |                              |
| 17   | Epc: 7.8°S, 143.1°E. New Britain region<br>- H = 23h 12m 09s. h about 42 km (USCGS)        |         |              |    |    |    |     |                              |
|      | Delhi                                                                                      | Z       | er           | 23 | 21 | 23 |     | Slight, rarefaction          |
| 17   | Shillong                                                                                   | Z       | er           | 23 | 22 | 39 |     | Slight, distant              |
| 18   | Shillong                                                                                   | Z       | iP           | 00 | 14 | 33 |     | Slight, distant, compression |
| 18   | Shillong                                                                                   | Z       | ir           | 02 | 33 | 53 |     | Slight, distant              |
| 18   | Shillong                                                                                   | Z       | er           | 02 | 44 | 29 |     | Slight, near                 |
| 18   | Epc: 9.6°S, 119.8°E. Sumba Island. - H = 05h 53m 48.1s<br>h about 38 km (USCGS)            |         |              |    |    |    |     |                              |
|      | Shillong                                                                                   | Z       | er           | 03 | 01 | 52 |     | Feeble, distant, rarefaction |
|      | Chatra                                                                                     | Z       | iP           | 06 | 02 | 27 |     | Feeble, rarefaction          |
| 18   | Delhi                                                                                      | Z       | er           | 06 | 03 | 18 |     | Slight, rarefaction          |
| 18   | Dehra Dun                                                                                  | Z       | e            | 08 | 58 | 55 |     | Tremor                       |
| 18   | Epc: 7.2°S, 119.9°E. Flores Sea. - H = 09h 23m 37.5s<br>h about 538 km (USCGS)             |         |              |    |    |    |     |                              |
|      | Shillong                                                                                   | Z       | iP           | 09 | 30 | 44 |     | Slight, distant, compression |
|      | Delhi                                                                                      | Z       | er           | 09 | 32 | 11 |     | Tremor, rarefaction          |
| 18   | Epc: 15.3°N, 143.1°E. Mariana Islands region<br>- H = 10h 10m 12.7s. h about 16 km (USCGS) |         |              |    |    |    |     |                              |
|      | Chatra                                                                                     | Z       | iP           | 10 | 19 | 05 |     | Feeble, distant, compression |
|      | Shillong                                                                                   | Z       | iP           | 10 | 19 | 33 |     | Slight, distant              |
| 18   | Delhi                                                                                      | Z       | iP           | 10 | 21 | 04 |     | Slight, rarefaction          |
| 18   | Chatra                                                                                     | Z       | iP           | 12 | 51 | 30 |     | Feeble, near                 |
| 18   | Shillong                                                                                   | Z       | er           | 12 | 52 | 09 |     | Slight, near                 |
| 18   | Chatra                                                                                     | Z       | iP           | 15 | 06 | 25 |     | Feeble, distant, compression |

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| Date | Station                                                                                         | Compt | Phase                 | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|------|-------------------------------------------------------------------------------------------------|-------|-----------------------|--------|--------|--------|----------------|------------------------------|
| 18   | Shillong                                                                                        | Z     | iP                    | 16     | 39     | 44     |                | Slight, distant              |
| 18   | Shillong                                                                                        | Z     | eP                    | 18     | 33     | 21     |                | Slight, near                 |
| 18   | Chatra                                                                                          | Z     | er<br>is              | 19     | 29     | 52     | 310            | Feeble                       |
|      |                                                                                                 |       |                       |        | 30     | 26     |                |                              |
| 18   | Delhi                                                                                           | Z     | eP                    | 20     | 32     | 52     |                | Tremor, compression          |
| 18   | Chatra                                                                                          | Z     | eP                    | 22     | 40     | 51     |                | Feeble                       |
| 19   | Epc: 5.1°S, 153.6°E. New Britain region<br>- H = 00h 52m 13.9s. h about 49 km (USCGS)           |       |                       |        |        |        |                |                              |
|      | Shillong                                                                                        | Z     | iP                    | 01     | 03     | 05     |                | Slight, distant              |
| 19   | Delhi                                                                                           | Z     | ir                    | 01     | 04     | 22     |                | Slight, compression          |
| 19   | Madras                                                                                          | E     | ern<br>i<br>eSn<br>Sg | 09     | 59     | 16     | 200            | Feeble                       |
|      |                                                                                                 |       |                       |        | 59     | 29     |                |                              |
|      |                                                                                                 |       |                       |        | 59     | 40     |                |                              |
|      |                                                                                                 |       |                       |        | 59     | 42     |                |                              |
| 19   | Poona                                                                                           | Z     | eP                    | 10     | 02     | 12     |                | Slight, near                 |
| 19   | Delhi                                                                                           | Z     | iP                    | 14     | 21     | 55     |                | Slight, rarefaction          |
| 19   | Chatra                                                                                          | Z     | eP<br>eS              | 14     | 54     | 44     | 870            | Feeble                       |
|      |                                                                                                 |       |                       |        | 56     | 14     |                |                              |
| 19   | Shillong                                                                                        | Z     | iP                    | 15     | 54     | 57     |                | Slight, distant              |
| 19   | Shillong                                                                                        | Z     | iP                    | 13     | 28     | 45     |                | Slight, distant              |
| 19   | Shillong                                                                                        | Z     | eP                    | 22     | 04     | 32     |                | Slight, near                 |
| 19   | Epc: 33.8°N, 140.7°E. Honshu, Japan.<br>- H = 22h 05m 45s. h about 93 km (USCGS)                |       |                       |        |        |        |                |                              |
|      | Shillong                                                                                        | Z     | iP                    | 22     | 13     | 37     |                | Slight, distant, rarefaction |
| 19   | Shillong                                                                                        | Z     | eP                    | 22     | 24     | 41     |                | Slight, distant              |
| 19   | Shillong                                                                                        | Z     | eP                    | 22     | 44     | 39     |                | Slight, distant              |
| 20   | Delhi                                                                                           | Z     | iP                    | 00     | 14     | 53     |                | Slight, rarefaction          |
| 20   | Delhi                                                                                           | Z     | eP                    | 02     | 55     | 19     |                | Tremor, rarefaction          |
| 20   | Delhi                                                                                           | Z     | eP                    | 03     | 10     | 36     |                | Tremor, rarefaction          |
| 20   | Epc: 51.5°N, 173.6°W. Fox Islands, Aleutian Islands<br>- H = 04h 36m 41s. h about 25 km (USCGS) |       |                       |        |        |        |                |                              |
|      | Shillong                                                                                        | Z     | iP                    | 04     | 43     | 11     |                | Slight, distant              |
| 20   | Shillong                                                                                        | Z     | iP                    | 06     | 32     | 29     |                | Slight, local                |
| 20   | Shillong                                                                                        | Z     | eP                    | 10     | 17     | 59     |                | Slight, near                 |

| Date | Station                                                                                | Compt | Phase | G  | M  | T  | $\Delta$ | Remarks                      |
|------|----------------------------------------------------------------------------------------|-------|-------|----|----|----|----------|------------------------------|
|      |                                                                                        |       |       | h  | m  | s  | km       |                              |
| 20   | Shillong                                                                               | Z     | iP    | 12 | 07 | 21 |          | Slight, local                |
| 20   | Chatra                                                                                 | Z     | iPg   | 16 | 13 | 35 | 10       | Rarefaction                  |
|      |                                                                                        |       | iSg   |    | 13 | 36 |          |                              |
|      |                                                                                        |       | i     |    | 13 | 37 |          |                              |
| 20   | Epc: 21°S, 174.3°W. Tonga Islands region<br>- H = 16h 27m 20.9s. h about 28 km (USCGS) |       |       |    |    |    |          |                              |
|      | Chatra                                                                                 | Z     | iP    | 16 | 44 | 26 |          | Feeble, distant, rarefaction |
| 20   | Chatra                                                                                 | Z     | iPg   | 17 | 53 | 29 | 110      | Feeble                       |
|      |                                                                                        |       | iSg   |    | 56 | 41 |          |                              |
| 20   | Shillong                                                                               | Z     | er    | 21 | 31 | 49 |          | Slight, near                 |
| 20   | Epc: 5.6°S, 128.7°E. Banda Sea. - d = 23h 31m 37.9s.<br>h about 297 km (USCGS)         |       |       |    |    |    |          |                              |
|      | Shillong                                                                               | Z     | iP    | 23 | 39 | 43 |          | Slight, distant              |
| 21   | Shillong                                                                               | Z     | er    | 01 | 03 | 21 |          | Slight, local                |
| 21   | Shillong                                                                               | Z     | er    | 02 | 27 | 39 |          | Slight, local                |
| 21   | Epc: 36.6°N, 54.6°E. Northern Iran. - d = 03h 07m 03s<br>h about 41 km (USCGS)         |       |       |    |    |    |          |                              |
|      | Dehra Dun                                                                              | Z     | eP    | 03 | 11 | 32 |          | Tremor                       |
| 21   | Dehra Dun                                                                              | Z     | eP    | 05 | 06 | 06 |          | Feeble                       |
|      |                                                                                        |       | i     |    | 09 | 11 |          |                              |
| 21   | Lokaro                                                                                 | E     | iP    | 06 | 16 | 26 |          | Slight, distant              |
| 21   | Dehra Dun                                                                              | Z     | eP    | 07 | 06 | 09 |          | Tremor                       |
| 21   | Chatra                                                                                 | Z     | er    | 07 | 08 | 03 | 2030     | Feeble                       |
|      |                                                                                        |       | eS    |    | 11 | 25 |          |                              |
| 21   | Chatra                                                                                 | Z     | iP    | 10 | 42 | 58 | 790      | Feeble, rarefaction          |
|      |                                                                                        |       | iS    |    | 44 | 20 |          |                              |
| 21   | Dehra Dun                                                                              | Z     | eP    | 10 | 44 | 54 |          | Tremor                       |
| 21   | Shillong                                                                               | Z     | iP    | 14 | 13 | 17 |          | Slight, distant              |
| 21   | Dehra Dun                                                                              | Z     | er    | 16 | 42 | 21 |          | Tremor                       |
| 21   | Epc: 37°N, 71.9°E. Hindukush region<br>- H = 17h 28m 24.7s. h about 38 km (USCGS)      |       |       |    |    |    |          |                              |
|      | Dehra Dun                                                                              | Z     | eP    | 17 | 30 | 38 | 830      | Slight                       |
|      |                                                                                        |       | iS    |    | 32 | 04 |          |                              |
| 21   | Delhi                                                                                  | Z     | iP    | 17 | 30 | 53 | 950      | Slight, rarefaction          |
|      |                                                                                        |       | iS    |    | 32 | 31 |          |                              |
| 21   | Chatra                                                                                 | Z     | iP    | 17 | 32 | 23 | 1720     | Slight                       |
|      |                                                                                        |       | iS    |    | 35 | 17 |          |                              |



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| Date | Station                                                                                               | Compt | Phase     | G<br>h | A<br>m | T<br>s      | $\Delta$<br>km | Remarks                      |
|------|-------------------------------------------------------------------------------------------------------|-------|-----------|--------|--------|-------------|----------------|------------------------------|
| 21   | Shillong                                                                                              | Z     | iP        | 17     | 33     | 13          |                | Slight, distant              |
| 22   | Epc: 3.2°S, 137.5°E. Western New Guinea<br>- H = 00h 16m 07.2s. h about 104 km (JSCGS)                |       |           |        |        |             |                |                              |
|      | Shillong                                                                                              | Z     | iP        | 00     | 25     | 12          |                | Slight, distant              |
| 22   | Epc: 5.9°S, 151.7°E. New Britain region<br>- H = 00h 21m 30.9s. h about 81 km (USCGS)                 |       |           |        |        |             |                |                              |
|      | Shillong                                                                                              | Z     | iP        | 00     | 32     | 13          |                | Slight, distant, rarefaction |
| 22   | Dehra Dun                                                                                             | Z     | e         | 05     | 46     | 09          |                | Tremor                       |
|      | Delhi                                                                                                 | Z     | iP        | 05     | 46     | 49          |                | Slight, compression          |
| 22   | Shillong                                                                                              | Z     | iP<br>e   | 10     | 55     | 49<br>56 18 |                | Slight, near                 |
| 22   | Shillong                                                                                              | Z     | er        | 12     | 20     | 23          |                | Slight, near                 |
| 22   | Shillong                                                                                              | Z     | teP       | 12     | 23     | 49          |                | Slight, distant              |
| 22   | Epc: 8.4°S, 153.8°E. Solomon Islands<br>- H = 13h 36m 49.7s. h about 107 km (USCGS)                   |       |           |        |        |             |                |                              |
|      | Shillong                                                                                              | Z     | iP        | 13     | 48     | 15          |                | Slight, distant, rarefaction |
|      | Delhi                                                                                                 | Z     | iP        | 13     | 50     | 01          |                | Slight, compression          |
| 22   | Chatra                                                                                                | Z     | er<br>eSg | 14     | 34     | 43<br>35 03 | 130            | Feeble                       |
| 22   | Shillong                                                                                              | Z     | eP        | 14     | 50     | 04          |                | Slight, near                 |
| 22   | Shillong                                                                                              | Z     | iP        | 15     | 29     | 48          |                | Slight, near, compression    |
| 22   | Chatra                                                                                                | Z     | iP        | 15     | 30     | 47          |                | Feeble, distant              |
| 22   | Shillong                                                                                              | Z     | eP<br>e   | 23     | 15     | 42<br>15 53 |                | Slight, near                 |
| 22   | Shillong                                                                                              | Z     | eP        | 23     | 59     | 33          |                | Slight, distant              |
| 23   | Shillong                                                                                              | Z     | iP<br>i   | 01     | 26     | 26<br>26 49 |                | Slight, near, rarefaction    |
| 23   | Epc: 10.7°N, 96.5°W. Off coast of Costa Rica<br>- H = 01h 12m 52.3s. h about 44 km (JSCGS)            |       |           |        |        |             |                |                              |
|      | Bokaro                                                                                                | E     | iP        | 01     | 27     | 00          |                | Slight, distant              |
| 23   | Shillong                                                                                              | Z     | iP        | 03     | 13     | 19          |                | Slight, distant, compression |
| 23   | Shillong                                                                                              | Z     | teP<br>i  | 03     | 33     | 29<br>33 41 |                | Slight, near                 |
| 23   | Epc: 14.1°S, 136.8°E. New Hebrides Islands. Felt: Santa<br>- H = 23h 09m 12.4s. h about 99 km (USCGS) |       |           |        |        |             |                |                              |

| Date | Station                                                                       | Compt       | Phase                 | G M T |    |                                  | A<br>km | Remarks                                               |
|------|-------------------------------------------------------------------------------|-------------|-----------------------|-------|----|----------------------------------|---------|-------------------------------------------------------|
|      |                                                                               |             |                       | h     | m  | s                                |         |                                                       |
| 23   | Shillong                                                                      | Z           | iP                    | 23    | 22 | 27                               |         | Slight, distant, compression                          |
| 24   | Bokaro                                                                        | NE          | eP                    | 07    | 17 | 14                               |         | Slight, tremor                                        |
| 24   | Bokaro                                                                        | NE          | iP                    | 03    | 15 | 34                               |         | Slight, tremor                                        |
| 24   | Chatra                                                                        | Z           | iP<br>eS              | 09    | 57 | 33<br>59 50                      | 1350    | Feeble, rarefaction                                   |
| 24   | Chatra                                                                        | Z           | iP                    | 15    | 25 | 57                               |         | Feeble, distant, compression                          |
| 24   | Epic: 10.3°N, 121.5°E. Sulu Sea. - H = 16h 23m 10.8s<br>h about 21 km (USCGS) |             |                       |       |    |                                  |         |                                                       |
|      | Chatra                                                                        | Z           | iP                    | 16    | 30 | 18                               |         | Feeble, distant, rarefaction                          |
| 24   | Delhi                                                                         | NEZ         | iP                    | 16    | 36 | 25                               |         | Slight, compression, first ground motion North, East. |
| 24   | Dehra Dun                                                                     | N           | eP                    | 16    | 41 | 28                               |         | Feeble                                                |
| 24   | Chatra                                                                        | Z           | iP                    | 18    | 35 | 46                               |         | Feeble                                                |
| 24   | Dehra Dun                                                                     | Z           | eP<br>i               | 21    | 27 | 27<br>30 50                      |         | Feeble                                                |
| 24   | Chatra                                                                        | Z           | eP                    | 21    | 27 | 34                               |         | Feeble, distant                                       |
| 24   | Delhi                                                                         | Z           | iPKP<br>i<br>i<br>iPP | 21    | 28 | 03<br>29 02<br>30 27<br>30 49    | 15190   | Slight, compression                                   |
| 25   | Dehra Dun                                                                     | Z<br>N<br>e | eP<br>e<br>e          | 04    | 53 | 58<br>59 34<br>05 07 27          |         | Feeble                                                |
| 25   | Chatra                                                                        | Z<br>N      | eP<br>i               | 04    | 59 | 31<br>05 02 31                   |         | Feeble, distant                                       |
| 25   | Bombay                                                                        | N<br>E      | eP<br>e<br>e<br>e     | 04    | 59 | 47<br>05 01 13<br>03 51<br>06 35 |         | Slight, distant                                       |
| 25   | Calcutta                                                                      | E           | eP                    | 05    | 46 | 12                               |         | Slight                                                |
| 25   | Hyderabad                                                                     | E           | M                     | 05    | 50 | 32                               |         | Per. = 27 sec, $\mu = 12$                             |
| 25   | Dehra Dun                                                                     | Z           | eP                    | 07    | 49 | 20                               |         | Tremor                                                |
| 25   | Delhi                                                                         | Z           | iP                    | 17    | 58 | 59                               |         | Slight, rarefaction                                   |
| 25   | Delhi                                                                         | Z           | iP                    | 18    | 00 | 37                               |         | Slight, rarefaction                                   |
| 25   | Shillong                                                                      | Z           | iP                    | 22    | 15 | 40                               |         | Slight, distant, rarefaction                          |
| 25   | Shillong                                                                      | Z           | iP                    | 22    | 42 | 18                               |         | Slight, distant, compression                          |
| 25   | Chatra                                                                        | Z           | iP<br>eS              | 22    | 42 | 50<br>45 03                      | 1310    | Feeble, compression                                   |

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| Date | Station                                                                                              | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                      |
|------|------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|----------------------------------------------|
| 25   | Tocklai                                                                                              | E     | eP    | 22     | 42     | 10     |                | Slight, distant                              |
| 26   | Epc: 47.1°N, 153.9°E. Kurile Islands. - H = 04h 23m 11.9s<br>h about 35 km (USCGS)                   |       |       |        |        |        |                |                                              |
|      | Shillong                                                                                             | Z     | iP    | 04     | 32     | 31     |                | Slight, distant, compression                 |
|      | Chatra                                                                                               | Z     | eP    | 04     | 32     | 49     |                | Feeble                                       |
|      | Delhi                                                                                                | Z     | iP    | 04     | 33     | 24     |                | Slight, compression                          |
| 26   | Delhi                                                                                                | Z     | eP    | 06     | 35     | 09     |                | Slight, rarefaction                          |
| 26   | Epc: 7.5°N, 82.7°W. South of Panama. Felt: Balboa Hugsats<br>Mag. = 6% (Pas), 7 (Brk). h about 21 km |       |       |        |        |        |                |                                              |
|      | Poona                                                                                                | NEZ   | iPKP  | 08     | 33     | 24     | 16180          | Rarefaction, first ground motion South, East |
|      |                                                                                                      | NE    | iPP   |        | 36     | 43     |                |                                              |
|      |                                                                                                      | N     | PPP   |        | 40     | 04     |                |                                              |
|      |                                                                                                      |       | SKS   |        | 40     | 24     |                |                                              |
|      |                                                                                                      |       | PKKS  |        | 45     | 51     |                |                                              |
|      |                                                                                                      |       | SS    |        | 55     | 30     |                |                                              |
|      |                                                                                                      |       | SSS   | 09     | 00     | 27     |                |                                              |
|      |                                                                                                      |       | Lr    |        | 20     | 15     |                |                                              |
|      |                                                                                                      |       | M     |        | 32     | 26     |                |                                              |
|      |                                                                                                      |       | Mn    |        | 38     | 00     |                | Per=36 sec, $\mu = 110.8$                    |
|      | Dehra Dun                                                                                            | Z     | ePKP  | 08     | 34     | 02     |                |                                              |
|      |                                                                                                      | N     | i     |        | 34     | 24     |                |                                              |
|      |                                                                                                      |       | i     |        | 37     | 45     |                |                                              |
|      |                                                                                                      |       | i     |        | 43     | 42     |                |                                              |
|      |                                                                                                      |       | i     |        | 46     | 39     |                |                                              |
|      | Chatra                                                                                               | Z     | iPKP  | 08     | 34     | 19     |                | Rarefaction                                  |
|      |                                                                                                      |       | Lq    | 09     | 03     | 09     |                |                                              |
|      |                                                                                                      |       | eLr   |        | 07     | 08     |                |                                              |
|      |                                                                                                      | E     | M     |        | 37     | 38     |                | Per.=20.5 sec, $\mu = 50$                    |
|      |                                                                                                      | N     | M     |        | 48     | 49     |                | Per=21 sec, Amp.=4.5 mm                      |
|      | Bombay                                                                                               | NE    | ePKP  | 08     | 34     | 22     | 16280          |                                              |
|      |                                                                                                      |       | PP    |        | 37     | 50     |                |                                              |
|      |                                                                                                      |       | i     |        | 38     | 13     |                |                                              |
|      |                                                                                                      |       | PKS2  |        | 38     | 39     |                |                                              |
|      |                                                                                                      |       | i     |        | 39     | 00     |                |                                              |
|      |                                                                                                      | E     | i     |        | 39     | 41     |                |                                              |
|      |                                                                                                      | N     | PPP   |        | 41     | 00     |                |                                              |
|      |                                                                                                      | E     | e     |        | 42     | 41     |                |                                              |
|      |                                                                                                      | NE    | PKKP1 |        | 43     | 02     |                |                                              |
|      |                                                                                                      |       | PS    |        | 47     | 55     |                |                                              |
|      |                                                                                                      |       | eSS   |        | 56     | 45     |                |                                              |
|      |                                                                                                      | N     | SSS   | 09     | 02     | 09     |                |                                              |
|      |                                                                                                      |       | M     |        | 46     | 47     |                | Per: 21 sec, $\mu = 27$                      |
|      |                                                                                                      | E     | M     |        | 49     | 21     |                | Per: 20 sec, $\mu = 25$                      |
|      | Shillong                                                                                             | Z     | iPKP  | 08     | 34     | 25     | 16890          | Compression                                  |
|      |                                                                                                      |       | PP    |        | 38     | 16     |                |                                              |
|      |                                                                                                      |       | PPP   |        | 41     | 24     |                |                                              |
|      |                                                                                                      |       | PPS   |        | 50     | 85     |                |                                              |
|      |                                                                                                      |       | SSP   |        | 58     | 01     |                |                                              |
|      |                                                                                                      |       | SS    | 09     | 03     | 31     |                |                                              |

| Date   | Station                                        | Compt | Phase | G  | M  | T     | $\Delta$ | Remarks                      |
|--------|------------------------------------------------|-------|-------|----|----|-------|----------|------------------------------|
|        |                                                |       |       | h  | m  | s     | km       |                              |
| 26     | Shillong<br>Contd. Contd.                      | Z     | SSS   | 09 | 06 | 01    |          |                              |
|        |                                                |       | SSr   |    | 08 | 01    |          |                              |
|        |                                                |       | Lq    |    | 18 | 21    |          |                              |
|        |                                                |       | Ll    |    | 25 | 57    |          |                              |
|        | Bokaro                                         | NE    | ePKP  | 08 | 34 | 23    |          |                              |
|        |                                                |       | e     |    | 41 | 20    |          |                              |
|        | Visakhapatnam                                  | E     | ePKP  | 08 | 34 | 40    | 16170    |                              |
|        |                                                | NE    | ePP   |    | 38 | 04    |          |                              |
|        | Calcutta                                       | E     | iPKP  | 08 | 34 | 40    |          |                              |
|        |                                                |       | i     |    | 36 | 19    |          |                              |
|        |                                                |       | i     |    | 37 | 02    |          |                              |
|        |                                                |       | i     |    | 52 | 10    |          |                              |
|        | Hyderabad                                      | NE    | PKP   | 08 | 34 | 43    | 16120    |                              |
|        |                                                |       | i     |    | 35 | 47    |          |                              |
|        |                                                | N     | PP    |    | 38 | 05    |          |                              |
|        | Kodaikanal                                     | E     | iPKP  | 08 | 34 | 57    |          |                              |
| Madras | E                                              | iPKP  | 08    | 34 | 58 | 16400 |          |                              |
|        |                                                | PKP2  |       | 35 | 09 |       |          |                              |
|        |                                                | IP    |       | 39 | 31 |       |          |                              |
|        |                                                | PAS   |       | 38 | 44 |       |          |                              |
|        |                                                | PPP   |       | 41 | 52 |       |          |                              |
|        |                                                | SKKS  |       | 45 | 28 |       |          |                              |
|        |                                                | SKSP  |       | 48 | 50 |       |          |                              |
|        |                                                | FS    |       | 49 | 22 |       |          |                              |
|        |                                                | PFS   |       | 51 | 12 |       |          |                              |
|        |                                                | SS    |       | 57 | 34 |       |          |                              |
| 26     | Shillong                                       | Z     | iP    | 10 | 31 | 11    |          | Slight, distant, rarefaction |
| 26     | Shillong                                       | Z     | eP    | 14 | 19 | 07    |          | Slight, local                |
| 26     | Shillong                                       | Z     | iP    | 14 | 30 | 00    |          | Slight, local                |
| 26     | Delhi                                          | Z     | iP    | 18 | 19 | 10    |          | Slight, compression          |
|        |                                                |       | i     |    | 20 | 46    |          |                              |
| 26     | Shillong                                       | Z     | iP    | 19 | 21 | 51    |          | Slight, near, compression    |
| 26     | Chatra                                         | Z     | iPn   | 20 | 52 | 43    | 260      | Slight, rarefaction          |
|        |                                                |       | iSn   |    | 53 | 13    |          |                              |
| 26     | Shillong                                       | Z     | eP    | 20 | 53 | 22    |          | Slight, distant              |
| 26     | Delhi                                          | Z     | eP    | 20 | 53 | 10    |          | Slight, rarefaction          |
| 27     | Delhi                                          | Z     | iP    | 00 | 35 | 20    |          | Slight, compression          |
| 27     | Epc: 21.7°N, 144.4°E. North of Mariana Islands |       |       |    |    |       |          |                              |
|        | - H = 01h 16m 50.3s. h about 100 km (USCGS)    |       |       |    |    |       |          |                              |
|        | Shillong                                       | Z     | iP    | 01 | 25 | 21    |          | Slight,                      |
| 27     | Shillong                                       | Z     | iP    | 02 | 36 | 17    |          | Slight, distant, compression |

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| Date | Station                                                                                                  | Compt | Phase      | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|------|----------------------------------------------------------------------------------------------------------|-------|------------|--------|--------|--------|----------------|------------------------------|
| 27   | Delhi                                                                                                    | Z     | iPg<br>iSg | 04     | 38     | 48     | 60             | Slight, compression          |
|      |                                                                                                          |       |            |        | 38     | 54     |                |                              |
| 27   | Chatra                                                                                                   | Z     | eP<br>eS   | 05     | 54     | 48     | 1280           | Feeble                       |
|      |                                                                                                          |       |            |        | 56     | 59     |                |                              |
| 27   | Chatra                                                                                                   | Z     | ePn<br>eSn | 11     | 31     | 02     | 340            | Feeble                       |
|      |                                                                                                          |       |            |        | 31     | 39     |                |                              |
| 27   | Chatra                                                                                                   | Z     | iPg<br>iSg | 11     | 42     | 20     | 130            | Feeble                       |
|      |                                                                                                          |       |            |        | 42     | 37     |                |                              |
| 27   | Delhi                                                                                                    | Z     | iP         | 11     | 50     | 34     |                | Slight, compression          |
| 27   | Epc: 51.6°N, 174.1°W. Andreev of Islands, Aleutian Islands<br>- H = 12h 39m 35.1s. h about 60 km (USCGS) |       |            |        |        |        |                |                              |
|      | Shillong                                                                                                 | Z     | iP         | 12     | 50     | 02     |                | Slight, rarefaction          |
| 27   | Chatra                                                                                                   | Z     | iP         | 12     | 50     | 15     |                | Feeble                       |
| 27   | Dehra Dun                                                                                                | Z     | eP         | 12     | 50     | 36     |                | Tremor                       |
| 27   | Dehra Dun                                                                                                | Z     | e          | 15     | 07     | 31     |                | Tremor                       |
| 27   | Delhi                                                                                                    | Z     | eP         | 15     | 07     | 51     |                | Slight                       |
| 27   | Shillong                                                                                                 | Z     | eP         | 18     | 00     | 54     |                | Slight, local                |
| 27   | Delhi                                                                                                    | Z     | iP         | 18     | 02     | 33     |                | Slight, rarefaction          |
| 27   | Delhi                                                                                                    | Z     | iP         | 20     | 00     | 27     |                | Slight, rarefaction          |
| 27   | Chatra                                                                                                   | Z     | eP         | 20     | 01     | 30     |                | Feeble                       |
| 27   | Shillong                                                                                                 | Z     | eP         | 20     | 01     | 53     |                | Slight                       |
| 27   | Chatra                                                                                                   | Z     | iP<br>eS   | 22     | 15     | 39     | 240            | Feeble, rarefaction          |
|      |                                                                                                          |       |            |        | 16     | 06     |                |                              |
| 28   | Shillong                                                                                                 | Z     | iP         | 00     | 19     | 00     |                | Slight, distant, compression |
| 28   | Delhi                                                                                                    | Z     | iP         | 00     | 23     | 50     |                | Slight, compression          |
| 28   | Shillong                                                                                                 | Z     | eP         | 02     | 15     | 47     |                | Slight, distant              |
| 28   | Chatra                                                                                                   | Z     | iPg<br>iSg | 05     | 02     | 01     | 90             | Feeble, compression          |
|      |                                                                                                          |       |            |        | 02     | 12     |                |                              |
| 28   | Shillong                                                                                                 | Z     | eP         | 06     | 59     | 28     |                | Slight, near                 |
| 28   | Chatra                                                                                                   | Z     | ePn<br>eSn | 07     | 10     | 09     | 290            | Feeble                       |
|      |                                                                                                          |       |            |        | 10     | 42     |                |                              |
| 28   | Shillong                                                                                                 | Z     | eP         | 07     | 10     | 36     |                | Slight, distant              |
| 28   | Delhi                                                                                                    | Z     | iP         | 10     | 12     | 04     |                | Slight, rarefaction          |
| 28   | Shillong                                                                                                 | Z     | eP         | 11     | 32     | 17     |                | Slight, near                 |

| Date | Station                                                                             | Compt | Phase    | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                      |
|------|-------------------------------------------------------------------------------------|-------|----------|--------|--------|-------------|----------------|------------------------------|
| 28   | Chatra                                                                              | Z     | iP       | 12     | 27     | 04          |                | Feeble, distant, rarefaction |
|      | Shillong                                                                            | Z     | iP       | 12     | 27     | 24          |                | Slight, distant, compression |
| 28   | Shillong                                                                            | Z     | eP       | 14     | 18     | 45          |                | Slight, distant              |
| 28   | Shillong                                                                            | Z     | iP       | 18     | 43     | 21          |                | Slight, local                |
| 28   | Chatra                                                                              | Z     | iP<br>eS | 19     | 44     | 39<br>46 43 | 1210           | Feeble, rarefaction          |
| 28   | Shillong                                                                            | Z     | iP       | 19     | 51     | 03          |                | Slight, distant, rarefaction |
|      | Chatra                                                                              | Z     | eP       | 19     | 51     | 30          |                | Feeble, distant              |
| 28   | Dehra Dun                                                                           | Z     | e        | 19     | 52     | 20          |                | Tremor                       |
|      | Delhi                                                                               | Z     | eP       | 19     | 52     | 20          |                | Slight, compression          |
| 28   | Epc: 44.6°N, 148.6°E. Kurile Islands. - H = 20h 46m 26s<br>h about 32 km (USCGS)    |       |          |        |        |             |                |                              |
|      | Shillong                                                                            | Z     | iP       | 20     | 55     | 15          |                | Slight, rarefaction          |
|      | Chatra                                                                              | Z     | iP       | 20     | 55     | 36          |                | Feeble, rarefaction          |
| 28   | Dehra Dun                                                                           | Z     | e        | 20     | 56     | 09          |                | Tremor                       |
|      | Delhi                                                                               | Z     | iP       | 20     | 56     | 16          |                | Slight, compression          |
| 28   | Epc: 42.5°N, 142.8°E. Hokkaido, Japan, h about 43 km<br>- H = 21h 54m 42.4s (USCGS) |       |          |        |        |             |                |                              |
|      | Delhi                                                                               | Z     | iP       | 22     | 04     | 03          |                | Slight, compression          |
| 29   | Delhi                                                                               | Z     | iP       | 00     | 33     | 51          |                | Tremor, rarefaction          |
| 29   | Chatra                                                                              | Z     | iP       | 00     | 34     | 51          |                | Feeble, distant, compression |
| 29   | Shillong                                                                            | Z     | iP       | 00     | 35     | 19          |                | Slight, distant, rarefaction |
| 29   | Epc: 25.5°N, 125.4°E. Ryukyu Islands. h about 184 km (USCGS)<br>- H 03h 37m 24.4s.  |       |          |        |        |             |                |                              |
|      | Shillong                                                                            | Z     | iP       | 03     | 43     | 20          |                | Slight, rarefaction          |
|      | Delhi                                                                               | Z     | iP       | 03     | 45     | 17          |                | Slight, rarefaction          |
| 29   | Shillong                                                                            | Z     | eP<br>i  | 05     | 17     | 09<br>17 27 |                | Slight, local                |
| 29   | Shillong                                                                            | Z     | eP       | 07     | 00     | 06          |                | Slight, near                 |
| 29   | Chatra                                                                              | Z     | eP       | 07     | 21     | 53          |                | Feeble                       |
| 29   | Shillong                                                                            | Z     | iP       | 07     | 27     | 27          |                | Slight, distant, rarefaction |
| 29   | Delhi                                                                               | Z     | iP       | 07     | 28     | 55          |                | Slight, compression          |

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| Date | Station                                                                                                                                        | Compt              | Phase                                                                   | G  | M  | T           | Δ    | Remarks                      |
|------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------|----|----|-------------|------|------------------------------|
|      |                                                                                                                                                |                    |                                                                         | h  | m  | s           | km   |                              |
| 29   | Epc: 23.6°N, 114.3°E. Kwangtung Province, China. Felt: Hongkong.<br>- H = 08h 57m 46.1s. h about 65 km (USCGS)                                 |                    |                                                                         |    |    |             |      |                              |
|      | Shillong                                                                                                                                       | Z                  | iP                                                                      | 09 | 02 | 23          |      | Slight, compression          |
| 30   | Shillong                                                                                                                                       | Z                  | iP                                                                      | 03 | 25 | 03          |      | Slight, distant, compression |
|      | Chatra                                                                                                                                         | Z                  | iP<br>ScS                                                               | 03 | 25 | 35<br>23 21 | 1630 | Feeble                       |
| 30   | Bokaro                                                                                                                                         | NE                 | iP                                                                      | 08 | 26 | 17          |      | Slight, tremor               |
| 30   | Shillong                                                                                                                                       | Z                  | iP                                                                      | 03 | 52 | 47          |      | Slight, distant, rarefaction |
| 30   | Chatra                                                                                                                                         | Z                  | e                                                                       | 08 | 52 | 46          |      | Feeble                       |
| 30   | Epc: 39.7°N, 141.8°E, Honshu, Japan. - H = 10h 51m 03.2s<br>h about 37 km (USCGS)                                                              |                    |                                                                         |    |    |             |      |                              |
|      | Shillong                                                                                                                                       | Z                  | iP                                                                      | 10 | 59 | 07          |      | Slight, compression          |
|      | Delhi                                                                                                                                          | Z                  | iP                                                                      | 11 | 00 | 22          |      | Slight, compression          |
| 30   | Shillong                                                                                                                                       | Z                  | iP                                                                      | 13 | 55 | 23          |      | Slight, distant, rarefaction |
| 30   | Epc: 3.3°S, 143.9°E. Near North Coast of New Guinea<br>Felt: Mag. 6½ -7 (Pas), 7 (Brk), 7 (Pal).<br>- H = 17h 16m 44.4s. h about 25 km (USCGS) |                    |                                                                         |    |    |             |      |                              |
|      | Port Blair                                                                                                                                     | NE<br>E<br>NE<br>E | iP<br>PP<br>PPP<br>iS<br>PS<br>SS<br>SSS<br>M                           | 17 | 26 | 25          | 5500 |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 28 | 22          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 29 | 23          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 33 | 33          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 33 | 44          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 37 | 25          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 38 | 52          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 45 | 14          |      |                              |
|      | Shillong                                                                                                                                       | Z<br>E             | iP<br>iS                                                                | 17 | 26 | 40          | 6520 | Compression                  |
|      |                                                                                                                                                |                    |                                                                         |    | 34 | 44          |      |                              |
|      | Calcutta                                                                                                                                       | E                  | iP<br>PcP<br>PP<br>i<br>iS<br>ScS                                       | 17 | 26 | 53          | 6750 |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 27 | 52          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 29 | 01          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 34 | 48          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 35 | 10          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 36 | 25          |      |                              |
|      | Chatra                                                                                                                                         | Z                  | iP<br>PcP<br>PP<br>PPP<br>iS<br>PS<br>ScS<br>SS<br>SSS<br>Lq<br>Lr<br>M | 17 | 27 | 10          | 6980 | Compression                  |
|      |                                                                                                                                                |                    |                                                                         |    | 27 | 38          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 29 | 28          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 31 | 11          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 35 | 39          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 35 | 58          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 36 | 39          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 39 | 41          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 42 | 36          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 43 | 32          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 43 | 36          |      |                              |
|      |                                                                                                                                                |                    |                                                                         |    | 52 | 53          |      |                              |

| Date         | Station       | Compt | Phase   | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                         |
|--------------|---------------|-------|---------|--------|--------|--------|----------------|-------------------------------------------------|
| 30<br>Contd. | Visakhapatnam | E     | iP      | 17     | 27     | 19     | 7110           |                                                 |
|              |               | NE    | iPcP    |        | 27     | 42     |                |                                                 |
|              |               | E     | ePP     |        | 29     | 38     |                |                                                 |
|              |               | NE    | iS      |        | 35     | 55     |                |                                                 |
|              |               |       | iPS     |        | 36     | 19     |                |                                                 |
|              |               |       | iPPS    |        | 36     | 36     |                |                                                 |
|              |               |       | iSS     |        | 40     | 01     |                |                                                 |
| Bokaro       | NE            |       | iP      | 17     | 27     | 23     | 7010           | First ground motion<br>North, West              |
|              |               |       | PcP     |        | 27     | 52     |                |                                                 |
|              |               |       | PP      |        | 29     | 51     |                |                                                 |
|              |               |       | PPP     |        | 31     | 14     |                |                                                 |
|              |               |       | PcS     |        | 31     | 53     |                |                                                 |
|              |               |       | iS      |        | 35     | 54     |                |                                                 |
|              |               |       | PS      |        | 36     | 15     |                |                                                 |
|              |               |       | PPS     |        | 36     | 28     |                |                                                 |
|              |               |       | ScS     |        | 36     | 55     |                |                                                 |
|              |               |       | SS      |        | 39     | 57     |                |                                                 |
|              |               |       | SSS     |        | 42     | 39     |                |                                                 |
|              |               |       | Lq      |        | 46     | 37     |                |                                                 |
|              |               |       | Lr      |        | 46     | 33     |                |                                                 |
|              | M             |       | 52      | 03     |        |        |                |                                                 |
| Madras       | E             |       | iP      | 17     | 27     | 30     | 7530           |                                                 |
|              |               |       | PcP     |        | 27     | 55     |                |                                                 |
|              |               |       | PP      |        | 29     | 51     |                |                                                 |
|              |               |       | i       |        | 30     | 12     |                |                                                 |
|              |               |       | PPP     |        | 31     | 31     |                |                                                 |
|              |               |       | iS      |        | 36     | 28     |                |                                                 |
|              |               |       | e       |        | 36     | 38     |                |                                                 |
|              |               |       | PS      |        | 36     | 46     |                |                                                 |
|              |               |       | PPS     |        | 36     | 58     |                |                                                 |
|              |               |       | SKS/ScS |        | 37     | 15     |                |                                                 |
|              |               |       | e       |        | 37     | 40     |                |                                                 |
|              |               |       | SS      |        | 40     | 45     |                |                                                 |
|              |               |       | SSS     |        | 43     | 38     |                |                                                 |
|              | Lq            |       | 44      | 40     |        |        |                |                                                 |
|              | Lr            |       | 47      | 49     |        |        |                |                                                 |
| Hyderabad    | NE            |       | iP      | 17     | 27     | 47     | 7470           | First ground motion<br>North, West              |
|              |               |       | PP      |        | 30     | 15     |                |                                                 |
|              |               |       | iS      |        | 36     | 42     |                |                                                 |
|              |               |       | PPS     |        | 37     | 17     |                |                                                 |
|              | E             |       | SS      |        | 41     | 00     |                |                                                 |
|              |               |       | SSS     |        | 42     | 39     |                |                                                 |
|              | N             |       | M       |        | 53     | 06     |                | Per.: 14 sec, $\mu = 6$                         |
|              | E             |       | M       |        | 53     | 17     |                | Per.: 15 sec, $\mu = 6$                         |
| Dehra Dun    | Z             |       | eP      | 17     | 28     | 05     | 7930           |                                                 |
|              |               |       | PP      |        | 30     | 47     |                |                                                 |
|              |               |       | PPP     |        | 32     | 44     |                |                                                 |
|              |               |       | iS      |        | 37     | 23     |                |                                                 |
|              |               |       | SS      |        | 41     | 57     |                |                                                 |
|              |               |       | SSS     |        | 45     | 52     |                |                                                 |
|              |               |       | M       |        | 58     | 22     |                |                                                 |
| Delhi        | NEZ           |       | iP      | 17     | 23     | 07     | 7960           | First ground motion<br>North, West, compression |
|              |               |       | PcP     |        | 28     | 25     |                |                                                 |
|              |               |       | PP      |        | 30     | 51     |                |                                                 |
|              |               |       | PPP     |        | 32     | 35     |                |                                                 |



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| Date         | Station                                                                                                                                                                                                                                           | Compt     | Phase  | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                      |  |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|--------|--------|--------|----------------|----------------------------------------------|--|
| 30<br>Contd. | Delhi<br>Contd.                                                                                                                                                                                                                                   | NEZ       | iS     | 17     | 37     | 26     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | NZ        | i      |        | 37     | 46     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | NE        | SKS    |        |        | 38     | 04             |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | PPS    |        |        | 38     | 22             |                                              |  |
|              |                                                                                                                                                                                                                                                   | E         | SS     |        |        | 42     | 16             |                                              |  |
|              |                                                                                                                                                                                                                                                   | EN        | Lq     |        |        | 47     | 36             |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | Lr     |        |        | 50     | 46             |                                              |  |
|              |                                                                                                                                                                                                                                                   | M         |        | 56     | 46     |        |                |                                              |  |
| 30           | Poona                                                                                                                                                                                                                                             | NEZ       | iP     | 17     | 28     | 11     | 7970           | Compression, first ground motion North, West |  |
|              |                                                                                                                                                                                                                                                   | ZE        | PcP    |        | 29     | 27     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | NEZ       | PP     |        | 30     | 54     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | NZ        | PPP    |        | 32     | 23     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | NE        | iS     |        | 37     | 31     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | N         | PS/SKS |        | 37     | 53     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | PPS    |        | 38     | 05     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | E         | i      |        | 38     | 17     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | N         | SS     |        | 42     | 03     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | SSS    |        | 45     | 05     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | Lq     |        | 47     | 05     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | Lr     |        | 49     | 54     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | Mn     |        | 18     | 25     | 27             | Per. = 17.3 sec, $\mu$ = 9.23                |  |
| 30           | Bombay                                                                                                                                                                                                                                            | NE        | iP     | 17     | 28     | 19     | 8110           |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | e      |        | 30     | 14     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | PP     |        | 30     | 50     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | PPP    |        | 32     | 48     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | iS     |        | 37     | 46     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | PS     |        | 38     | 03     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | PPS    |        | 38     | 39     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | i      |        | 39     | 23     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | E         | SS     |        | 41     | 44     |                |                                              |  |
|              | i                                                                                                                                                                                                                                                 |           | 44     | 06     |        |        |                |                                              |  |
| 30           | Delhi                                                                                                                                                                                                                                             | Z         | ePn    | 20     | 15     | 10     | 220            | Slight                                       |  |
|              |                                                                                                                                                                                                                                                   |           | iSn    |        | 15     | 36     |                |                                              |  |
| 30           | Epc: 5°N, 76.3°W. Western Colombia, 47 killed, 300 injures in Caldas Province; property damage over 400,000 square miles area<br>Felt: at Balboa, Heights, C. z.. Mag: 6½ (Pas), 6½ (Brk), 6 (Pal).<br>- H = 20h 18m 49.3s. h about 45 km (USCGS) | Dehra Dun | Z      | e      | 20     | 38     | 00             |                                              |  |
|              |                                                                                                                                                                                                                                                   |           | N      | i      |        | 41     | 46             |                                              |  |
|              |                                                                                                                                                                                                                                                   |           |        | i      |        | 42     | 13             |                                              |  |
|              |                                                                                                                                                                                                                                                   |           |        | i      |        | 51     | 12             |                                              |  |
| 30           | Delhi                                                                                                                                                                                                                                             | EN        | ePKP   | 20     | 33     | 04     | 15460          | Rarefaction                                  |  |
|              |                                                                                                                                                                                                                                                   |           | ePP    |        | 40     | 59     |                |                                              |  |
| 30           | Hyderabad                                                                                                                                                                                                                                         | NE        | iPKP   | 20     | 33     | 07     |                |                                              |  |
| 30           | Poona                                                                                                                                                                                                                                             | EZ        | iPKP   | 20     | 38     | 15     | 15950          | Compression, first ground motion West        |  |
|              |                                                                                                                                                                                                                                                   | Z         | iPP    |        | 41     | 31     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | E         | PKS    |        | 41     | 37     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | EZ        | i      |        | 43     | 53     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | NZ        | PPP    |        | 44     | 23     |                |                                              |  |
|              |                                                                                                                                                                                                                                                   | N         | PPS    |        | 54     | 01     |                |                                              |  |
| SS           |                                                                                                                                                                                                                                                   |           | 59     | 57     |        |        |                |                                              |  |
|              | SSP                                                                                                                                                                                                                                               |           | 21     | 00     | 30     |        |                |                                              |  |

| Date   | Station                                                                                           | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|--------|---------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------|
| 30     | Poona                                                                                             | N     | SSS   | 21     | 05     | 03     |                |                              |
| Contd. | Contd.                                                                                            |       | Mn    | 56     | 57     |        |                | Per: 18.3 sec, $\mu = 7.96$  |
|        | Bombay                                                                                            | NE    | ePKP  | 20     | 38     | 16     | 15650          |                              |
|        |                                                                                                   |       | PPP   | 41     | 20     |        |                |                              |
|        |                                                                                                   | E     | iS    | 42     | 07     |        |                |                              |
|        |                                                                                                   | NE    | e     | 42     | 32     |        |                |                              |
|        |                                                                                                   | E     | eS    | 51     | 33     |        |                |                              |
|        |                                                                                                   | NE    | eSS   | 59     | 34     |        |                |                              |
|        |                                                                                                   | E     | eSS   | 21     | 00     | 03     |                |                              |
|        |                                                                                                   | N     | e     | 05     | 03     |        |                |                              |
|        | Ceylon                                                                                            | Z     | iPKP  | 20     | 38     | 25     |                | Compression                  |
|        |                                                                                                   | E     | i     | 49     | 19     |        |                |                              |
|        | Tocklai                                                                                           | E     | ePKP  | 20     | 38     | 32     |                |                              |
|        | Port Blair                                                                                        | NE    | ePKP  | 20     | 38     | 42     | 15450          |                              |
|        |                                                                                                   | E     | e     | 39     | 30     |        |                |                              |
|        |                                                                                                   |       | PP    | 40     | 38     |        |                |                              |
|        | Bokaro                                                                                            | NE    | e     | 20     | 38     | 42     |                |                              |
|        |                                                                                                   |       | e     | 43     | 00     |        |                |                              |
|        |                                                                                                   |       | e     | 48     | 45     |        |                |                              |
|        |                                                                                                   |       | e     | 21     | 00     | 44     |                |                              |
|        | Visakhapatnam                                                                                     | E     | e     | 20     | 38     | 46     |                |                              |
|        |                                                                                                   | NE    | e     | 42     | 10     |        |                |                              |
|        | Calcutta                                                                                          | E     | ePKP  | 20     | 38     | 47     |                |                              |
|        | Madras                                                                                            | E     | ePKP  | 20     | 38     | 48     | 13280          |                              |
|        |                                                                                                   |       | PP    | 42     | 16     |        |                |                              |
|        |                                                                                                   |       | PKS   | 42     | 23     |        |                |                              |
|        |                                                                                                   |       | PPP   | 45     | 34     |        |                |                              |
|        |                                                                                                   |       | SKKS  | 48     | 53     |        |                |                              |
|        |                                                                                                   |       | SKKAS | 49     | 39     |        |                |                              |
|        |                                                                                                   |       | SKSP  | 52     | 33     |        |                |                              |
|        |                                                                                                   |       | PS    | 52     | 57     |        |                |                              |
|        |                                                                                                   |       | SS    | 21     | 01     | 18     |                |                              |
|        |                                                                                                   |       | SSS   | 06     | 37     |        |                |                              |
| 30     | Delhi                                                                                             | Z     | iP    | 23     | 12     | 22     | 990            | Slight, compression          |
|        |                                                                                                   |       | iS    | 14     | 04     |        |                |                              |
| 31     | Shillong                                                                                          | Z     | iP    | 00     | 54     | 36     |                | Slight, distant, compression |
| 31     | Epc: 3.2°S, 144.1°E. Near North Coast of New Guinea<br>- H = 02h 19m 05.2s. h about 20 km (USCGS) |       |       |        |        |        |                |                              |
|        | Shillong                                                                                          | Z     | iP    | 02     | 29     | 01     |                | Slight, compression          |
|        | Poona                                                                                             | Z     | i     | 02     | 30     | 34     |                | Slight, rarefaction          |
| 31     | Port Blair                                                                                        | E     | eP    | 04     | 19     | 41     |                |                              |
|        |                                                                                                   |       | i     | 26     | 49     |        |                |                              |
|        |                                                                                                   |       | i     | 29     | 41     |        |                |                              |
| 31     | Dehra Dun                                                                                         | Z     | eP    | 05     | 17     | 38     |                | Feeble                       |
|        |                                                                                                   | N     | i     | 20     | 52     |        |                |                              |
|        |                                                                                                   |       | i     | 26     | 49     |        |                |                              |

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| Date | Station                                                                                              | Comp                   | Phase                               | G  | M  | T                                               | Δ   | Remarks                      |
|------|------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------|----|----|-------------------------------------------------|-----|------------------------------|
|      |                                                                                                      |                        |                                     | h  | m  | s                                               | km  |                              |
| 31   | Epc: 18.3°N, 120.8°E. Near North Coast of Luzons, P.I.<br>- H = 05h 13m 04.1s. h about 39 km (USCGS) |                        |                                     |    |    |                                                 |     |                              |
|      | Shillong                                                                                             | Z                      | iP<br>i                             | 05 | 18 | 43<br>18 55                                     |     | Slight, compression          |
|      | Bokaro                                                                                               | E                      | eP<br>i<br>i<br>i                   | 05 | 19 | 40<br>20 58<br>24 55<br>30 05                   |     | Slight                       |
|      | Chatra                                                                                               | Z                      | iP                                  | 05 | 19 | 53                                              |     | Feeble, rarefaction          |
|      | Calcutta                                                                                             | E                      | eP<br>e                             | 05 | 20 | 23<br>24 15                                     |     | Slight                       |
|      | Poona                                                                                                | Z<br>EZ<br>Z           | iP<br>i<br>i                        | 05 | 21 | 16<br>23 05<br>28 05                            |     | Slight, rarefaction          |
|      | Bombay                                                                                               | NE<br>E<br>NE<br>E     | e<br>e<br>e<br>e                    | 05 | 21 | 29<br>23 10<br>28 02<br>31 30                   |     | Slight                       |
| 31   | Chatra                                                                                               | Z                      | iP                                  | 05 | 20 | 34                                              |     | Slight, distant, rarefaction |
| 31   | Shillong                                                                                             | Z                      | iP<br>iS                            | 15 | 51 | 53<br>52 23                                     | 270 | Slight, compression          |
| 31   | Shillong                                                                                             | Z                      | iP<br>i                             | 16 | 38 | 40<br>39 07                                     |     | Slight, near, rarefaction    |
| 31   | Chatra                                                                                               | Z                      | iP<br>eS                            | 16 | 39 | 45<br>40 39                                     | 510 | Feeble, compression          |
| 31   | Shillong                                                                                             | Z                      | eP                                  | 18 | 13 | 28                                              |     | Slight, near                 |
| 31   | Shillong                                                                                             | Z                      | iP                                  | 18 | 17 | 35                                              |     | Slight, near                 |
| 31   | Epc: 33°N, 75°E. Jammu Province. - H = 18h 43m 55s (New Delhi)                                       |                        |                                     |    |    |                                                 |     |                              |
|      | Dehra Dun                                                                                            | Z<br>N                 | eP<br>PPP<br>iS<br>SS<br>SSS        | 18 | 44 | 59<br>45 14<br>45 44<br>45 54<br>46 08          | 410 | Slight                       |
|      | Delhi                                                                                                | Z<br>N<br>E<br>EN<br>E | iPn<br>iP<br>iPg<br>iSn<br>S*<br>Sg | 18 | 45 | 14<br>45 25<br>45 33<br>46 10<br>46 26<br>46 34 | 520 | Slight, recompression        |
|      | Chatra                                                                                               | Z                      | eP<br>PPP<br>Lq<br>iS               | 18 | 46 | 51<br>47 07<br>48 02<br>48 11                   | 770 | Feeble                       |

| Date         | Station          | Compt | Phase               | G<br>h               | M<br>m               | T<br>s | Δ<br>km | Remarks             |
|--------------|------------------|-------|---------------------|----------------------|----------------------|--------|---------|---------------------|
| 31<br>Contd. | Chatra<br>Cintd. | Z     | SS<br>SSS           | 18<br>48             | 24<br>38             |        |         |                     |
|              | Shillong         | Z     | teP                 | 18                   | 47                   | 38     |         | Slight              |
|              | Bokaro           | E     | teP<br>iS           | 13<br>51             | 48<br>14             | 43     | 1490    | Slight              |
|              | Bombay           | N     | e                   | 18                   | 51                   | 30     |         | Feeble              |
|              | Madras           | E     | teS<br>e<br>e<br>M? | 18<br>53<br>53<br>54 | 34<br>00<br>39<br>39 |        |         |                     |
| 31           | Shillong         | Z     | teP                 | 20                   | 31                   | 31     |         | Tremor              |
| 31           | Shillong         | Z     | iP                  | 22                   | 29                   | 40     |         | Slight, local       |
| 31           | Delhi            | Z     | teP                 | 22                   | 45                   | 39     |         | Slight, compression |

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*Earthquake reports*  
 (Non-Instrumental)

The following is the list of earthquakes that were reported by voluntary observers from different stations during the month of July 1962.

| Place     | Date<br>GMT | Time<br>GMT<br>h. m. | Duration of<br>of shocks<br>in secs. | No. of<br>shocks | Intensity<br>in R.F.<br>scale | Remarks               |
|-----------|-------------|----------------------|--------------------------------------|------------------|-------------------------------|-----------------------|
| Shillong  | 07          | 23 00                | A few                                | 1                | II                            | Slight rumbling south |
| Ehuntar   | 07          | 23 07                | 12                                   | 2                | VI                            | From NE               |
| Srinagar  | 07          | 23 07                | 30                                   | 1                | VI                            | From West             |
| Qazigund  | 07          | 23 09                | 12                                   | 2                | VII                           |                       |
| Banihal   | 07          | 23 10                | 40                                   | 3                | VI                            | From West             |
| Gulmarg   | 07          | 23 10                | 60                                   | 2                | VII                           |                       |
| Mukteswar | 13          | 05 30                | 2                                    | 1                | IV                            | From East             |
| Joshimath | 13          | 05 32                | 15                                   | 2                | VI                            | Presumably from West  |
| Mukteswar | 14          | 15 59                | 4                                    | 1                | V                             | From East             |
| Joshimath | 14          | 15 59                | 30                                   | 2                | VII                           | Presumably from SES.  |

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July 1962

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MICROSEISMIC TABULATION

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Shillong Compt. E-W.</i>					<i>Station. Shillong Compt. E-W</i>				
01	00	-	-	-	12	00	2	0.5	4.4
	06	2	0.2	4.0		06	2	0.6	5.2
	12	2	0.2	3.9		12	2	0.6	5.1
	18	2	0.2	3.7		18	2	0.6	5.3
02	00	2	0.2	3.9	13	00	2	0.6	5.2
	06	2	0.2	4.2		06	2	0.6	5.2
	12	2	0.2	4.1		12	2	0.7	5.5
	18	2	0.2	4.0		18	2	0.6	5.2
03	00	2	0.2	3.9	14	00	2	0.6	5.2
	06	2	0.2	3.6		06	...	-	-
	12	2	0.2	3.3		12	...	-	-
	18	2	0.2	4.0		18	2	0.6	5.3
04	00	2	0.2	4.0	15	00	2	0.6	5.5
	06	2	0.2	3.8		06	...	-	-
	12	2	0.2	4.0		12	2	0.5	5.0
	18	2	0.2	4.1		18	2	0.5	4.8
05	00	2	0.2	4.0	16	00	2	0.5	4.7
	06	2	0.2	3.8		06	2	0.5	4.8
	12	2	0.2	4.0		12	2	0.4	4.5
	18	...	-	-		18	2	0.4	4.2
06	00	1	0.2	4.0	17	00	2	0.4	4.2
	06	2	0.2	3.3		06	...	-	-
	12	1	0.4	4.2		12	2	0.2	4.0
	18	1	0.4	4.1		18	...	-	-
07	00	1	0.2	4.0	18	00	2	0.2	4.0
	06	2	0.4	4.0		06	2	0.2	4.1
	12	2	0.4	4.2		12	2	0.2	4.0
	18	2	0.4	4.2		18	2	0.2	3.8
08	00	2	0.4	4.1	19	00	2	0.2	3.9
	06	2	0.5	4.3		06	2	0.2	4.0
	12	2	0.5	4.2		12	2	0.2	4.1
	18	2	0.5	4.3		18	2	0.2	4.3
09	00	2	0.5	4.3	20	00	2	0.2	4.4
	06	...	-	-		06	2	0.2	4.2
	12	2	0.6	5.0		12	2	0.4	4.6
	18	2	0.5	5.0		18	2	0.4	4.5
10	00	2	0.6	5.1	21	00	2	0.4	4.5
	06	2	0.5	4.8		06	2	0.5	5.0
	12	2	0.5	4.9		12	...	-	-
	18	2	0.4	4.3		18	2	0.6	5.3
11	00	2	0.4	4.2	22	00	2	0.6	5.4
	06	...	-	-		06	2	0.5	5.2
	12	2	0.5	4.3		12	2	0.5	5.0
	18	2	0.5	4.4		18	2	0.5	5.1

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Shillong</i>				
23	00	2	0.5	5.0
	06	1	0.4	5.0
	12	1	0.5	5.1
	18	1	0.4	4.3
24	00	1	0.4	4.3
	06	3	0.5	5.1
	12	...	-	-
	18	2	0.5	5.0
25	00	2	0.4	4.8
	06	...	-	-
	12	1	0.4	4.6
	18	1	0.4	4.5
26	00	1	0.5	4.7
	06	...	-	-
	12	1	0.6	5.2
	18	1	0.6	5.2
27	00	1	0.5	4.8
	06	1	0.4	4.5
	12	1	0.4	4.6
	18	1	0.4	4.5
28	00	1	0.4	4.6
	06	3	0.3	4.3
	12	3	0.3	4.2
	18	3	0.3	4.3
29	00	3	0.3	4.2
	06	1	0.3	4.1
	12	1	0.3	4.0
	18	1	0.3	4.0
30	00	1	0.3	3.8
	06	...	-	-
	12	1	0.3	3.8
	18	...	-	-
31	00	1	0.3	3.8
	06	...	-	-
	12	1	0.4	5.0
	18	3	0.4	5.0

<i>Station. Madras</i>		Compt.	E. W.
01	00	3	0.7 4.5
		3	0.3 2.6
	03	3	0.4 2.7
		3	0.1 1.5
	06	3	0.4 2.6
		3	0.1 1.5
	12	3	0.5 4.2
		3	0.4 2.7
	18	3	0.6 4.5
		3	0.4 2.3

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Madras</i>				
02	00	3	0.4	4.2
		3	0.3	2.4
	03	3	0.5	4.4
		3	0.4	4.2
	06	3	0.6	4.5
		3	0.5	2.8
	12	1	0.6	3.0
		3	0.5	4.2
	18	1	0.6	2.9
		3	0.6	4.3
03	00	1	0.8	4.6
		3	0.6	2.9
	03	1	1.0	4.5
		3	0.5	2.6
	06	1	1.0	4.4
		3	0.5	2.7
	12	1	1.1	4.3
		3	0.5	2.9
	18	1	1.2	4.7
04	00	1	1.3	4.8
		1	1.3	4.7
	06	1	1.5	4.8
		1	1.4	5.0
	13	1	1.6	4.3
05	00	1	1.5	4.9
		1	1.5	4.9
	06	1	1.6	4.9
		1	1.3	5.1
	18	1	1.5	4.3
06	00	1	1.6	5.0
		1	1.4	4.9
	06	1	1.6	4.9
		1	1.7	5.0
	18	1	1.7	4.9
07	00	...	Earthquake	
		1	1.6	4.9
	06	1	1.8	4.9
		1	1.8	5.0
	18	1	2.0	5.1
08	00	1	2.1	5.5
		1	2.3	5.4
	06	1	2.2	5.8
		1	2.0	5.9
	18	1	1.9	5.5
09	00	1	1.9	5.5
		1	1.9	5.7
		1	1.3	4.1
	06	1	1.8	5.9
		1	1.2	4.2
		3	0.5	2.7

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Date	Hour	K	Amplitude	Mean	Date	Hour	K	Mean	Mean
	GMT		in mm	Period		GMT		Amplitude	Period
				in sec				in mm	in sec
<i>Station. Madras</i>					<i>Madras</i>				
<i>Compt. E.W.</i>					<i>Compt. E.W.</i>				
09	12	1	2.0	5.8	14	00	1	2.7	5.8
Contd.		1	1.1	4.2		03	1	2.6	5.8
		1	0.9	3.4		06	1	2.6	5.9
		3	0.4	2.5		12	1	2.4	5.7
	18	1	1.3	5.9		18	1	2.8	5.9
		1	1.1	4.3					
		3	0.6	2.7	15	00	1	2.7	5.9
						03	1	2.6	5.0
10	00	1	1.8	5.6		06	1	2.8	5.9
		1	1.3	4.4		12	1	2.6	5.7
		3	0.5	2.6		18	1	2.3	5.9
	03	1	1.7	5.7					
		1	1.1	2.3	16	00	1	2.1	5.7
		3	0.3	2.8		03	1	2.0	5.8
	06	3	1.7	5.7		06	1	2.1	6.0
		3	1.3	4.5		12	1	2.0	5.9
	12	1	1.6	5.6		18	1	1.9	5.7
		1	1.4	4.3					
		3	0.7	2.9	17	00	1	1.7	5.5
	18	3	1.7	5.7		03	1	1.5	5.5
		1	1.5	4.3		06	1	1.6	5.7
		3	0.7	2.8		12	1	1.4	5.3
						18	1	1.3	5.4
11	00	3	1.7	5.5					
		3	1.2	4.5	18	00	1	1.2	5.1
		3	0.7	2.3		03	1	1.2	5.0
	03	1	1.7	5.5		06	1	1.2	5.3
		1	1.3	4.5		12	1	1.1	5.3
		3	0.7	2.3		18	1	1.0	5.1
	06	1	1.3	5.5	19	00	3	0.9	5.1
		1	1.4	4.6			3	0.3	2.5
		3	0.8	2.9		03	...	No record	
	12	1	1.7	5.5		06	3	1.0	5.0
		1	1.4	4.4			3	0.2	2.3
		1	0.9	3.2		12	3	1.0	5.2
	18	3	1.7	5.5			3	0.3	2.3
		3	1.4	4.3		18	3	0.9	4.6
		3	1.1	3.3			3	0.3	2.3
12	00	3	1.9	5.5					
		3	1.3	4.0	20	00	3	1.0	4.9
		3	0.9	3.3			3	0.3	2.3
	03	3	2.0	5.5		03	3	1.0	5.2
		1	1.5	4.5			3	0.3	2.3
		3	0.9	2.9			3	0.1	1.5
	06	1	2.1	5.6		06	3	0.9	4.9
		1	1.7	4.6			3	0.4	2.6
	12	1	2.1	5.5		12	3	1.1	5.2
		1	1.3	4.7			1	0.5	2.7
	18	1	2.1	5.5		18	3	1.1	4.8
		1	1.9	4.7			1	0.6	2.8
13	00	1	2.4	5.5	21	00	3	0.9	4.6
		1	2.0	4.9			3	0.5	2.8
	03	1	2.5	5.8		03	3	1.0	4.6
	06	1	2.5	5.6			1	0.6	2.7
	12	1	2.6	5.7		06	3	0.9	4.5
	18	1	2.6	5.7			3	0.6	2.7

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Madras</i>				
21	12	3	1.1	5.3
Contd.		3	1.1	4.5
		1	0.7	2.7
	18	3	1.0	4.5
		1	0.7	2.8
22	00	3	1.0	4.6
		1	0.3	2.9
	03	3	1.1	4.7
		1	0.3	2.8
	06	1	1.0	2.9
		3	1.2	4.3
	12	3	1.2	4.7
		1	0.3	2.8
	13	3	1.2	4.9
		1	0.6	2.8
23	00	3	1.0	4.6
		3	0.8	3.6
		3	0.4	2.6
	03	3	1.2	4.7
		3	0.5	2.3
	06	3	1.1	4.8
		3	0.1	1.3
	12	3	1.2	4.7
	18	3	1.1	4.3
24	00	3	1.1	4.5
		3	0.7	3.1
	03	3	1.2	4.4
		3	0.9	3.3
	06	3	1.1	4.9
		3	0.9	3.8
	12	3	1.1	5.0
		3	0.9	3.7
	18	3	1.1	4.8
		3	0.9	3.7
25	00	3	1.1	4.3
		3	0.8	3.5
	03	3	1.1	4.7
		3	0.7	3.2
	06	...	Earthquake	
	12	3	1.1	4.5
		3	0.7	2.9
	13	3	1.1	4.3
		3	0.6	2.8
26	00	3	1.0	4.8
		3	0.6	2.8
	03	3	1.2	4.3
		3	0.4	2.7
	06	3	1.1	4.9
	12	3	1.1	4.8
	13	3	1.1	4.7
		3	0.4	2.6

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Madras</i>				
27	00	3	1.1	4.8
		1	0.4	1.3
	03	3	1.1	4.3
		3	0.3	2.0
	06	3	1.1	4.6
		3	0.3	2.3
	12	3	1.2	4.8
		3	0.3	2.2
	13	3	1.2	4.7
		3	0.4	2.6
28	00	3	1.0	4.8
		3	0.3	2.6
	03	3	0.9	4.7
	03	3	1.0	4.7
	12	3	1.1	4.9
		3	0.3	2.5
	18	3	1.1	4.7
		3	0.3	2.5
29	00	3	1.2	4.7
		3	0.3	2.4
	03	3	1.2	4.9
		3	0.4	2.8
	06	3	1.1	5.1
		3	0.4	2.7
	12	3	1.1	4.9
		3	0.3	2.8
	13	3	1.1	4.8
		3	0.3	2.5
30	00	3	1.0	4.7
		3	0.3	2.7
	03	3	0.9	4.7
		3	0.3	2.7
	06	3	0.9	4.7
		3	0.4	2.8
	12	3	0.9	4.6
		3	0.4	2.9
	18	...	Earthquake	
31	00	3	0.4	2.6
	03	3	0.3	2.7
	06	3	0.3	2.7
	12	3	0.7	4.5
		3	0.3	2.7
	18	3	0.7	4.5
		3	0.4	2.7
		3	0.3	1.9
<i>Station. Bokaro</i>				
01	00	-	-	-
	03	3	0.4	4.0
	12	3	0.3	4.0
	18	3	0.3	4.0



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Date	Hour	n	Mean Amplitude	Mean Period
	GMT		in $\mu\text{m}$	in sec

Date	Hour	n	Mean Amplitude	Mean Period
	GMT		in $\mu\text{m}$	in sec

Station.	Bokaro	Compt.	E. W.
02	00	3	0.4 4.0
	06	3	0.3 4.0
	12	3	0.4 4.0
	18	3	0.4 4.2
03	00	3	0.4 4.0
	06	3	0.5 4.8
	12	2	0.6 5.0
	18	2	0.6 5.0
04	00	2	0.3 5.0
	06	3	0.6 5.0
	12	2	0.8 5.0
	18	2	1.0 5.0
05	00	2	0.7 5.0
	06	3	0.6 4.5
	12	2	0.8 5.0
	18	2	0.9 5.0
06	00	2	0.3 5.0
	06	2	0.7 5.0
	12	2	1.0 5.0
	18	3	0.8 5.2
07	00	...	- -
	06	3	0.8 5.0
	12	2	1.0 5.0
	13	3	0.8 4.3
08	00	3	1.0 5.0
	06	3	0.7 4.8
	12	2	1.0 5.5
	18	3	0.9 5.2
09	00	3	1.0 5.0
	06	2	1.0 5.0
	12	2	1.0 5.5
	18	2	0.7 4.8
10	00	3	0.5 4.5
	06	3	0.3 5.0
	12	3	0.7 4.3
	18	3	0.7 4.2
11	00	2	0.8 3.3
	06	3	0.9 4.0
	12	3	1.0 4.0
	18	3	0.9 3.8
12	00	3	0.8 4.0
	06	3	0.3 4.0
	12	3	0.3 4.2
	18	3	0.8 4.8
13	00	3	0.9 5.8
	06	3	1.1 5.3
	12	3	1.0 5.3
	18	3	1.0 5.3

Station	Bokaro	Compt.	E. W.
14	00	3	0.9 5.6
	06	3	1.1 5.8
	12	3	1.0 5.6
	18	3	1.0 5.8
15	00	3	1.0 5.8
	06	3	0.9 6.0
	12	3	0.9 5.3
	18	3	0.8 5.8
16	00	3	0.7 5.8
	06	3	0.6 5.0
	12	3	0.6 5.0
	18	3	0.6 5.0
17	00	3	0.4 4.5
	06	3	0.7 4.5
	12	3	0.7 5.0
	18	3	0.6 4.7
18	00	2	0.3 5.0
	06	3	0.6 5.0
	12	3	0.5 5.0
	18	3	0.5 5.0
19	00	3	0.5 4.8
	06	3	0.5 4.3
	12	3	0.5 5.0
	13	0,0	- -
20	00	3	0.4 4.6
	06	0,0	- -
	12	0,0	- -
	13	3	0.3 4.0
21	00	3	0.3 4.0
	06	0,0	- -
	12	3	0.3 4.0
	18	3	0.4 4.0
22	00	3	0.3 4.1
	06	3	0.3 4.5
	12	3	0.5 4.3
	18	3	0.4 4.0
23	00	3	0.5 4.2
	06	3	0.6 4.5
	12	3	0.5 5.0
	18	3	0.5 4.5
24	00	3	0.5 4.0
	06	3	0.4 4.4
	12	3	0.4 4.2
	13	3	0.4 4.2
25	00	3	0.4 4.4
	06	...	- -
	12	3	0.4 4.8
	18	3	0.4 4.2

Date Hour K Mean Mean  
GMT Amplitude Period  
..... in mm ..... in sec

Date Hour K Mean Mean  
GMT Amplitude Period  
..... in mm ..... in sec

Station. Bokaro Compt. E. W.

Station. Bombay (Colaba) Compt. E. W.

26	00	3	0.4	4.2
	06	3	0.4	4.0
	12	3	0.4	4.2
	18	3	0.4	4.4
27	00	3	0.4	4.5
	06	3	0.4	4.4
	12	3	0.4	4.2
	18	3	0.4	4.2
28	00	3	0.4	4.8
	06	3	0.4	4.5
	12	3	0.4	4.6
	18	3	0.4	4.6
29	00	3	0.4	4.4
	06	3	0.4	4.5
	12	3	0.4	4.8
	18	3	0.4	4.6
30	00	3	0.4	4.6
	06	3	0.4	4.2
	12	3	0.4	4.0
	18	...	-	-
31	00	3	0.4	4.0
	06	...	-	-
	12	0,0	-	-
	18	0,0	-	-

04	00	3	1.4	4.4
			0.7	2.9
	06	1	1.9	4.5
	12	1	1.9	4.4
	18	3	1.9	4.1
			0.9	1.9
05	00	3	2.3	4.1
			1.0	2.6
	06	3	2.0	4.5
			0.7	2.0
	12	3	2.4	4.6
			0.8	2.4
	18	3	2.3	4.5
			0.9	2.3
06	00	3	2.1	4.7
			0.6	2.2
	06 to			
	18	...	-	-
07	00	...	-	-
	06	3	2.9	4.2
			0.7	2.0
	12	3	2.9	4.5
			0.7	2.3
	18	3	3.1	4.4
			0.8	2.5
08	00	3	3.1	4.7
			0.9	2.0
	06	3	3.4	4.5
			0.8	2.0
	12	3	3.0	4.3
			1.0	2.2
	18	...	-	-
09	00	3	3.4	4.2
			1.2	2.4
	06	3	3.3	4.9
			1.2	2.2
	12	3	3.5	4.3
			0.9	2.0
	18	3	3.1	4.4
			1.2	2.3
10	00	3	3.9	4.6
			0.5	2.3
	06	-	-	-
	12	3	3.3	4.3
			0.8	2.0
	18	3	3.5	4.4
			0.9	2.5
11	00	3	3.5	4.3
			1.1	2.3
	06	3	3.1	4.4
			1.2	2.4

Station. Bombay (Colaba) Compt. E. W.

01	00	3	0.9	4.4
			0.6	2.5
	06	3	1.0	4.2
			0.4	2.0
	12	3	0.9	4.1
			0.4	2.4
	18	3	0.8	4.2
			0.4	2.3
02	00	-	-	-
	06	3	0.9	4.5
	12	3	0.4	4.3
			0.4	2.1
	18	3	1.0	4.4
			0.4	2.0
03	00	3	0.9	5.0
			0.5	2.7
	06	3	1.1	4.6
			0.6	2.1
	12	3	1.2	4.7
			0.4	2.2
	18	3	1.4	4.6
			0.6	2.2

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Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Bombay (Colaba) Compt. E. W</i>				
11	12	3	3.3	4.3
Contd.	18	3	1.3	2.1
			3.4	4.3
			0.8	2.0
12	00	3	3.2	4.3
			1.4	2.5
	06	3	3.4	4.1
	12	3	1.2	2.0
			3.1	4.7
	18	3	1.2	2.0
			3.7	4.4
			1.3	2.2
13	00	3	4.2	4.5
			1.3	2.2
	06	-	-	-
	12	3	3.5	4.8
			1.0	2.3
	18	3	3.8	4.8
			1.5	2.2
14	00	3	3.5	4.4
			1.4	2.2
	06	3	3.5	4.4
	12	-	1.1	2.5
			-	-
	18	3	2.7	4.2
			1.2	2.3
15	00	3	2.8	3.3
			1.3	2.5
	06	3	3.0	4.3
			2.5	4.4
	12	-	0.8	2.0
			-	-
	18	3	2.4	4.0
			1.2	2.0
16	00	3	2.2	4.4
			0.7	2.1
	06	-	-	-
	12	3	2.5	4.6
			0.8	2.2
	18	3	2.5	6.0
			2.2	4.6
			0.3	2.0
			2.0	5.5
17	00	3	2.1	4.3
			1.0	2.3
	06	-	-	-
	12	3	2.0	4.6
			0.9	2.3
	18	3	1.9	4.6
			1.1	2.0

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Bombay (Colaba) Compt. E. W</i>				
18	00	3	1.6	4.5
			0.8	2.2
	06	3	1.9	4.0
			1.0	2.3
	12	-	-	-
	18	3	1.6	3.8
			1.0	2.2
19	00	3	1.4	3.9
			0.9	2.5
	06	3	1.6	4.0
			0.8	2.3
	12	3	1.9	3.9
			0.3	2.0
	18	-	-	-
20	00 to	-	-	-
			-	-
	18	3	1.7	4.0
			0.9	2.0
21	00	3	2.0	3.7
			1.0	2.2
	06	3	1.5	4.3
			0.9	2.0
	12	3	2.0	4.6
			0.9	2.2
	18	3	2.1	4.1
			0.9	2.2
22	00	3	1.9	4.0
			1.0	2.0
	06	3	1.8	4.0
			1.0	2.3
	12	3	1.9	3.9
			0.8	3.9
	18	3	1.9	4.1
			0.3	2.0
23	00	3	2.1	4.4
			0.3	2.0
	06	3	1.8	4.3
			0.8	2.3
	12	3	2.1	4.5
			0.3	2.3
	18	3	1.6	4.5
			1.1	2.1
24	00	3	1.9	4.3
			0.8	2.3
	06	3	1.6	4.1
			0.6	2.0
	12	3	1.9	4.1
			0.8	2.0
	18	3	1.8	3.3
			0.6	2.2

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Bombay (Colaba) Compt. E. W</i>				
25	00	2	1.6	4.0
			0.6	1.9
	06	2	1.7	4.1
			0.6	2.0
	12	-	-	-
	13	-	-	-
26	00	-	-	-
	06	3	1.6	4.2
			0.9	2.0
	12	3	1.7	4.0
			0.7	2.0
	18	3	1.9	4.2
			1.3	2.5
27	00	3	1.9	4.0
			0.3	2.3
	06	-	-	-
	12	3	2.0	4.4
			0.8	2.0
	18	3	2.1	4.6
			0.9	2.3
28	00	3	1.8	4.5
			1.0	2.3
	06	3	1.3	4.2
			1.1	2.5
	12	3	2.2	4.5
			1.0	2.1
	18	3	1.9	3.9
			1.0	2.2
29	00	3	1.9	3.9
			0.8	2.0
	06	3	1.6	4.4
			0.8	2.5
	12	-	-	-
	18	3	1.6	3.5
			0.7	2.1
30	00	3	1.5	3.3
			0.8	2.0
	06	3	1.3	3.5
			0.8	2.2
	12	3	1.4	3.3
			0.7	2.3
	18	-	-	-
31	00 to			
	13	-	-	-
<i>Station. Visakhapatnam Compt. E. W</i>				
01	00	...	-	-
	06	2	0.5	3.7
	12	2	0.5	4.0
	18	2	0.6	3.3

Date	Hour	K	Mean Amplitude in mm	Mean Period in sec
<i>Station. Visakhapatnam. Compt. E. W</i>				
02	00	2	0.5	3.7
	06	2	0.7	3.9
	12	...	-	-
	18	...	-	-
03	00	...	-	-
	06	2	0.6	3.3
	12	2	0.6	4.6
	18	2	0.7	4.6
04	00	2	0.7	4.5
	06	3	0.8	3.4
	12	3	0.8	4.4
	18	2	0.8	4.7
05	00	2	0.7	5.1
	06	1	1.0	5.6
	12	1	0.8	5.0
	18	3	0.9	5.4
06	00	3	0.8	4.8
	06	2	0.9	3.7
	12	...	-	-
	18	2	0.9	5.2
07	00	...	-	-
	06	3	1.1	4.9
	12	3	1.1	4.6
	18	3	1.2	4.9
08	00	3	1.2	5.2
	06	...	-	-
	18	...	-	-
09	00	...	-	-
	06	1	1.2	5.7
	12	1	1.6	5.6
	18	1	1.1	5.2
10	00	1	1.1	4.9
	06	1	1.3	5.7
	12	1	1.2	4.6
	18	1	1.2	3.2
11	00	1	1.7	3.5
	06	1	2.1	3.5
	12	1	3.3	4.1
	18	1	2.4	4.0
12	00	1	1.7	4.0
	06	3	1.6	4.0
	12	3	1.3	4.3
	18	3	1.4	5.2
13	00	3	1.3	5.0
	06	1	1.4	5.9
	12	1	1.5	5.9
	18	1	1.7	5.9

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Date	Hour GMT	K	Mean Amplitude in $\mu\text{m}$	Mean Period in $\text{sec}$
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Date	Hour GMT	K	Mean Amplitude in $\mu\text{m}$	Mean Period in $\text{min}$
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Station. Visakhapatnam Compt. E. W

Station. Visakhapatnam Compt. E. W

14	00	1	1.5	5.6
	06	1	1.5	5.6
	12	...	-	-
	18	3	1.3	5.7
15	00 to			
	18	...	-	-
16	00	3	1.3	5.6
	06	3	1.1	5.8
	12	1	1.0	5.6
	18	1	1.0	5.6
17	00	...	-	-
	06	2	1.1	4.7
	12	2	0.9	5.5
	18	2	1.0	5.5
18	00	2	0.9	5.5
	06	2	0.7	5.1
	12	2	0.6	5.4
	18	2	0.5	4.2
19	00	2	0.6	5.4
	06	2	0.6	4.3
	12	2	0.6	5.2
	18	2	0.5	4.5
20	00	0,0	-	-
	06	2	0.6	3.7
	12	2	0.5	4.5
	18	0,0	-	-
21	00	2	0.6	3.3
	06	2	0.7	4.0
	12	2	0.7	4.1
	18	2	0.9	4.0
22	00	2	1.1	3.8
	06	2	0.7	3.9
	12	2	0.3	3.8
	18	2	0.9	4.3
23	00	2	0.6	4.2
	06	2	0.6	3.8
	12	2	0.6	4.0
	18	2	0.6	3.7
24	00	2	0.5	3.4
	06	2	0.5	3.7
	12	2	0.7	4.0
	18	2	0.5	4.1
25	00	2	0.7	3.7
	06	2	0.8	3.7
	12	2	0.9	4.2
	18	2	0.6	4.2

26	00	2	0.7	4.2
	06	2	0.8	4.3
	12	2	0.9	4.4
	18	2	0.6	-
27	00	2	0.5	3.6
	06	2	0.7	4.7
	12	2	0.6	4.7
	18	2	0.6	4.7
28	00	2	0.7	4.7
	06	2	0.7	4.2
	12	2	0.6	4.1
	18	2	0.8	5.1
29	00	2	0.6	4.1
	06	2	0.7	4.8
	12	2	0.6	5.0
	18	2	0.6	3.9
30	00	0,0	-	-
	06	2	0.5	4.5
	12	0,0	-	-
	18	...	-	-
31	00	2	0.4	4.1
	06	2	0.3	3.5
	12	2	0.4	3.5
	18	2	0.5	4.1

Station. Port Blair Compt. E. W

01	00	1	0.4	3
	06	1	0.3	3
	12	1	0.4	3
	18	1	0.3	3
02	00	1	0.3	3
	06	1	0.8	3
	12	1	0.4	4
	18	1	0.3	3
03	00	...	-	-
	06	...	-	-
	12	1	0.8	3
	18	1	1.2	2
04	00	...	-	-
	06	1	0.8	3
	12	1	0.8	4
	18	1	0.3	5
05	00	1	0.8	5
	06	1	0.3	3
	12	1	1.2	3
	18	1	0.3	3
06	00	1	1.6	3

Date	Hour	K	Mean Amplitude (Micron)	Mean Period in sec
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Date	Hour	K	Mean Amplitude (Micron)	Mean Period in sec
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Station.	Port Blair	Compt.	E. W.
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Station.	Port Blair	Compt.	E. W.
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06	06	1	1.6	3
Cont'd.	12	1	2.0	4
	18	1	2.0	3

19	00		-	-
	06	1	0.3	3
	12	...	-	-
	18	...	-	-

07	00	...	-	-
	06	1	1.6	3
	12	1	1.6	3
	18	1	2.4	5

20	00	...	-	-
	06	...	-	-
	12	1	1.2	3
	18	1	1.6	3

08	00 to			
	13	...	-	-

21	00	1	1.6	3
	06	...	-	-
	12	1	1.2	3
	18	1	0.8	3

09	00	...	-	-
	06	1	2.4	5
	12	1	2.8	5
	18	1	2.0	4

22	00	1	0.4	3
	06	...	-	-
	12	...	-	-
	18	3	1.2	3

10	00	1	2.0	5
	06	...	-	-
	12	1	2.0	3
	18	1	2.4	3

23	00	3	0.8	3
			1.2	5
	06	...	-	-
	12	3	0.8	2
			1.2	5

11	00	1	2.0	5
	06	...	-	-
	12	1	1.6	3
	18	1	2.4	5

	13	2	0.8	3
24	00	1	0.8	3
	06	...	-	-
	12	1	1.2	3
	18	1	2.0	7

12	00	1	2.0	4
	06	1	1.6	3
	12	1	2.0	6
	18	1	2.4	5

25	00	1	1.6	7
	06	...	-	-
	12	1	1.6	3
	18	1	0.8	4

13	00	...	-	-
	06	...	-	-
	12	1	1.6	5
	18	1	1.2	4
			1.2	4

26	00	1	0.8	3
	06	...	-	-
	12	1	2.0	4
	18	1	1.2	5

14	00	3	1.2	2
	06	to.		
	13	...	-	-

27	00	1	1.2	3
	06	...	-	-
	12	1	1.2	3
	18	1	0.8	3

15	00	...	-	-
	06	...	-	-
	12	3	0.8	2
			0.8	4
	18	2	0.8	3

28	00	1	1.2	3
	06	to	1	0.
	13	1	0.8	5

16	00	2	0.3	3
	06	to		
	18	...	-	-

29	00	1	1.2	4
	06	...	-	-
	12	1	0.8	3
	18	1	0.4	5

17	00	to		
	12	...	-	-
	18	3	0.4	2
			0.4	2

30	00	1	0.8	3
	06	...	-	-
	12	1	0.4	3
	18	...	-	-

18	00	3	0.8	7
	06	1	0.8	7
	12	1	0.4	3
	18	1	0.8	3

31	00	1	0.8	3
	06	1	0.4	3
	12	1	0.4	3
	18	1	0.8	3

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List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude         | Longitude      | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation | Instrument    | Compt | Period<br>in<br>secs | Static<br>Magni-<br>fication | Damping<br>ratio | Paper<br>speed<br>mm/min |                            |
|---------------|------------------|----------------|--------------------------------|----------------------------|---------------|-------|----------------------|------------------------------|------------------|--------------------------|----------------------------|
| Bombay        | 18.54°N, 72.40°E |                |                                | Deccan Trap                | Milne-Shaw    | N     | 12                   | 350                          | 21:1             | 8                        |                            |
|               |                  |                |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 21:1             | 8                        |                            |
|               |                  |                |                                |                            | Sprengnether  | E     | To=7.3 Tg=7.3        |                              | 5000             | 2.30:1                   | 30                         |
|               |                  |                |                                |                            | Benioff       | Z     | -                    | -                            | -                | -                        | 50 for S.P.<br>30 for L.P. |
| Bokaro        | 23.50°N, 85.48°E |                |                                | Rock                       | Sprengnether  | E     | To=Tg=5.5            |                              | 5200             | 2.33:1                   | 30                         |
|               |                  |                |                                |                            | Wood-Anderson | N     | 0.8                  | 930                          | Critical         | 50                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 830                          | Critical         | 50                       |                            |
|               |                  |                |                                |                            | Milne-Shaw    | E     | 12                   | 270                          | 20:1             | 15                       |                            |
|               |                  |                |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 15                       |                            |
| Calcutta      | 22.32°N, 88.22°E | (1) 7<br>(2) 6 |                                | Omori-Ewing<br>Alluvium    | Milne-Shaw    | E     | 12                   | 300                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Wood-Anderson | N     | 2                    | 1000                         | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Omori-Ewing   | E     | 10                   | 30                           | -                | 25.4                     |                            |
|               |                  |                |                                |                            | Omori-Ewing   | N     | 15                   | 32                           | -                | 25.4                     |                            |
| Chatra        | 25.50°N, 87.10°E |                | 151                            | Sand Stone                 | Milne-Shaw    | N     | 10                   | 250                          | 20:1             | 15                       |                            |
|               |                  |                |                                |                            | Milne-Shaw    | E     | 10                   | 250                          | 20:1             | 15                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | N     | 0.8                  | 940                          | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 970                          | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Benioff (S.P) | Z     | To=0.72 Tg=0.45      |                              | -                | Es=23:1                  | 50                         |
| Delhi         | 28.41°N, 77.13°E |                | 207                            | Quartzite<br>Sand Stone    | Sprengnether  | E     | To=Tg=7.5            |                              | 5000             | Critical                 | 30                         |
|               |                  |                |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 1000                         | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Benioff       | Z     | To=Tg=1.0            |                              | -                | -                        | 50                         |
|               |                  |                |                                |                            | Press Ewing   | Z     | To=30 Tg=100         |                              | -                | -                        | 15                         |
|               |                  |                |                                |                            | Press Ewing   | N     | To=30 Tg=100         |                              | -                | -                        | 15                         |
| Press Ewing   | E                | To=30 Tg=100   |                                | -                          | -             | 15    |                      |                              |                  |                          |                            |
| Dehra Dun     | 30.19°N, 78.02°E |                | 582                            | Gravel                     | Wilson Lamson | Z     | To=Tg=1.8            |                              | -                | -                        | 50                         |
|               |                  |                |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 1000                         | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 20:1             | 8                        |                            |
| Hyderabad     | 17.25°N, 78.27°E |                | 535                            | Granite                    | Milne-Shaw    | E     | 12                   | 250                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                        |                            |
| Kodakamal     | 10.14°N, 77.29°E |                | 2345                           | Rock                       | Milne-Shaw    | E     | 10                   | 250                          | 20:1             | 8                        |                            |
| Madras        | 13.00°N, 80.11°E |                | 15                             |                            | Sprengnether  | E     | To=Tg=7.5            |                              | 5000             | 23:1                     | 30                         |
| Poona         | 18.32°N, 73.51°E |                | 550                            | Deccan Trap                | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Wood-Anderson | E     | 1.0                  | 1000                         | 20:1             | 15                       |                            |
|               |                  |                |                                |                            | Sprengnether  | Z     | To=1.5 Tg=3000       |                              | 3000             | 2.1:1                    | 30                         |
| Port Blair    | 11.49°N, 92.43°E |                |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Wood-Anderson | N     | 2.0                  | 950                          | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 970                          | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Benioff       | Z     | To=1.0 Tg=1.6        |                              | -                | -                        | 30                         |
| Sehore        | 23.10°N, 77.08°E |                |                                |                            | Wood-Anderson | E     | 0.8                  | 840                          | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | N     | 0.8                  | 900                          | Critical         | 50                       |                            |
| Shillong      | 25.34°N, 91.53°E |                |                                | Quartzite<br>Sand Stone    | Milne-Shaw    | N     | 12                   | 250                          | 20:1             | 8                        |                            |
|               |                  |                |                                |                            | Benioff       | Z     | To=1.0 Tg=1.0        |                              | -                | -                        | 50                         |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 900                          | Critical         | 30                       |                            |
|               |                  |                |                                |                            | Wood-Anderson | N     | 0.8                  | 970                          | Critical         | 30                       |                            |
| Tocklai       | 28.45°N, 94.45°E |                |                                | Alluvium                   | Sprengnether  | E     | To=5.5 Tg=5.5        |                              | 3000             | 2.4:1                    | 30                         |
|               |                  |                |                                |                            | Wood-Anderson | E     | 0.8                  | 900                          | h=0.5            | 50                       |                            |
| Visakhapatnam | 18.07°N, 83.27°E |                |                                |                            | Sprengnether  | E     | To=Tg=5.5            |                              | 5000             | 1.2:1                    | 30                         |
|               |                  |                |                                |                            | Wood-Anderson | N     | To=2.0 Tg=970        |                              | 970              | Critical                 | 30                         |
|               |                  |                |                                |                            | Wood-Anderson | E     | To=0.8 Tg=970        |                              | 970              | Critical                 | 30                         |



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MAR 3 1965



# SEISMOLOGICAL BULLETIN

AUG 1962

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and Constants

| Station      | Latitude | Longitude | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation                         | Instrument           | Compt         | Period<br>in<br>secs | Seismic<br>Magnifi-<br>cation | Damping<br>ratio | Paper<br>speed<br>mm/min |    |
|--------------|----------|-----------|--------------------------------|----------------------------------------------------|----------------------|---------------|----------------------|-------------------------------|------------------|--------------------------|----|
| Agra         |          |           |                                |                                                    | Columbia             | E             | To = 15              | Tg = 100                      |                  | 15                       |    |
|              |          |           |                                |                                                    | Long Period          | N             | To = 15              | Tg = 85                       |                  | 15                       |    |
|              |          |           |                                |                                                    | - do -               | Z             | To = 15              | Tg = 70                       |                  | 15                       |    |
| Bombay       | 18. 54°N | 72. 40°E  | 5                              | Deccan Trap                                        | Milne-Shaw           | N             | 12                   | 350                           | 13: 1            | 16                       |    |
|              |          |           |                                |                                                    | Milne-Shaw           | E             | 12                   | 350                           | 23: 1            | 8                        |    |
|              |          |           |                                |                                                    | Sprengnether         | E             | To = Tg = 7 secs     |                               | 30               |                          |    |
| Bokaro       | 23. 50°N | 85. 48°E  |                                | Rock                                               | Milne-Shaw           | N             | 12                   | 250                           | 20: 1            | 15                       |    |
|              |          |           |                                |                                                    | Milne-Shaw           | E             | 12                   | 250                           | 20: 1            | 15                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | E             | 0. 9                 | 950                           | h = 0. 8         | 60                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | N             | 0. 8                 | 1000                          | h = 0. 8         | 50                       |    |
| Calcutta     | 22. 32°N | 88. 32°E  |                                | (1) 7 Alluvium                                     | Milne-Shaw           | E             | 12                   | 250                           | 20: 1            | 8                        |    |
|              |          |           |                                |                                                    | (2) 6 Omori-Ewing    | Wood-Anderson | N                    | 2                             | 870              | Critical                 | 30 |
|              |          |           |                                |                                                    | Omori-Ewing          | N             | 16                   | 32                            |                  | 25. 4                    |    |
|              |          |           |                                |                                                    | Omori-Ewing          | E             | 21                   | 30                            |                  | 25. 4                    |    |
| Chatra       | 25. 50°N | 87. 30°E  | 161                            | Sand Stone                                         | Milne-Shaw           | E             | 12                   | 250                           | 20: 1            | 15                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | N             | 1                    | 1000                          | 30: 1            | 60                       |    |
|              |          |           |                                |                                                    | Benloff              | Z             | To = 0               | Tg = 0. 45<br>secs            | Critical         | 60                       |    |
|              |          |           |                                |                                                    | Wenner-Accelerograph | ZNE           |                      |                               |                  |                          |    |
| Colombo      | 06. 54°N | 79. 52°E  | 7                              | Beach Sand                                         | Milne-Shaw           | E             | 12                   | 250                           | 20: 1            | -                        |    |
| Dehra Dun    | 30. 30°N | 78. 02°E  | 582                            | Gravel                                             | Wood-Anderson        | N             | 0. 9                 | 950                           | Critical         | 60                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | E             | 0. 9                 | 850                           | Critical         | 60                       |    |
|              |          |           |                                |                                                    | Milne-Shaw           | N             | 12                   | 250                           | 20: 1            | 8                        |    |
|              |          |           |                                |                                                    | Milne-Shaw           | E             | 12                   | 250                           | 20: 1            | 8                        |    |
| Hyderabad    | 17. 35°N | 78. 27°E  | 535                            | Granite                                            | Milne-Shaw           | E             | 12                   | 250                           | 20: 1            | 8                        |    |
|              |          |           |                                |                                                    | Milne-Shaw           | N             | 12                   | 250                           | 20: 1            | 8                        |    |
| Kodaikanal   | 10. 14°N | 77. 28°E  | 2348                           | Rock                                               | Milne-Shaw           | E             | 10                   | 250                           | 20: 1            | 8                        |    |
| Madras       | 13. 00°N | 80. 11°E  | 15                             |                                                    | Sprengnether         | E             | To = Tg = 7. 2 secs  | Critical                      | 30               |                          |    |
| New Delhi    | 28. 34°N | 77. 52°E  | 207                            | Massive Quartzite                                  |                      |               |                      |                               |                  |                          |    |
| Poona        | 18. 32°N | 73. 51°E  | 540                            | Deccan Trap                                        | Sprengnether         | Z             | To = Tg = 1. 4       |                               | Critical         | 30                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | E             | 4                    | 1000                          | 20: 1            | 15                       |    |
|              |          |           |                                |                                                    | Milne-Shaw           | N             | 12                   | 280                           | 20: 1            | 8                        |    |
| Fort Blair   | 11. 40°N | 92. 43°E  |                                |                                                    | Wood-Anderson        | N             | 2                    | 1000                          | 20: 1            | 30                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | E             | 0. 9                 | 1000                          | 65: 1            | 30                       |    |
|              |          |           |                                |                                                    | Milne-Shaw           | N             | 12                   | 350                           | 20: 1            | 8                        |    |
|              |          |           |                                |                                                    | Wood-Anderson        | N             | 0. 9                 | 980                           | Critical         | 30                       |    |
| Shillong     | 25. 34°N | 91. 53°E  | 1500                           | Quartzite<br>Sand Stone<br>(Shillong<br>Quartzite) | Wood-Anderson        | N             | 0. 8                 | 1000                          | h = 0. 8         | 30                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | E             | 0. 8                 | 1000                          | h = 0. 8         | 30                       |    |
|              |          |           |                                |                                                    | Milne-Shaw           | N             | 12                   | 250                           | 20: 1            | 8                        |    |
|              |          |           |                                |                                                    | Benloff              | Z             | To = 1. 0            | Tg = 1. 8                     |                  | 40                       |    |
| Tocklai      | 28. 45°N | 94. 45°E  |                                | Alluvium                                           | Sprengnether         | E             | To = Tg = 6. 3       | Critical                      | 30               |                          |    |
|              |          |           |                                |                                                    | Wenner Accelerograph | ZNE           |                      |                               |                  |                          |    |
| Visisiongram | 18. 07°N | 83. 27°E  |                                |                                                    | Wood-Anderson        | E             | 0. 9                 | 970                           | h = 0. 8         | 60                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | E             | 0. 9                 | 800                           | h = 0. 8         | 30                       |    |
|              |          |           |                                |                                                    | Wood-Anderson        | N             | 2                    | 1000                          | 20: 1            | 30                       |    |

List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude | Longitude | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation | Instrument    | Compt | Period<br>in<br>secs | Static<br>Magnifi-<br>cation | Damping<br>ratio           | Paper<br>speed<br>mm/min |
|---------------|----------|-----------|--------------------------------|----------------------------|---------------|-------|----------------------|------------------------------|----------------------------|--------------------------|
| Bombay        | 18.54°N, | 72.40°E   |                                | Deccan Trap                | Milne-Shaw    | N     | 12                   | 350                          | 21:1                       | 8                        |
|               |          |           |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 21:1                       | 8                        |
|               |          |           |                                |                            | Sprengnether  | E     | To= 7.3              | 5000                         | 2.30:1                     | 30                       |
|               |          |           |                                |                            |               |       | Tg= 7.3              |                              |                            |                          |
|               |          |           |                                | Benioff                    | Z             | -     | -                    | -                            | 50 for S.P.<br>30 for L.P. |                          |
| Bokaro        | 23.50°N, | 85.48°E   |                                | Rock                       | Sprengnether  | E     | To=Tg=5.5            | 5200                         | 2.33:1                     | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 930                          | Critical                   | 60                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 830                          | Critical                   | 50                       |
|               |          |           |                                |                            | Milne-Shaw    | E     | 12                   | 270                          | 20:1                       | 15                       |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 15                       |
| Calcutta      | 22.32°N, | 88.22°E   | (1) 7<br>(2) 5                 | Omori-Ewing<br>Alluvium    | Milne-Shaw    | E     | 12                   | 300                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | N     | 2                    | 1000                         | Critical                   | 30                       |
|               |          |           |                                |                            | Omori-Ewing   | E     | 10                   | 30                           |                            | 25.4                     |
|               |          |           |                                |                            | Omori-Ewing   | N     | 15                   | 32                           |                            | 25.4                     |
| Chatra        | 25.50°N, | 87.10°E   | 151                            | Sand Stone                 | Milne-Shaw    | N     | 10                   | 250                          | 20:1                       | 15                       |
|               |          |           |                                |                            | Milne-Shaw    | E     | 10                   | 250                          | 20:1                       | 15                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 940                          | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |           |                                |                            | Benioff(S.P)  | Z     | To=0.72              | -                            | Es = 23:1                  | 60                       |
|               |          |           |                                |                            |               |       | Tg=0.45              |                              | Eg = Critical              |                          |
| Delhi         | 28.41°N, | 77.13°E   | 207                            | Quartzite<br>Sand Stone    | Sprengnether  | E     | To=Tg=7.5            | 5000                         | Critical                   | 30                       |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |           |                                |                            | Benioff       | Z     | To=Tg=1.0            | -                            | -                          | 60                       |
|               |          |           |                                |                            | Press Ewing   | Z     | To=30                | Tg=100                       | -                          | 15                       |
|               |          |           |                                |                            | Press Ewing   | N     | To=30                | Tg=100                       | -                          | 15                       |
| Press Ewing   | E        | To=30     | Tg=100                         | -                          | 15            |       |                      |                              |                            |                          |
| Dehra Dun     | 30.19°N, | 78.02°E   | 582                            | Gravel                     | Wilson Lamson | Z     | To=Tg=1.5            | -                            | -                          | 50                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Milne-Shaw    | E     | 12                   | 250                          | 20:1                       | 8                        |
| Hyderabad     | 17.25°N, | 78.27°E   | 536                            | Granite                    | Milne-Shaw    | E     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
| Kodakamal     | 10.14°N, | 77.29°E   | 2345                           | Rock                       | Milne-Shaw    | E     | 10                   | 250                          | 20:1                       | 8                        |
| Madras        | 13.00°N, | 80.11°E   | 15                             |                            | Sprengnether  | E     | To=Tg=7.5            | 5000                         | 23:1                       | 30                       |
| Poona         | 18.32°N, | 73.51°E   | 550                            | Deccan Trap                | Milne-Shaw    | N     | 12                   | 280                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | E     | 4.0                  | 1000                         | 20:1                       | 15                       |
|               |          |           |                                |                            | Sprengnether  | Z     | 1.5                  | 3000                         | 2.1:1                      | 30                       |
| Port Blair    | 11.49°N, | 92.43°E   |                                |                            | Milne-Shaw    | F     | 12                   | 290                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Wood-Anderson | N     | 2.0                  | 950                          | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |           |                                |                            | Benioff       | Z     | To= 1.0              | Tg=1.6                       | -                          | 30                       |
| Sehore        | 23.10°N, | 77.08°E   |                                |                            | Wood-Anderson | E     | 0.8                  | 840                          | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 900                          | Critical                   | 30                       |
| Shillong      | 25.34°N, | 91.53°E   |                                | Quartzite<br>Sand Stone    | Milne-Shaw    | N     | 12                   | 250                          | 20:1                       | 8                        |
|               |          |           |                                |                            | Benioff       | Z     | To= 1.0              | Tg=1.0                       | -                          | 50                       |
|               |          |           |                                |                            | Wood-Anderson | E     | 0.8                  | 900                          | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | 0.8                  | 970                          | Critical                   | 30                       |
| Tocklai       | 28.45°N, | 94.45°E   |                                | Alluvium                   | Sprengnether  | E     | To=5.5               | 3900                         | 2.4:1                      | 30                       |
|               |          |           |                                |                            |               |       | Tg=5.5               |                              |                            |                          |
|               |          |           |                                | Wood-Anderson              | E             | 0.8   | 970                  | h=0.8                        | 60                         |                          |
| Visakhapatnam | 18.07°N, | 83.27°E   |                                |                            | Sprengnether  | E     | To=Tg=5.9            | 5000                         | 1.2:1                      | 30                       |
|               |          |           |                                |                            | Wood-Anderson | N     | To= 2.0              | 970                          | Critical                   | 30                       |
|               |          |           |                                |                            | Wood-Anderson | E     | To= 0.8              | 970                          | Critical                   | 30                       |



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| Date | Station                                                                                                        | Compt                     | Phase                                                                                 | G<br>h | M<br>m | T<br>s                                                                           | $\Delta$<br>km | Remarks                                                   |
|------|----------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------|----------------|-----------------------------------------------------------|
| 01   | Dehra Dun                                                                                                      | Z                         | ie<br>i                                                                               | 02     | 48     | 16<br>49                                                                         |                | Feeble                                                    |
| 01   | Epic: 5.5°N, 125.3°E. Near Coast of Mindanao, Philippine Islands<br>- H = 04h 28m 26.7s. h about 33 km (USCGS) |                           |                                                                                       |        |        |                                                                                  |                |                                                           |
|      | Shillong                                                                                                       | Z                         | ip                                                                                    | 04     | 35     | 41                                                                               |                | Slight, distant, compression                              |
|      | Delhi                                                                                                          | Z                         | ip                                                                                    | 04     | 37     | 24                                                                               |                | Tremor, compression                                       |
| 01   | Epic: 03.5°S, 144.5°E. - H = 04h 36m 43s. (Shillong)                                                           |                           |                                                                                       |        |        |                                                                                  |                |                                                           |
|      | Shillong                                                                                                       | NEZ                       | ip<br>is                                                                              | 04     | 46     | 49<br>54                                                                         | 6520           | Moderate, compression, initial ground motion North, West. |
|      | Calcutta                                                                                                       | E                         | ep<br>PcP<br>is                                                                       | 04     | 47     | 07<br>47<br>55                                                                   | 6750           | Slight                                                    |
|      | Chatra                                                                                                         | NEZ<br>NE                 | ip<br>PcP<br>Pp<br>S<br>PPS<br>ScS<br>SS<br>SSS<br>Lq<br>Lr                           | 04     | 47     | 22<br>47<br>51<br>55<br>56<br>57<br>00<br>02<br>03<br>06                         | 6980           | Slight, distant, compression                              |
|      | Bokaro                                                                                                         | E<br><br>NE<br>E          | ip<br>PcP<br>Pp<br>PPP<br>PcS<br>is<br>rs<br>PPS<br>ScS<br>SS<br>SSS<br>Lq<br>Lr<br>M | 04     | 47     | 25<br>47<br>49<br>51<br>51<br>56<br>56<br>56<br>57<br>59<br>02<br>03<br>03<br>10 | 7090           | Moderate                                                  |
|      | Visakhapatnam                                                                                                  | E<br>N<br>E<br><br>N<br>E | ip<br>ep<br>iPcP<br>iPP<br>iPPP<br>is<br>eS<br>iPS<br>ePPS                            | 04     | 47     | 23<br>47<br>49<br>51<br>56<br>56<br>56<br>56                                     | 7140           | Moderate, distant, initial ground motion South-East.      |
|      | Madras                                                                                                         | E                         | ip<br>PcP<br>Pp<br>PPP<br>is<br>PS<br>PPS                                             | 04     | 47     | 39<br>48<br>50<br>51<br>56<br>56<br>57                                           | 7360           | Moderate, initial ground motion towards East              |

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| Date         | Station          | Compt     | Phase                | G<br>h | M<br>m | T<br>s | $\Delta$<br>km              | Remarks                                                                      |          |
|--------------|------------------|-----------|----------------------|--------|--------|--------|-----------------------------|------------------------------------------------------------------------------|----------|
| 01<br>Contd. | Madras<br>Contd. | E         | S <sub>n</sub> S/ScS | 04     | 57     | 33     |                             |                                                                              |          |
|              |                  |           | SS                   | 05     | 00     | 43     |                             |                                                                              |          |
|              |                  |           | SSS                  |        | 03     | 39     |                             |                                                                              |          |
|              |                  |           | Lq                   |        | 04     | 31     |                             |                                                                              |          |
|              |                  |           | Lr                   |        | 07     | 41     |                             |                                                                              |          |
|              |                  |           | M                    |        | 13     | 21     |                             |                                                                              |          |
|              |                  | Hyderabad | E                    | iP     | 04     | 47     | 56                          | 7550                                                                         | Moderate |
|              | PP               |           |                      |        | 50     | 32     |                             |                                                                              |          |
|              | iS               |           |                      |        | 56     | 55     |                             |                                                                              |          |
|              | PS               |           |                      |        | 57     | 17     |                             |                                                                              |          |
| PPS          |                  |           |                      | 57     | 47     |        |                             |                                                                              |          |
| SS           | 05               |           |                      | 01     | 35     |        |                             |                                                                              |          |
| Lr           |                  |           |                      | 09     | 26     |        |                             |                                                                              |          |
|              |                  | M         |                      | 14     | 14     |        |                             |                                                                              |          |
|              | Kodaikanal       | E         | iP                   | 04     | 48     | 00     | 7290                        | Slight, distant, initial<br>ground motion East.<br>Per.=20 sec, $\mu$ =15 mm |          |
| iS           |                  |           |                      | 56     | 45     |        |                             |                                                                              |          |
| M            |                  |           |                      | -      | -      |        |                             |                                                                              |          |
|              | Sehore           | E         | Per                  | 04     | 48     | 10     |                             | Slight, distant                                                              |          |
| Delhi        | NEZ              |           | iP                   | 04     | 48     | 14     | 7940                        | Moderate, compression,<br>initial ground motion<br>North West                |          |
|              |                  |           | i                    |        | 48     | 20     |                             |                                                                              |          |
|              |                  |           | Per                  |        | 48     | 24     |                             |                                                                              |          |
|              | EZ               |           | PP                   |        | 50     | 53     |                             |                                                                              |          |
|              |                  |           | PPP                  |        | 52     | 42     |                             |                                                                              |          |
|              | NE               |           | i                    |        | 54     | 43     |                             |                                                                              |          |
|              |                  |           | PS                   |        | 58     | 03     |                             |                                                                              |          |
|              | NE               |           | PPS                  |        | 58     | 22     |                             |                                                                              |          |
|              |                  |           | SSS                  | 05     | 05     | 18     |                             |                                                                              |          |
|              | NE               |           | i                    |        | 06     | 12     |                             |                                                                              |          |
| Lq           |                  |           |                      | 07     | 14     |        |                             |                                                                              |          |
| N            |                  | Lr        |                      | 10     | 07     |        |                             |                                                                              |          |
|              |                  |           |                      |        |        |        |                             |                                                                              |          |
| Dehra Dun    | Z                | N         | iP                   | 04     | 48     | 13     | 8250                        | Moderate                                                                     |          |
|              |                  |           | iS                   |        | 57     | 50     |                             |                                                                              |          |
|              |                  |           | SS                   | 05     | 02     | 37     |                             |                                                                              |          |
|              |                  |           | SSS                  |        | 06     | 37     |                             |                                                                              |          |
|              |                  |           | Lr                   |        | 12     | 33     |                             |                                                                              |          |
|              |                  |           | M                    |        | 13     | 49     |                             |                                                                              |          |
| Poona        | EZ               |           | iP                   | 04     | 48     | 21     | 8130                        | Moderate, compression,<br>initial ground motion<br>West                      |          |
|              |                  |           | Per                  |        | 48     | 31     |                             |                                                                              |          |
|              | E                |           | PP                   |        | 51     | 07     |                             |                                                                              |          |
|              |                  |           | PPP                  |        | 52     | 51     |                             |                                                                              |          |
|              | N                |           | iS                   |        | 57     | 49     |                             |                                                                              |          |
|              |                  |           | S <sub>n</sub> S     |        | 58     | 00     |                             |                                                                              |          |
|              | Z                |           | ScS                  |        | 58     | 10     |                             |                                                                              |          |
|              |                  |           | PS                   |        | 58     | 29     |                             |                                                                              |          |
|              |                  |           | PPS                  |        | 58     | 44     |                             |                                                                              |          |
|              |                  |           | SS                   | 05     | 02     | 39     |                             |                                                                              |          |
| N            |                  | Lq        |                      | 09     | 05     |        |                             |                                                                              |          |
|              |                  | Mn        |                      | 22/23p |        |        | Per.=19.8 secs, $\mu$ =9.37 |                                                                              |          |
| Bombay       | NE               |           | Per                  | 04     | 48     | 37     | 8130                        | Slight                                                                       |          |
|              |                  |           | Per                  |        | 49     | 06     |                             |                                                                              |          |
|              | E                |           | PP                   |        | 51     | 03     |                             |                                                                              |          |
|              |                  |           | iS                   |        | 58     | 05     |                             |                                                                              |          |
|              | E                |           | PS                   |        | 58     | 24     |                             |                                                                              |          |
|              |                  |           | PPS                  |        | 58     | 40     |                             |                                                                              |          |
|              | NE               |           | SS                   | 05     | 02     | 02     |                             |                                                                              |          |
|              |                  |           | SSS                  |        | 04     | 40     |                             |                                                                              |          |

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| Date | Station                                                                                   | Compt. | Phase         | G<br>h | M<br>m         | T<br>s         | $\Delta$<br>km | Remarks                                                |
|------|-------------------------------------------------------------------------------------------|--------|---------------|--------|----------------|----------------|----------------|--------------------------------------------------------|
| 01   | Shillong                                                                                  | Z      | iP            | 07     | 51             | 31             |                | Slight, compression                                    |
|      | Chatra                                                                                    | Z      | iP<br>eS      | 07     | 52<br>52       | 04<br>51       | 430            | Feeble, compression                                    |
| 01   | Chatra                                                                                    | Z      | eP            | 10     | 17             | 34             |                | Feeble, near                                           |
| 01   | Shillong                                                                                  | Z      | e             | 10     | 18             | 07             |                | Slight, distant                                        |
| 01   | Shillong                                                                                  | Z      | iP<br>i<br>Sg | 10     | 44<br>44<br>45 | 15<br>58<br>05 | 330            | Slight, rarefaction                                    |
|      | Chatra                                                                                    | Z      | eP            | 10     | 46             | 43             |                | Feeble, distant                                        |
| 01   | Shillong                                                                                  | Z      | e             | 13     | 43             | 23             |                | Slight, near                                           |
| 01   | Epc: 29.1°N, 98.6°E. Kansu Province, China.<br>- H = 15h 47m 45.5s. h about 25 km (USCGS) |        |               |        |                |                |                |                                                        |
|      | Shillong                                                                                  | Z      | iP            | 15     | 51             | 13             |                | Slight, distant, rarefaction                           |
|      | Chatra                                                                                    | Z      | eP<br>eS      | 15     | 51<br>54       | 34<br>33       | 1790           | Slight, distant                                        |
|      | Dehra Dun                                                                                 | Z      | e<br>i        | 15     | 52<br>55       | 09<br>23       |                | Feeble                                                 |
|      | Delhi                                                                                     | NEZ    | eP<br>iS      | 15     | 52<br>53       | 27<br>09       | 2240           | Slight, rarefaction, initial ground motion North East. |
|      | Calcutta                                                                                  | E      | e             | 15     | 55             | 46             |                | Slight                                                 |
|      | Bokaro                                                                                    | E      | i             | 15     | 58             | 25             |                | Probably 'M' waves.                                    |
|      | Bomaty                                                                                    | NE     | e             | 16     | 05             | 46             |                | Feeble                                                 |
| 01   | Shillong                                                                                  | Z      | eP            | 23     | 20             | 15             |                | Slight, near                                           |
| 02   | Dehra Dun                                                                                 | Z      | e<br>i        | 04     | 30<br>32       | 22<br>18       |                | Feeble, near                                           |
| 02   | Shillong                                                                                  | Z      | e             | 04     | 38             | 03             |                | Slight, distant                                        |
| 02   | Shillong                                                                                  | Z      | iP<br>i       | 07     | 24<br>24       | 17<br>40       |                | Slight                                                 |
| 02   | Shillong                                                                                  | Z      | iP            | 07     | 28             | 00             |                | Slight, local                                          |
| 02   | Shillong                                                                                  | Z      | iP<br>i       | 09     | 01<br>02       | 55<br>15       |                | Slight, distant, rarefaction                           |
| 02   | Shillong                                                                                  | Z      | eP<br>iSg     | 12     | 55<br>55       | 23<br>34       | 100            | Slight                                                 |
| 02   | Port Blair                                                                                | NE     | iP            | 13     | 01             | 50             |                | Slight, local                                          |
| 02   | Shillong                                                                                  | Z      | eP            | 13     | 37             | 22             |                | Slight, distant                                        |
| 02   | Delhi                                                                                     | NE     | iP<br>P       | 15     | 33<br>33       | 43<br>51       |                | Slight                                                 |

02 Epc: 33.4°N, 73.5°E. West Pakistan, Felt: Rawalpindi.  
- H = 15h 32m 20.9s. h about 33 km (USCGS)

|               |    |     |          |      |                                |
|---------------|----|-----|----------|------|--------------------------------|
| Dehra Dun     | Z  | iP  | 15 33 38 | 550  | Slight                         |
|               | N  | Lq  | 34 25    |      |                                |
|               |    | iS  | 34 36    |      |                                |
|               |    | SS  | 34 47    |      |                                |
|               |    | SSS | 34 58    |      |                                |
|               |    | M   | 25 06    |      |                                |
| Delhi         | NE | epP | 15 23 59 | 720  | Slight                         |
|               |    | PP  | 34 02    |      |                                |
|               |    | iS  | 35 14    |      |                                |
|               | Z  | M   | 35 58    |      | Per. = 12 secs, Amp. = 28.5 mm |
| Sehore        | N  | epP | 15 34 53 | 1140 | Slight                         |
|               |    | PP  | 35 02    |      |                                |
|               |    | Lq  | 36 43    |      |                                |
|               |    | esS | 36 50    |      |                                |
|               |    | SS  | 37 06    |      |                                |
|               |    | M   | 38 01    |      |                                |
| Chatra        | Z  | epP | 15 35 33 | 1460 | Feeble                         |
|               |    | esS | 38 01    |      |                                |
| Bokaro        | E  | epP | 15 35 54 |      | Slight, near                   |
|               |    | i   | 38 19    |      |                                |
|               |    | i   | 40 21    |      |                                |
| Shillong      | Z  | epP | 15 36 24 |      | Slight, compression            |
|               |    | e   | 42 04    |      |                                |
| Poona         | Z  | esS | 15 38 29 |      | Slight                         |
|               |    | e   | 38 43    |      |                                |
|               |    | i   | 39 43    |      |                                |
|               |    | i   | 40 03    |      |                                |
|               | E  | i   | 40 06    |      |                                |
|               |    | i   | 40 12    |      |                                |
|               | Z  | i   | 40 19    |      |                                |
| Calcutta      | N  | esS | 15 39 31 |      | Slight                         |
|               |    | e   | 41 42    |      |                                |
| Hyderabad     | E  | esS | 15 39 32 |      | Slight                         |
|               |    | i   | 40 50    |      |                                |
|               |    | M   | 42 12    |      | Per. = 9 secs, $\mu = 7$       |
| Visakhapatnam | E  | iS  | 15 39 43 |      |                                |
|               |    | e   | 39 51    |      |                                |
|               |    | epP | 39 57    |      |                                |
|               |    | M   | 41 46    |      |                                |
| Bombay        | NE | e   | 15 39 56 |      | Feeble                         |
|               | N  | M   | 41 23    |      | Per. = 8 secs, $\mu = 4$       |
| Madras        | E  | esS | 15 41 16 |      | Slight                         |
|               |    | e   | 43 22    |      |                                |
|               |    | e   | 44 44    |      |                                |
| Kodaikanal    | E  | i   | 15 45 52 |      | Slight, distant                |
| 02 Shillong   | E  | epP | 15 36 24 | 4010 | Slight, compression            |
|               |    | esS | 42 04    |      |                                |



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| Date | Station                                                                                                                                           | Compt. | Phase   | G<br>h | M<br>m   | T<br>s   | $\Delta$<br>km | Remarks                   |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------|--------|----------|----------|----------------|---------------------------|
| 02   | Shillong                                                                                                                                          | Z      | e       | 16     | 47       | 47       |                | Slight, distant           |
| 02   | Dehra Dun                                                                                                                                         | Z      | e       | 18     | 49       | 42       |                | Tremor                    |
| 02   | Dehra Dun                                                                                                                                         | Z      | e       | 19     | 07       | 41       |                | Tremor                    |
| 02   | Shillong                                                                                                                                          | Z      | i<br>IS | 20     | 29<br>39 | 23<br>42 | 150            | Slight                    |
| 03   | Shillong                                                                                                                                          | Z      | e       | 02     | 23       | 56       |                | Slight, distant           |
| 03   | Shillong                                                                                                                                          | Z      | e       | 04     | 26       | 20       |                | Slight, distant           |
| 03   | Epc: 23.20S, 67.50W. Northern Chile-Argentine border<br>- H <sub>1</sub> = 09h 53m 12.1s. h about 71 km<br>Mag. : 7-7½ (ras), 6.8 (Brk). (USCGS). |        |         |        |          |          |                |                           |
|      | Bombay                                                                                                                                            | NE     | ePKP    | 09     | 15       | 38       | 16650          | Moderate                  |
|      |                                                                                                                                                   | E      | e       |        | 16       | 44       |                |                           |
|      |                                                                                                                                                   | NE     | PP      |        | 19       | 20       |                |                           |
|      |                                                                                                                                                   | E      | PKS2    |        | 19       | 56       |                |                           |
|      |                                                                                                                                                   | NE     | SKKS1   |        | 25       | 30       |                |                           |
|      |                                                                                                                                                   | E      | SKKS    |        | 26       | 04       |                |                           |
|      |                                                                                                                                                   | N      | PKKS1   |        | 28       | 30       |                |                           |
|      |                                                                                                                                                   | E      | PS      |        | 28       | 55       |                |                           |
|      |                                                                                                                                                   | NE     | PPS     |        | 31       | 06       |                |                           |
|      |                                                                                                                                                   | E      | e       |        | 33       | 51       |                |                           |
|      |                                                                                                                                                   | NE     | eSS     |        | 37       | 21       |                |                           |
|      |                                                                                                                                                   | E      | SSP     |        | 38       | 06       |                |                           |
|      |                                                                                                                                                   | N      | SSP     |        | 38       | 25       |                |                           |
|      |                                                                                                                                                   | E      | SSS     |        | 42       | 39       |                |                           |
|      |                                                                                                                                                   |        | M       | 10     | 17       | -        |                |                           |
|      | Poona                                                                                                                                             | NEZ    | iPKP    | 09     | 15       | 40       | 16760          | Moderate, rarefaction     |
|      |                                                                                                                                                   | E      | PKP2    |        | 16       | 00       |                | Initial ground motion     |
|      |                                                                                                                                                   |        | PKS     |        | 19       | 02       |                | South-West.               |
|      |                                                                                                                                                   | Z      | iPP     |        | 19       | 22       |                |                           |
|      |                                                                                                                                                   | N      | PPP     |        | 22       | 41       |                |                           |
|      |                                                                                                                                                   | NE     | i       |        | 25       | 36       |                |                           |
|      |                                                                                                                                                   | E      | SKKS    |        | 26       | 03       |                |                           |
|      |                                                                                                                                                   | N      | SSP     |        | 38       | 59       |                |                           |
|      |                                                                                                                                                   |        | i       |        | 43       | 08       |                |                           |
|      | Kodaikanal                                                                                                                                        | E      | ePKP    | 09     | 15       | 43       |                | Slight, distant, initial  |
|      |                                                                                                                                                   |        | e       |        | 25       | 43       |                | ground motion West, other |
|      |                                                                                                                                                   |        | PP      |        | 26       | 52       |                | phases not clear.         |
|      | Delhi                                                                                                                                             | EZ     | iPKP    | 09     | 15       | 47       |                | Moderate, rarefaction     |
|      |                                                                                                                                                   | NEZ    | i       |        | 15       | 50       |                | First ground motion West. |
|      |                                                                                                                                                   | Z      | i       |        | 16       | 25       |                |                           |
|      |                                                                                                                                                   | NE     | i       |        | 25       | 51       |                |                           |
|      |                                                                                                                                                   |        | i       |        | 26       | 05       |                |                           |
|      |                                                                                                                                                   |        | i       |        | 26       | 25       |                |                           |
|      |                                                                                                                                                   |        | i       |        | 29       | 23       |                |                           |
|      |                                                                                                                                                   | E      | i       |        | 34       | 37       |                |                           |
|      |                                                                                                                                                   | NE     | i       |        | 44       | 53       |                |                           |
|      |                                                                                                                                                   | E      | i       |        | 48       | 42       |                |                           |

| Date         | Station       | Compt | Phase | G<br>h | M<br>m | T<br>s                     | $\Delta$<br>km                            | Remarks           |
|--------------|---------------|-------|-------|--------|--------|----------------------------|-------------------------------------------|-------------------|
| 03<br>Contd. | Dehra Dun     | Z     | iPKP  | 09     | 15     | 49                         |                                           | Moderate          |
|              |               | E     | i     |        | 19     | 06                         |                                           |                   |
|              |               |       | i     |        | 20     | 25                         |                                           |                   |
|              |               |       | i     |        | 26     | 03                         |                                           |                   |
|              |               |       | i     |        | 34     | 44                         |                                           |                   |
|              |               |       | i     | 49     | 39     |                            |                                           |                   |
|              | Sehore        | N     | erPKP | 09     | 15     | 51                         |                                           | Slight            |
| 03           | Hyderabad     | NE    | erPP  | 09     | 15     | 54                         | 13990                                     | Moderate          |
|              |               |       | PS    |        | 16     | 00                         |                                           |                   |
|              |               | N     | SS    |        | 33     | 06                         |                                           |                   |
|              |               |       | SSS   |        | 38     | 36                         |                                           |                   |
|              |               |       | Lr    |        | 57     | 24                         |                                           |                   |
|              |               | E     | Lr    |        | 57     | 27                         |                                           |                   |
|              |               | N     | M     | 10     | 08     | 30                         |                                           |                   |
| E            | M             |       | 08    | 33     |        | Per. = 21 secs, $\mu$ = 13 |                                           |                   |
| Madras       | E             | iPKP  | 09    | 15     | 54     |                            | Moderate                                  |                   |
|              |               | e     |       | 16     | 35     |                            |                                           |                   |
|              |               | i     |       | 16     | 52     |                            |                                           |                   |
|              |               | e     |       | 19     | 31     |                            |                                           |                   |
|              |               | i     |       | 26     | 01     |                            |                                           |                   |
|              |               | i     |       | 29     | 21     |                            |                                           |                   |
|              |               | e     |       | 35     | 21     |                            |                                           |                   |
|              |               | e     |       | 38     | 25     |                            |                                           |                   |
| e            |               | 46    | 32    |        |        |                            |                                           |                   |
| 03           | Visakhapatnam | NE    | erKP  | 09     | 16     | 00                         |                                           | Moderate          |
| 03           | Chatra        | NEZ   | iPKP  | 09     | 16     | 02                         |                                           | Moderate, distant |
|              |               |       | i     |        | 20     | 12                         |                                           |                   |
|              |               |       | i     |        | 22     | 19                         |                                           |                   |
|              |               |       | i     |        | 26     | 24                         |                                           |                   |
|              |               |       | i     |        | 27     | 03                         |                                           |                   |
|              |               |       | i     |        | 29     | 11                         |                                           |                   |
|              |               |       | i     |        | 34     | 33                         |                                           |                   |
|              |               |       | i     |        | 38     | 19                         |                                           |                   |
|              |               |       | i     |        | 44     | 39                         |                                           |                   |
|              |               |       | i     |        | 49     | 37                         |                                           |                   |
|              |               |       | i     | 10     | 00/01  |                            | Probably deep focus                       |                   |
| Bokaro       | NE            | iPKP  | 09    | 16     | 05     |                            | Slight, initial ground motion South West. |                   |
|              |               | E     | i     |        | 17     | 09                         |                                           |                   |
|              |               | i     |       | 19     | 49     |                            |                                           |                   |
|              |               | i     |       | 21     | 47     |                            |                                           |                   |
|              |               | i     |       | 26     | 11     |                            |                                           |                   |
|              |               | i     |       | 26     | 24     |                            |                                           |                   |
|              |               | i     |       | 26     | 41     |                            |                                           |                   |
|              | NE            | i     |       | 26     | 44     |                            |                                           |                   |
|              |               | i     |       | 27     | 30     |                            |                                           |                   |
|              |               | i     |       | 27     | 51     |                            |                                           |                   |
|              |               | i     |       | 28     | 02     |                            |                                           |                   |
|              |               | i     |       | 28     | 38     |                            |                                           |                   |
|              |               | i     |       | 30     | 00     |                            |                                           |                   |
|              |               | i     |       | 31     | 06     |                            |                                           |                   |
| i            |               |       | 32    | 57     |        |                            |                                           |                   |
|              | i             |       | 35    | 01     |        |                            |                                           |                   |
|              | i             |       | 36    | 43     |        |                            |                                           |                   |
|              | i             |       | 39    | 40     |        |                            |                                           |                   |
|              | i             |       | 40    | 28     |        |                            |                                           |                   |

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| Date   | Station                                                   | Compt | Phase | G  | M     | T  | $\Delta$ | Remarks                      |
|--------|-----------------------------------------------------------|-------|-------|----|-------|----|----------|------------------------------|
|        |                                                           |       |       | h  | m     | s  | km       |                              |
| 03     | Port Blair                                                | E     | iPKP  | 09 | 16    | 06 |          | Moderate, probably           |
| Contd. |                                                           |       | i     |    | 26    | 48 |          | deep                         |
|        |                                                           |       | i     |    | 27    | 40 |          |                              |
|        |                                                           |       | i     |    | 28    | 21 |          |                              |
|        |                                                           |       | i     |    | 39    | 57 |          |                              |
|        |                                                           |       | i     |    | 42    | 57 |          |                              |
|        | Shillong                                                  | NEZ   | iPKP  | 10 | 15    | 07 |          | Moderate, initial ground     |
|        |                                                           | Z     | i     |    | 16    | 53 |          | motion West, rarefaction     |
|        |                                                           | EZ    | i     |    | 27    | 11 |          |                              |
|        |                                                           |       | i     |    | 40    | 43 |          |                              |
| 03     | Shillong                                                  | Z     | eP    | 10 | 29    | 29 |          | Slight, distant, rarefaction |
| 03     | Epic: 40.9°N, 73.3°E. Kirghiz, S.S.R. - H = 11h 04m 03.6s |       |       |    |       |    |          |                              |
|        | h about 25 km (JSCCS)                                     |       |       |    |       |    |          |                              |
|        | 41°N, 74.5°E. - H = 11h 04m 10s (Shillong)                |       |       |    |       |    |          |                              |
|        | Dehra Dun                                                 | Z     | iP    | 11 | 06    | 41 | 1220     | Slight                       |
|        |                                                           | N     | iS    |    | 08    | 46 |          |                              |
|        |                                                           |       | SS    |    | 08    | 57 |          |                              |
|        |                                                           |       | SSS   |    | 09    | 07 |          |                              |
|        |                                                           |       | M     |    | 10    | 02 |          | Per.=11.3 secs               |
|        | Delhi                                                     | Z     | iP    | 11 | 06    | 59 | 1320     | Moderate, rarefaction        |
|        |                                                           | EZ    | iS    |    | 09    | 13 |          |                              |
|        |                                                           | Z     | M     |    | -     | -  |          | Per.=15 secs, Amp.=47 mm     |
|        | Sehore                                                    | N     | eP    | 11 | 08    | 09 | 1870     | Slight                       |
|        | Chatra                                                    | Z     | eP    | 11 | 08    | 15 | 1980     | Slight                       |
|        |                                                           |       | eS    |    | 11    | 31 |          |                              |
|        | Bokaro                                                    | E     | iP    | 11 | 09    | 41 | 3200     | Slight, initial ground       |
|        |                                                           | NE    | iS    |    | 12    | 13 |          | motion West                  |
|        |                                                           |       | Lq    |    | 12    | 29 |          |                              |
|        |                                                           |       | SS    |    | 12    | 38 |          |                              |
|        |                                                           |       | Lr    |    | 13    | 21 |          |                              |
|        |                                                           |       | M     |    | 15    | 13 |          |                              |
|        | Shillong                                                  | NEZ   | iP    | 11 | 08    | 55 | 2320     | Slight                       |
|        |                                                           |       | eS    |    | 12    | 44 |          |                              |
| 03     | Poona                                                     | Z     | iP    | 11 | 09    | 00 | 2390     | Slight, compression          |
|        |                                                           | N     | iS    |    | 12    | 55 |          |                              |
|        |                                                           | E     | Lq    |    | 13    | 11 |          |                              |
|        |                                                           | Z     | i     |    | 13    | 33 |          |                              |
|        |                                                           | E     | SSS   |    | 13    | 33 |          |                              |
|        |                                                           |       | M     |    | 15    | 50 |          |                              |
|        |                                                           | N     | Mn    |    | 17/18 |    |          | Per.=10 secs, $\mu$ = 7.29   |
|        | Hyderabad                                                 | N     | iP    | 11 | 09    | 17 | 2660     | Moderate                     |
|        |                                                           |       | iS    |    | 13    | 32 |          |                              |
|        |                                                           |       | SS    |    | 14    | 30 |          |                              |
|        |                                                           |       | Lr    |    | 15    | 30 |          |                              |
|        |                                                           |       | M     |    | 17    | 24 |          | Per.=12 secs, $\mu$ = 11     |
|        |                                                           | E     | M     |    | 17    | 36 |          | Per.=9 secs, $\mu$ = 7       |

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| Date         | Station                                                                       | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                              |        |
|--------------|-------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------------------------------|--------|
| 03<br>Contd. | Visakhapatnam                                                                 | E     | iP    | 11     | 09     | 25     | 2940           | Moderate, distant, first<br>ground movement West.    |        |
|              |                                                                               | N     | eP    |        |        |        |                |                                                      |        |
|              |                                                                               | NE    | eS    |        | 12     | 57     |                |                                                      |        |
|              |                                                                               | E     | eSS   |        | 15     | 12     |                |                                                      |        |
|              |                                                                               |       |       | eSSS   |        | 15     | 22             |                                                      |        |
|              | Bombay                                                                        | Es    | e     | 11     | 09     | 31     |                | Slight                                               |        |
|              |                                                                               | NE    | eS    |        | 13     | 04     |                |                                                      |        |
|              |                                                                               | N     | M     |        | 17     | 40     |                | Per. = 11 secs, $\mu = 4$                            |        |
|              |                                                                               | E     | M     |        | 17     | -      |                |                                                      |        |
|              | Madras                                                                        | E     |       | eP     | 11     | 09     | 53             | 3070                                                 | Slight |
|              |                                                                               |       | PP    |        | 10     | 42     |                |                                                      |        |
|              |                                                                               |       | eS    |        | 14     | 34     |                |                                                      |        |
|              |                                                                               |       | Lq    |        | 15     | 41     |                |                                                      |        |
|              |                                                                               |       | SSS   |        | 16     | 10     |                |                                                      |        |
|              |                                                                               |       | Lr    |        | 16     | 53     |                |                                                      |        |
|              |                                                                               |       | M     |        | 18     | 59     |                |                                                      |        |
| 03           | Calcutta                                                                      | E     | i     | 11     | 13     | 05     |                | Slight                                               |        |
| 03           | Dehra Dun                                                                     | Z     | e     | 16     | 47     | 13     |                | Tremor                                               |        |
| 03           | Delhi                                                                         | Z     | iP    | 16     | 47     | 44     |                | Slight, rarefaction                                  |        |
| 03           | Epc: 36.5°N, 71.1°E. Hindukush. - H = 18h 02m 45.3s<br>h about 209 km (JSCGS) |       |       |        |        |        |                |                                                      |        |
|              | Dehra Dun                                                                     | Z     | iP    | 18     | 04     | 44     | 870            | Slight                                               |        |
|              |                                                                               |       | N     | iS     |        | 06     |                |                                                      | 14     |
|              |                                                                               |       |       | SS     |        | 06     |                |                                                      | 26     |
|              |                                                                               |       |       | SSS    |        | 06     |                |                                                      | 39     |
|              |                                                                               |       |       | M      |        | 07     |                |                                                      | 05     |
|              | Delhi                                                                         | Z     | iP    | 18     | 04     | 51     | 950            | Slight                                               |        |
|              |                                                                               |       | iS    |        | 06     | 29     |                |                                                      |        |
|              | Chatra                                                                        | Z     | iP    | 18     | 06     | 30     |                | Compression                                          |        |
|              | Eokaro                                                                        | E     | iP    | 18     | 06     | 45     |                | Slight, near                                         |        |
|              |                                                                               |       | i     |        | 09     | 47     |                |                                                      |        |
|              | Shillong                                                                      | Z     | iP    | 18     | 07     | 13     |                | Slight, distant, rarefaction                         |        |
|              | Poona                                                                         | Z     | e     | 18     | 10     | 24     |                | Slight                                               |        |
|              | Visakhapatnam                                                                 | E     | eP    | 18     | 11     | 30     | 1200           | Slight, near                                         |        |
|              |                                                                               |       | eS    |        | 13     | 43     |                |                                                      |        |
| 03           | Shillong                                                                      | Z     | iP    | 19     | 43     | 32     |                | Slight, compression                                  |        |
|              |                                                                               |       | iS    |        | 48     | 57     |                |                                                      |        |
| 03           | Port Blair                                                                    | E     | iPg   | 20     | 32     | 35     | 60             | Slight, locally felt<br>first ground<br>motion West. |        |
|              |                                                                               |       | P     |        | 32     | 33     |                |                                                      |        |
|              |                                                                               |       | iSg   |        | 32     | 42     |                |                                                      |        |
|              | Shillong                                                                      | Z     | e     | 20     | 35     | 35     |                | Slight, distant                                      |        |
|              |                                                                               |       | e     |        | 37     | 53     |                |                                                      |        |

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| Date | Station                                                               | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                        |
|------|-----------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------------------------|
| 03   | Delhi                                                                 | Z     | iP    | 20     | 33     | 35     |                | Slight, rarefaction                            |
| 03   | Port Blair                                                            | E     | iPg   | 20     | 50     | 23     | 70             | Slight, locally felt,<br>first ground movement |
|      |                                                                       |       | P*    |        | 50     | 31     |                | West                                           |
|      |                                                                       |       | P     |        | 50     | 23     |                |                                                |
|      |                                                                       |       | iSg   |        | 50     | 26     |                |                                                |
|      |                                                                       |       | SS    |        | 50     | 54     |                |                                                |
|      |                                                                       |       | SSS   |        | 51     | 06     |                |                                                |
|      | Shillong                                                              | Z     | e     | 20     | 55     | 51     |                | Slight, distant                                |
| 03   | Epc: 12°N, 92½°E. In Andaman Island.<br>- H = 22h 46m 10s (New Delhi) |       |       |        |        |        |                |                                                |
|      | Port Blair                                                            | E     | iPg   | 22     | 46     | 25     | 60             | Slight, local, felt,<br>first ground movement  |
|      |                                                                       |       | P     |        | 46     | 28     |                | West                                           |
|      |                                                                       |       | iSg   |        | 46     | 31     |                |                                                |
|      |                                                                       |       | S     |        | 46     | 39     |                |                                                |
|      | Visakhapatnam                                                         | E     | iP    | 22     | 48     | 41     | 1070           | Slight, near, first<br>ground motion East      |
|      |                                                                       | N     | iSg   |        | 50     | 31     |                |                                                |
|      |                                                                       |       | eSg   |        |        |        |                |                                                |
|      | Madras                                                                | E     | e     | 22     | 49     | 01     |                | Feeble                                         |
|      |                                                                       |       | e     |        | 49     | 11     |                |                                                |
|      |                                                                       |       | e     |        | 49     | 33     |                |                                                |
|      | Shillong                                                              | Z     | e     | 22     | 49     | 20     |                | Slight, distant                                |
|      | Bokaro                                                                | E     | e     | 22     | 49     | 37     |                | Slight, near, phases<br>not well developed.    |
|      |                                                                       |       | i     |        | 51     | 52     |                |                                                |
|      | Chatra                                                                | Z     | eP    | 22     | 49     | 58     |                | Feeble, distant                                |
|      | Calcutta                                                              | E     | e     | 22     | 50     | 55     |                | Slight                                         |
|      | Delhi                                                                 | E     | iP    | 22     | 51     | 05     | 2370           | Slight, rarefaction                            |
|      |                                                                       |       | eS    |        | 54     | 53     |                |                                                |
|      | Dehra Dun                                                             | Z     | e     | 22     | 51     | 15     |                | Tremor                                         |
| 03   | Shillong                                                              | Z     | eP    | 22     | 51     | 47     |                | Slight, distant                                |
| 03   | Madras                                                                | E     | e     | 23     | 01     | 00     |                | Feeble                                         |
|      |                                                                       |       | e     |        | 02     | 00     |                |                                                |
|      |                                                                       |       | e     |        | 02     | 17     |                |                                                |
| 03   | Poona                                                                 | Z     | eP    | 23     | 54     | 31     |                | Slight, distant                                |
| 04   | Shillong                                                              | Z     | eP    | 07     | 06     | 54     |                | Slight, distant                                |
| 04   | Shillong                                                              | Z     | eP    | 10     | 48     | 02     |                | Slight, near                                   |
| 04   | Shillong                                                              | Z     | eP    | 11     | 20     | 46     | 220            | Slight                                         |
|      |                                                                       |       | iS    |        | 31     | 12     |                |                                                |
| 04   | Port Blair                                                            | E     | i     | 21     | 15     | 36     |                | Feeble, local                                  |
| 04   | Port Blair                                                            | E     | i     | 22     | 31     | 18     |                | Feeble, local                                  |

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| Date | Station                                                                                                         | Compt | Phase   | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|------|-----------------------------------------------------------------------------------------------------------------|-------|---------|--------|--------|--------|----------------|------------------------------|
| 05   | Shillong                                                                                                        | Z     | iP      | 00     | 34     | 11     | 150            | Slight                       |
| 05   | Delhi                                                                                                           | Z     | eP      | 03     | 15     | 09     |                | Slight, rarefaction          |
| 05   | Delhi                                                                                                           | Z     | iP      | 03     | 46     | 11     |                | Slight, compression          |
| 05   | Epc: 74.2°N, 52.5°E. Novaya Zemlya. - H = 09h 03m 45.8s<br>h about 0 km (USCGS)                                 |       |         |        |        |        |                |                              |
|      | Delhi                                                                                                           | E     | eP      | 09     | 17     | 12     |                |                              |
|      |                                                                                                                 | Z     | eP      |        | 17     | 14     |                |                              |
|      |                                                                                                                 | NZ    | i       |        | 19     | 06     |                |                              |
|      |                                                                                                                 | N     | i       |        | 24     | 05     |                |                              |
|      |                                                                                                                 |       | i       |        | 27     | 41     |                |                              |
|      |                                                                                                                 | E     | i       |        | 27     | 43     |                |                              |
|      |                                                                                                                 | Z     | i       |        | 28     | 06     |                |                              |
|      |                                                                                                                 |       | M       |        | -      | -      |                | Per.=18 secs, Amp.=13.5 mm   |
| 05   | Calcutta                                                                                                        | E     | e       | 09     | 41     | 13     |                | Slight                       |
| 05   | Delhi                                                                                                           | Z     | iP      | 10     | 33     | 18     |                |                              |
| 05   | Dehra Dun                                                                                                       | Z     | e       | 15     | 16     | 18     |                | Tremor                       |
| 06   | Epc: 32°N, 40.8°W. North Atlantic Ocean. h about 43 km (USCGS)<br>- H = 01h 35m 30.5s. Mag.= 3½ (Pas), 5½ (Pal) |       |         |        |        |        |                |                              |
|      | Delhi                                                                                                           | Z     | eP      | 01     | 43     | 52     | 10310          | Slight, rarefaction          |
|      |                                                                                                                 |       | PP      |        | 52     | 13     |                |                              |
|      |                                                                                                                 | E     | SAS     |        | 59     | 31     |                |                              |
|      |                                                                                                                 | Z     | eS, ScS | 02     | 00     | 09     |                |                              |
|      |                                                                                                                 | E     | iS, ScS |        | 00     | 13     |                |                              |
|      |                                                                                                                 | ZE    | PS      |        | 01     | 31     |                |                              |
|      |                                                                                                                 | E     | i?      |        | 05     | 23     |                |                              |
|      |                                                                                                                 | ZE    | SS      |        | 03     | 43     |                |                              |
| 06   | Shillong                                                                                                        | EZ    | iP      | 01     | 58     | 03     |                | Slight                       |
|      |                                                                                                                 |       | e       |        | 53     | 15     |                |                              |
| 06   | Shillong                                                                                                        | Z     | iP      | 02     | 16     | 26     |                | Slight, distant, compression |
| 06   | Chatra                                                                                                          | Z     | eP      | 02     | 17     | 00     |                | Feeble, distant              |
| 06   | Shillong                                                                                                        | Z     | iP      | 02     | 22     | 37     |                | Slight, distant              |
| 06   | Tocklai                                                                                                         | E     | iP      | 03     | 13     | 35     |                | Slight, distant              |
| 06   | Shillong                                                                                                        | Z     | iP      | 03     | 59     | 46     |                | Slight, distant, compression |
| 06   | Delhi                                                                                                           | Z     | iP      | 09     | 00     | 02     |                | Slight, compression          |
| 06   | Chatra                                                                                                          | Z     | er      | 09     | 00     | 11     |                | Feeble, distant              |
| 06   | Delhi                                                                                                           | Z     | iP      | 09     | 03     | 04     |                | Slight, compression          |
| 06   | Dehra Dun                                                                                                       | Z     | e       | 10     | 52     | 30     |                | Feeble                       |
|      |                                                                                                                 |       | i       |        | 53     | 53     |                |                              |
| 06   | Delhi                                                                                                           | Z     | eP      | 10     | 52     | 45     | 820            |                              |
|      |                                                                                                                 |       | iS      |        | 54     | 17     |                |                              |

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| Date | Station                                                                            | Compt    | Phase      | G<br>h   | M<br>m   | T<br>s | $\Delta$<br>km | Remarks                                                |
|------|------------------------------------------------------------------------------------|----------|------------|----------|----------|--------|----------------|--------------------------------------------------------|
| 06   | Chatra                                                                             | Z        | eP<br>e    | 10<br>57 | 54<br>07 | 23     |                | Feeble                                                 |
| 06   | Dehra Dun                                                                          | Z        | e          | 13       | 00       | 05     |                | Tremor                                                 |
| 06   | Delhi                                                                              | Z        | iP<br>iS   | 18<br>01 | 00<br>57 | 13     | 1010           | Slight, rarefaction                                    |
| 06   | Chatra                                                                             | Z        | eP         | 18       | 01       | 57     |                | Feeble, distant                                        |
| 06   | Shillong                                                                           | Z        | iP         | 18       | 02       | 13     |                | Slight, near, compression                              |
| 06   | Port Blair                                                                         | E        | e<br>e     | 19<br>48 | 43<br>13 | 00     |                | Slight, near                                           |
| 06   | Shillong                                                                           | Z        | i          | 21       | 05       | 44     |                | Slight, distant                                        |
| 06   | Delhi                                                                              | Z        | iP         | 21       | 10       | 33     |                | Slight, compression                                    |
| 06   | Chatra                                                                             | Z        | eP         | 21       | 19       | 16     |                | Feeble, distant                                        |
| 06   | Shillong                                                                           | Z        | iP         | 23       | 24       | 52     |                | Slight, distant, rarefaction                           |
| 07   | Port Blair                                                                         | NE       | Pg         | 02       | 32       | 04     |                | Slight, locally felt, first ground motion North-West.  |
| 07   | Madras                                                                             | E        | e          | 02       | 04       | 49     |                | Feeble, near                                           |
| 07   | Shillong                                                                           | Z        | iP         | 03       | 05       | 00     |                | Slight, distant, compression                           |
|      | Chatra                                                                             | Z        | eP<br>eS   | 03<br>03 | 05<br>23 | 23     | 1630           | Feeble, distant                                        |
|      | Delhi                                                                              | Z        | eP         | 03       | 06       | 43     |                | Slight, compression                                    |
|      | Dehra Dun                                                                          | Z        | e          | 03       | 06       | 53     |                | Tremor                                                 |
|      | Calcutta                                                                           | E        | e          | 03       | 07       | 07     |                | Slight                                                 |
| 07   | Delhi                                                                              | Z<br>NEZ | iP<br>i    | 03<br>10 | 10<br>49 | 39     |                | Slight, compression                                    |
| 07   | Shillong                                                                           | Z        | iP         | 03       | 59       | 59     |                | Slight, near, rarefaction                              |
| 07   | Delhi                                                                              | Z        | eP         | 06       | 10       | 14     |                | Slight, compression                                    |
| 07   | Epc: 4.3°N, 127.8°E. Molucca Passage<br>- H = 08h 44m 43.7s. h about 33 km (USCGS) |          |            |          |          |        |                |                                                        |
|      | Shillong                                                                           | Z        | iP         | 03       | 52       | 19     |                | Slight, distant, compression                           |
|      | Delhi                                                                              | Z        | iP         | 03       | 54       | 01     |                | Tremor, compression                                    |
| 07   | Delhi                                                                              | Z        | iP<br>M    | 09<br>02 | 00<br>06 | 54     |                | Russian nuclear explosion<br>Per.=25 secs, Amp.=2.2 mm |
| 07   | Chatra                                                                             | Z        | ePg<br>eSg | 09<br>12 | 11<br>12 | 55     | 140            | Feeble, local                                          |
|      | Shillong                                                                           | Z        | eP         | 09       | 12       | 33     |                | Slight, near                                           |

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| Date | Station                                                                                            | Compt | Phase      | G<br>h | M<br>m   | T<br>s   | $\Delta$<br>km | Remarks                      |
|------|----------------------------------------------------------------------------------------------------|-------|------------|--------|----------|----------|----------------|------------------------------|
| 07   | Port Blair                                                                                         | NE    | ePg<br>iSg | 10     | 18<br>19 | 55<br>52 | 60             | Slight                       |
| 07   | Shillong                                                                                           | Z     | iPg        | 12     | 49       | 13       |                | Slight, near, rarefaction    |
| 07   | Dehra Dun                                                                                          | Z     | e          | 15     | 59       | 15       |                | Tremor                       |
| 07   | Port Blair                                                                                         | NE    | iPg<br>iSg | 16     | 54<br>55 | 55<br>03 | 70             | Slight                       |
| 07   | Shillong                                                                                           | Z     | iP         | 17     | 35       | 13       |                | Slight, distant, rarefaction |
| 07   | Port Blair                                                                                         | NE    | iPg<br>iSg | 18     | 04<br>04 | 29<br>33 | 80             | Slight, locally felt         |
|      | Shillong                                                                                           | Z     | eP         | 13     | 07       | 29       |                | Slight, distant              |
| 07   | Shillong                                                                                           | Z     | iP         | 13     | 42       | 45       |                | Slight, near, rarefaction    |
| 07   | Shillong                                                                                           | Z     | eP         | 20     | 20       | 25       |                | Slight, near                 |
| 07   | Port Blair                                                                                         | NE    | iPg<br>iSg | 23     | 13<br>19 | 57<br>05 | 70             | Slight                       |
| 03   | Shillong                                                                                           | Z     | eP         | 07     | 51       | 07       |                | Slight, near                 |
| 03   | Epc: 52.1°N, 170.5°W. Fox Islands, Aleutian Islands<br>- H = 10h 54m 56.3s. h about 40 km (USCGS)  |       |            |        |          |          |                |                              |
|      | Shillong                                                                                           | Z     | iP         | 11     | 06       | 33       |                | Slight, distant, compression |
|      | Delhi                                                                                              | Z     | iP         | 11     | 07       | 03       |                | Tremor, rarefaction          |
| 03   | Shillong                                                                                           | Z     | iP         | 12     | 30       | 09       |                | Slight, near, rarefaction    |
| 03   | Delhi                                                                                              | Z     | iP         | 13     | 03       | 39       |                | Slight, compression          |
| 03   | Dehra Dun                                                                                          | Z     | e          | 14     | 03       | 50       |                | Feeble                       |
|      | Delhi                                                                                              | Z     | eP<br>iS   | 14     | 04<br>05 | 00<br>41 | 980            | Slight                       |
| 03   | Shillong                                                                                           | Z     | iP         | 14     | 45       | 25       |                | Slight, near, rarefaction    |
| 03   | Epc: 13.8°N, 144.8°E. Mariana Islands<br>- H = 17h 13m 31.5s. h about 385 km (USCGS)               |       |            |        |          |          |                |                              |
|      | Shillong                                                                                           | Z     | iP         | 17     | 24       | 45       |                | Slight, distant, rarefaction |
|      | Chatra                                                                                             | Z     | eP         | 17     | 25       | 19       |                | Feeble                       |
|      | Delhi                                                                                              | Z     | iP         | 17     | 26       | 13       |                | Slight, rarefaction          |
| 03   | Epc: 37°N, 141.5°E. Near East Coast of Honshu, Japan<br>- H = 17h 55m 37.9s. h about 53 km (USCGS) |       |            |        |          |          |                |                              |
|      | Shillong                                                                                           | Z     | eP         | 18     | 03       | 36       |                | Slight, rarefaction          |
|      | Chatra                                                                                             | Z     | iP         | 18     | 04       | 05       |                | Feeble, distant, rarefaction |



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| Date   | Station                                                   | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                   |
|--------|-----------------------------------------------------------|-------|-------|--------|--------|--------|----------------|-------------------------------------------|
| 08     | Delhi                                                     | Z     | iP    | 18     | 04     | 34     |                | Slight, rarefaction                       |
| Contd. | Tocklai                                                   | E     | eP    | 18     | 40     | 37     |                | Slight, distant                           |
|        | Shillong                                                  | Z     | eP    | 18     | 40     | 41     |                | Slight, distant                           |
| 08     | Shillong                                                  | Z     | eP    | 18     | 41     | 01     |                | Slight, distant                           |
|        | Chatra                                                    | Z     | eP    | 18     | 41     | 17     |                | Feeble, distant                           |
| 08     | Shillong                                                  | Z     | iP    | 20     | 04     | 20     |                | Slight, near, rarefaction                 |
| 09     | Delhi                                                     | Z     | iP    | 04     | 40     | 54     |                | Slight, rarefaction                       |
| 09     | Delhi                                                     | Z     | iP    | 04     | 44     | 09     |                | Slight, rarefaction                       |
| 09     | Delhi                                                     | Z     | eP    | 06     | 39     | 20     |                | Slight, rarefaction                       |
|        |                                                           |       | i     |        | 39     | 23     |                |                                           |
|        |                                                           |       | i     |        | 40     | 12     |                |                                           |
|        | Dehra Dun                                                 | Z     | i     | 06     | 39     | 22     |                | Tremor                                    |
| 09     | Dehra Dun                                                 | Z     | e     | 08     | 15     | 06     |                | Tremor                                    |
|        | Delhi                                                     | Z     | iP    | 08     | 15     | 15     | 1050           | Slight, compression                       |
|        |                                                           |       | iS    |        | 17     | 02     |                |                                           |
| 09     | Delhi                                                     | Z     | iP    | 10     | 51     | 56     |                | Slight, compression                       |
| 09     | Delhi                                                     | Z     | iP    | 13     | 10     | 47     |                | Slight, compression                       |
| 09     | Delhi                                                     | Z     | iP    | 17     | 44     | 37     |                | Slight, rarefaction                       |
|        |                                                           |       | i     |        | 44     | 44     |                |                                           |
| 09     | Chatra                                                    | Z     | eP    | 22     | 49     | 24     |                | Feeble, distant                           |
| 09     | Epc: 25°N, 92.5°E. (Assam). - H = 23h 15m 16s GMT (USCGS) |       |       |        |        |        |                |                                           |
| 09     | Shillong                                                  | NE    | iPg   | 23     | 15     | 38     | 110            | Slight, initial ground motion South-East. |
|        |                                                           |       | iSg   |        | 15     | 50     |                |                                           |
|        | Tocklai                                                   | E     | eS    | 23     | 16     | 20     |                | Slight                                    |
|        |                                                           |       | e     |        | 16     | 58     |                |                                           |
|        | Chatra                                                    | Z     | eP    | 23     | 16     | 24     | 510            | Slight                                    |
|        |                                                           |       | eS    |        | 17     | 13     |                |                                           |
|        | Calcutta                                                  | N     | eS    | 23     | 17     | 33     |                | Slight                                    |
| 09     | Chatra                                                    | Z     | eP    | 23     | 49     | 02     |                | Feeble, distant, rarefaction              |
| 10     | Shillong                                                  | Z     | eP    | 04     | 23     | 50     |                | Slight, distant                           |
| 10     | Shillong                                                  | Z     | e     | 20     | 13     | 00     |                | Tremor, distant                           |
| 10     | Shillong                                                  | Z     | e     | 20     | 19     | 02     |                | Slight, distant                           |
| 10     | Shillong                                                  | Z     | iP    | 20     | 26     | 42     |                | Slight, local                             |
| 10     | Dehra Dun                                                 | Z     | e     | 20     | 35     | 53     |                | Tremor                                    |

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| Date | Station                                                                                                                                                                                       | Compt   | Phase                                   | G<br>h | M<br>m | T<br>s                                                   | $\Delta$<br>km | Remarks                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------|--------|--------|----------------------------------------------------------|----------------|--------------------------------|
| 10   | Epc: 49.4°N, 27.9°W. North Atlantic Ocean<br>- H = 21h 03m 59.2s. h about 33 km (USCGS)                                                                                                       |         |                                         |        |        |                                                          |                |                                |
|      | Delhi                                                                                                                                                                                         | Z       | iP                                      | 21     | 15     | 57                                                       |                | Slight, compression            |
|      | Shillong                                                                                                                                                                                      | Z       | eP                                      | 21     | 16     | 49                                                       |                |                                |
| 10   | Delhi                                                                                                                                                                                         | Z       | iP                                      | 23     | 16     | 18                                                       |                | Tremor, rarefaction            |
| 10   | Delhip                                                                                                                                                                                        | Z       | iP<br>iS                                | 23     | 44     | 30<br>46 13                                              | 1000           | Slight, rarefaction            |
|      | Dehra Dun                                                                                                                                                                                     | Z       | eP<br>PPP<br>iS<br>SS<br>SSS<br>Lr<br>M | 23     | 44     | 32<br>44 44<br>46 19<br>46 35<br>46 40<br>46 50<br>47 36 | 1040           | Slight                         |
|      | Chatra                                                                                                                                                                                        | Z       | eP<br>e                                 | 23     | 46     | 27<br>49 40                                              |                | Feeble, distant                |
|      | Shillong                                                                                                                                                                                      | Z       | iP                                      | 23     | 47     | 15                                                       |                | Slight, distant, rarefaction   |
|      | Visakhapatnam                                                                                                                                                                                 | E       | e<br>i                                  | 23     | 51     | 22<br>53 51                                              |                | Slight                         |
| 11   | Chatra                                                                                                                                                                                        | Z       | e                                       | 01     | 29     | 04                                                       |                | Feeble, distant                |
| 11   | Epc: 20°S, 173.8°W. Fox Islands. - H = 01h 47m 39.6s<br>h about 63 km (USCGS)                                                                                                                 |         |                                         |        |        |                                                          |                |                                |
|      | Shillong                                                                                                                                                                                      | Z       | e                                       | 02     | 00     | 11                                                       |                | Slight, distant                |
|      | Delhi                                                                                                                                                                                         | Z       | iP                                      | 02     | 05     | 04                                                       |                | Slight, compression            |
|      | Calcutta                                                                                                                                                                                      | E       | i                                       | 02     | 09     | 57                                                       |                | Slight                         |
| 11   | Shillong                                                                                                                                                                                      | Z       | e                                       | 05     | 59     | 21                                                       |                | Slight, distant                |
| 11   | Epc: 25.2°N, 123.3°E. Off North East Coast of Formosa.<br>Mag. 6 (Pas), 5-5½ (Pal). - H = 03h 15m 43.7s. h about 140 km<br>(USCGS). Epc: 25.5°N, 121°E. Formosa. - H = 08h 15m 45s (Shillong) |         |                                         |        |        |                                                          |                |                                |
|      | Shillong                                                                                                                                                                                      | NEZ     | iP<br>eS                                | 08     | 21     | 27<br>28 01                                              | 2940           |                                |
|      |                                                                                                                                                                                               | Z       | i<br>i                                  |        |        | 23 01<br>31 53                                           |                |                                |
|      | Calcutta                                                                                                                                                                                      | E       | iP<br>PP<br>PPP<br>iS<br>M              | 08     | 21     | 56<br>22 49<br>23 00<br>26 50<br>30 26                   | 3270           | Initial ground motion<br>East. |
|      | Port Blair                                                                                                                                                                                    | NE<br>E | eP<br>PP<br>PPP                         | 08     | 22     | 00<br>22 40<br>23 04                                     | 3230           |                                |

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| Date         | Station              | Compt                                                                                       | Phase                                                                                                | C<br>h | M<br>m | T<br>s                                                                                             | $\Delta$<br>km | Remarks                                                              |
|--------------|----------------------|---------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------|
| 11<br>Contd. | Port Blair<br>Contd. | NE                                                                                          | eS                                                                                                   | 08     | 26     | 55                                                                                                 |                |                                                                      |
|              |                      | E                                                                                           | Lq                                                                                                   |        | 28     | 04                                                                                                 |                |                                                                      |
|              |                      |                                                                                             | SSS                                                                                                  |        | 28     | 37                                                                                                 |                |                                                                      |
|              |                      |                                                                                             | Lr                                                                                                   |        | 29     | 14                                                                                                 |                |                                                                      |
|              | Chatra               | Z                                                                                           | iP<br>i                                                                                              | 08     | 22     | 03<br>24                                                                                           |                | Rarefaction, feeble,<br>distant                                      |
|              | Bokaro               | NE                                                                                          | iP<br>PP<br>PPP<br>PcS<br>eS<br>ScP<br>i<br>SS<br>ScS<br>M                                           | 08     | 22     | 13<br>23<br>23<br>24<br>27<br>28<br>28<br>29<br>32<br>34                                           | 3590           | Initial ground<br>motion North-East                                  |
|              | Visakhapatnam        | NE                                                                                          | iP<br>iPP<br>iPPP<br>iPcP<br>iS                                                                      | 08     | 22     | 54<br>24<br>24<br>24<br>23                                                                         | 4020           | Distant, first ground<br>movement towards<br>North and West.         |
|              | Dehra Dun            | Z<br>N                                                                                      | eP<br>PP<br>PPP<br>eS<br>SS<br>SSS<br>Lr<br>M                                                        | 03     | 23     | 05<br>24<br>25<br>29<br>32<br>33<br>35<br>38                                                       | 4620           |                                                                      |
|              | Delhi                | NEZ<br>EZ<br>Z<br>N<br>NEZ<br>Z<br>E<br>EZ<br>NEZ<br>EZ<br>NES<br>EZ<br>NZ<br>E<br>NEZ<br>Z | iP<br>i<br>SP<br>i<br>PP<br>i<br>PcP<br>PcS, ScP<br>iS<br>i<br>SS<br>i<br>SS<br>SSS<br>ScS<br>i<br>i | 08     | 23     | 15<br>23<br>23<br>24<br>24<br>24<br>25<br>25<br>29<br>29<br>29<br>30<br>31<br>32<br>33<br>35<br>35 | 4340           | Rarefaction, initial<br>ground motion North-<br>East, probably deep. |
|              | Sehore               | E                                                                                           | iP                                                                                                   | 03     | 23     | 25                                                                                                 | 4490           |                                                                      |
|              | Hyderabad            | NE<br>E                                                                                     | iP<br>PP<br>PPP<br>PcS                                                                               | 08     | 23     | 25<br>25<br>25<br>28                                                                               | 4380           |                                                                      |

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| Date   | Station                                                                         | Compt | Phase | G  | M     | T  | $\Delta$ | Remarks                                            |
|--------|---------------------------------------------------------------------------------|-------|-------|----|-------|----|----------|----------------------------------------------------|
|        |                                                                                 |       |       | h  | m     | s  | km       |                                                    |
| 11     | Hyderabad                                                                       | NE    | iS    | 03 | 29    | 53 |          |                                                    |
| Contd. | Contd.                                                                          |       | PS    |    | 30    | 15 |          |                                                    |
|        |                                                                                 |       | PPS   |    | 30    | 30 |          |                                                    |
|        |                                                                                 | E     | SS    |    | 33    | 15 |          |                                                    |
|        |                                                                                 |       | Lq    |    | 33    | 54 |          |                                                    |
|        |                                                                                 |       | Lr    |    | 36    | 12 |          |                                                    |
|        |                                                                                 | N     | Lr    |    | 36    | 15 |          |                                                    |
|        |                                                                                 |       | M     |    | 39    | 15 |          | Per.=15 sec, $\mu = 9$                             |
|        |                                                                                 | E     | M     |    | 39    | 21 |          | Per.=15 sec, $\mu = 6$                             |
|        | Madras                                                                          | E     | iP    | 08 | 23    | 27 | 4520     | Moderate, initial ground motion East               |
|        |                                                                                 |       | PP    |    | 25    | 02 |          |                                                    |
|        |                                                                                 |       | PPP   |    | 25    | 35 |          |                                                    |
|        |                                                                                 |       | eS    |    | 29    | 37 |          |                                                    |
|        |                                                                                 |       | Lq    |    | 32    | 58 |          |                                                    |
|        |                                                                                 |       | SSS   |    | 33    | 17 |          |                                                    |
|        |                                                                                 |       | Lr    |    | 34    | 57 |          |                                                    |
|        |                                                                                 |       | M     |    | 38    | 20 |          |                                                    |
|        | Poona                                                                           | NE    | iP    | 08 | 23    | 57 | 4970     | Moderate, rarefaction, initial ground motion East. |
|        |                                                                                 | EZ    | i     |    | 24    | 31 |          |                                                    |
|        |                                                                                 | Z     | PcP   |    | 25    | 30 |          |                                                    |
|        |                                                                                 | NEZ   | PP    |    | 25    | 50 |          |                                                    |
|        |                                                                                 |       | PPP   |    | 26    | 33 |          |                                                    |
|        |                                                                                 | Z     | i     |    | 29    | 11 |          |                                                    |
|        |                                                                                 | N     | PcS   |    | 29    | 13 |          |                                                    |
|        |                                                                                 | NEZ   | iS    |    | 30    | 34 |          |                                                    |
|        |                                                                                 | N     | i     |    | 31    | 13 |          |                                                    |
|        |                                                                                 | E     | e     |    | 31    | 23 |          |                                                    |
|        |                                                                                 | NE    | SS    |    | 32    | 33 |          |                                                    |
|        |                                                                                 | N     | SSS   |    | 33    | 59 |          |                                                    |
|        |                                                                                 |       | Lr    |    | 34    | 46 |          |                                                    |
|        |                                                                                 |       | M     |    | 39    | 25 |          |                                                    |
|        |                                                                                 |       | Mn    |    | 41/42 |    |          | Per.=15 sec, $\mu = 7.02$                          |
|        | Bombay                                                                          | NE    | iP    | 08 | 24    | 04 | 5330     | Moderate                                           |
|        |                                                                                 |       | pP    |    | 24    | 38 |          |                                                    |
|        |                                                                                 |       | PP    |    | 25    | 59 |          |                                                    |
|        |                                                                                 |       | PPP   |    | 26    | 40 |          |                                                    |
|        |                                                                                 |       | iS    |    | 30    | 50 |          |                                                    |
|        |                                                                                 |       | PPS   |    | 31    | 04 |          |                                                    |
|        |                                                                                 | E     | i     |    | 31    | 22 |          |                                                    |
|        |                                                                                 | N     | i     |    | 31    | 38 |          |                                                    |
| 11     | Chatra                                                                          | Z     | iP    | 10 | 39    | 32 |          | Feeble, local, compression                         |
|        |                                                                                 |       | i     |    | 39    | 36 |          |                                                    |
| 11     | Epic: 06.6°S, 130.3°E. Banda Sea. - H = 18h 12m 53.7s<br>h about 173 km (USCGS) |       |       |    |       |    |          |                                                    |
|        | Shillong                                                                        | Z     | iP    | 18 | 19    | 26 |          | Slight, distant, rarefaction                       |
|        | Chatra                                                                          | Z     | iP    | 18 | 20    | 04 |          | Feeble, distant, rarefaction                       |
|        |                                                                                 | ZNE   | i     |    | 21    | 56 |          |                                                    |
|        | Dehra Dun                                                                       | Z     | e     | 18 | 21    | 11 |          | Tremor                                             |
|        | Delhi                                                                           | Z     | iP    | 18 | 21    | 15 |          | Slight, rarefaction                                |
|        |                                                                                 |       | i     |    | 21    | 22 |          |                                                    |
|        |                                                                                 |       | i     |    | 22    | 55 |          |                                                    |
|        |                                                                                 |       | i     |    | 23    | 03 |          |                                                    |

| Date         | Station                                                                                            | Compt | Phase            | G  | M  | T  | $\Delta$ | Remarks                      |
|--------------|----------------------------------------------------------------------------------------------------|-------|------------------|----|----|----|----------|------------------------------|
|              |                                                                                                    |       |                  | h  | m  | s  | km       |                              |
| 31<br>Contd. | Visakhapatnam                                                                                      | E     | iP<br>eSKS<br>eS | 17 | 14 | 55 | 9610     | Initial ground motion West.  |
| 31           | Shillong                                                                                           | Z     | e                | 17 | 42 | 01 |          | Slight, distant              |
| 31           | Shillong                                                                                           | Z     | e                | 17 | 45 | 25 |          | Tremor, distant              |
| 31           | Epic: 51.2°N, 179.9°W. Rat Islands, Aleutian Islands<br>- H = 17h 53m 03.9s. h about 43 km (USCGS) |       |                  |    |    |    |          |                              |
|              | Shillong                                                                                           | Z     | iP               | 18 | 07 | 14 |          | Slight, distant, compression |
| 31           | Chatra                                                                                             | Z     | iP               | 18 | 07 | 26 |          | Feeble, distant, compression |
|              | Dehra Dun                                                                                          | Z     | e                | 18 | 07 | 40 |          | Tremor                       |
|              | Delhi                                                                                              | Z     | iP               | 18 | 07 | 49 |          | Slight, compression          |
|              | Calcutta                                                                                           | E     | e                | 18 | 14 | 20 |          | Slight                       |
| 31           | Epic: 51.4°N, 179.8°W. Rat Islands, Aleutian Islands<br>- H = 21h 23m 14.4s. h about 33 km (USCGS) |       |                  |    |    |    |          |                              |
|              | Shillong                                                                                           | Z     | i                | 21 | 34 | 19 |          | Slight, distant              |

*Earthquake Reports*  
(Non-Instrumental)

The following is the list of Earthquakes that were reported by Voluntary Observers from different stations during the month of August 1962.

| Station  | Date | Time  | Duration  | No. of | Intensity | Remarks                |
|----------|------|-------|-----------|--------|-----------|------------------------|
|          | GMT  | GMT   | of shdcks | shdcks | in R.F.   |                        |
|          |      | h. m. | in secs.  |        | scale     |                        |
| Srinagar | 02   | 15 01 | -         | 1      | II        | Slight rattling sound. |
| Srinagar | 03   | 18 14 | -         | 1      | II        |                        |
| Shillong | 09   | 23 14 | 10        | 1      | III       |                        |
| Shillong | 09   | 23 45 | 5         | 1      | III       |                        |

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| Date         | Station       | Compt | Phase   | G<br>h | M<br>m | T<br>s                  | $\Delta$<br>km            | Remarks                                                                               |
|--------------|---------------|-------|---------|--------|--------|-------------------------|---------------------------|---------------------------------------------------------------------------------------|
| 31<br>Contd. | Delhi         | ZNE   | iP      | 17     | 14     | 23                      | 8280                      | Compression, initial<br>ground motion South,<br>West.<br><br>Per=22 secs, Amp=29.5 mm |
|              |               | NE    | PcP     |        | 14     | 37                      |                           |                                                                                       |
|              |               | ZNE   | PP      |        | 17     | 18                      |                           |                                                                                       |
|              |               | ZE    | PPP     |        | 19     | 01                      |                           |                                                                                       |
|              |               | ZNE   | iS      |        | 24     | 01                      |                           |                                                                                       |
|              |               | NE    | SKS     |        | 24     | 17                      |                           |                                                                                       |
|              |               | E     | ScS     |        | 24     | 32                      |                           |                                                                                       |
|              |               | ZNE   | PS      |        | 24     | 40                      |                           |                                                                                       |
|              |               |       | PPS     |        | 24     | 51                      |                           |                                                                                       |
|              |               | NE    | SS      |        | 23     | 08                      |                           |                                                                                       |
|              |               | ZNE   | SSS     |        | 32     | 18                      |                           |                                                                                       |
|              |               | E     | Lq      |        | 34     | 14                      |                           |                                                                                       |
|              |               | ZNE   | Lr      |        | 37     | 39                      |                           |                                                                                       |
|              |               | E     | M       |        | -      | -                       |                           |                                                                                       |
|              | Port Blair    | N     | iP      | 17     | 14     | 52                      | 9020                      | First ground<br>motion South                                                          |
|              |               | E     | eS      |        | 25     | 02                      |                           |                                                                                       |
| 31           | Visakhapatnam | E     | iP      | 17     | 14     | 55                      |                           | Initial ground<br>motion West.                                                        |
|              |               |       | SKS     |        | 25     | 02                      |                           |                                                                                       |
|              |               |       | eS      |        | 25     | 31                      |                           |                                                                                       |
| Hyderabad    |               | NE    | iP      | 17     | 15     | 03                      | 9320                      | Intensity<br>Southward-<br>Westward.                                                  |
|              |               |       | iS      |        | 25     | 32                      |                           |                                                                                       |
|              |               | N     | PS      |        | 26     | 38                      |                           |                                                                                       |
|              |               |       | SS      |        | 30     | 53                      |                           |                                                                                       |
|              |               |       | SSS     |        | 34     | 52                      |                           |                                                                                       |
|              |               |       | Lr      |        | 42     | 17                      |                           |                                                                                       |
|              |               | E     | Lr      |        | 42     | 23                      |                           |                                                                                       |
|              | M             |       | 49      | 30     |        | Per.=18 secs, $\mu$ = 3 |                           |                                                                                       |
|              | N             | M     |         | 49     | 34     |                         | Per.= 21 secs, $\mu$ = 13 |                                                                                       |
| Bombay       |               | NES   | eP      | 17     | 15     | 21                      |                           |                                                                                       |
|              |               |       | e       |        | 13     | 46                      |                           |                                                                                       |
|              |               |       | SKS     |        | 25     | 57                      |                           |                                                                                       |
|              |               | NE    | eS      |        | 26     | 04                      |                           |                                                                                       |
|              |               | E     | e       |        | 26     | 39                      |                           |                                                                                       |
|              |               | N     | e       |        | 27     | 07                      |                           |                                                                                       |
|              |               |       | M       |        | 53     | 02                      |                           | Per.=20 secs, $\mu$ = 9                                                               |
|              | E             | M     |         | 53     | 18     |                         | Per.=15 secs, $\mu$ = 3   |                                                                                       |
| Poona        |               | NE    | iP      | 17     | 15     | 22                      | 9790                      | Initial ground<br>motion South West.                                                  |
|              |               | E     | PP      |        | 19     | 42                      |                           |                                                                                       |
|              |               | NE    | SKS     |        | 25     | 50                      |                           |                                                                                       |
|              |               | N     | iS      |        | 26     | 05                      |                           |                                                                                       |
|              |               |       | Mn      |        | 55/53  |                         |                           | Per.=18.5 sec, $\mu$ =9.82                                                            |
| Madras       |               | E     | eP      | 17     | 15     | 24                      | 11250                     |                                                                                       |
|              |               |       | PP      |        | 19     | 36                      |                           |                                                                                       |
|              |               |       | PPP     |        | 21     | 45                      |                           |                                                                                       |
|              |               |       | SKS     |        | 25     | 59                      |                           |                                                                                       |
|              |               |       | e       |        | 26     | 41                      |                           |                                                                                       |
|              |               |       | iS/SKSP |        | 27     | 01                      |                           |                                                                                       |
|              |               |       | e       |        | 28     | 00                      |                           |                                                                                       |
|              |               |       | Lq      |        | 44     | 41                      |                           |                                                                                       |
|              |               |       | Lr      |        | 49     | 37                      |                           |                                                                                       |
|              |               |       | M       |        | 57     | 03                      |                           |                                                                                       |

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| Date         | Station                                                                                                                           | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                           |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|---------------------------------------------------|
| 29<br>Contd. | Madras                                                                                                                            | E     | e     | 22     | 54     | 49     |                |                                                   |
|              |                                                                                                                                   |       | M     |        | 10     | 02     |                |                                                   |
|              | Bombay                                                                                                                            | NE    | e     | 22     | 55     | 20     |                | Slight                                            |
|              |                                                                                                                                   |       | N     | e      | 23     | 02     | 10             |                                                   |
| 30           | Epc: 44.1°N, 12.5°E. Italy. - H = 06h 27m 07.4s<br>h about 33 km (USCGS)                                                          |       |       |        |        |        |                |                                                   |
|              | Madras                                                                                                                            | E     | e     | 06     | 27     | 29     |                |                                                   |
|              |                                                                                                                                   |       | e     |        | 41     | 18     |                |                                                   |
|              |                                                                                                                                   |       | e     |        | 43     | 06     |                |                                                   |
|              | Bombay                                                                                                                            | NE    | e     | 06     | 27     | 53     |                | Slight                                            |
|              |                                                                                                                                   |       | e     |        | 42     | 03     |                |                                                   |
| 30           | Bokaro                                                                                                                            | E     | i     | 09     | 22     | 01     |                | Slight, near                                      |
| 30           | Bokaro                                                                                                                            | E     | i     | 09     | 23     | 08     |                | Tremor                                            |
| 30           | Delhi                                                                                                                             | Z     | eP    | 11     | 53     | 07     |                | Slight, rarefaction                               |
| 30           | Delhi                                                                                                                             | Z     | iP    | 13     | 55     | 23     |                | Slight, rarefaction                               |
| 30           | Dehra Dun                                                                                                                         | N     | e     | 14     | 03     | 34     |                | Feeble                                            |
| 30           | Shillong                                                                                                                          | Z     | e     | 17     | 31     | 45     |                | Slight, distant                                   |
| 30           | Delhi                                                                                                                             | Z     | eP    | 17     | 36     | 33     |                | Slight, rarefaction                               |
| 30           | Shillong                                                                                                                          | Z     | e     | 21     | 21     | 24     |                | Tremor, distant                                   |
| 30           | Shillong                                                                                                                          | Z     | eP    | 21     | 23     | 15     |                | Slight, distant                                   |
| 30           | Shillong                                                                                                                          | Z     | eP    | 23     | 19     | 49     | 460            | Slight                                            |
|              |                                                                                                                                   |       | eS    |        | 20     | 38     |                |                                                   |
| 31           | Delhi                                                                                                                             | Z     | iP    | 02     | 33     | 23     |                | Slight, rarefaction                               |
| 31           | Delhi                                                                                                                             | Z     | iP    | 02     | 41     | 55     |                | Tremor, compression                               |
| 31           | Shillong                                                                                                                          | Z     | iP    | 03     | 20     | 03     |                | Slight, near                                      |
| 31           | Epc: 52.5°N, 160.6°E. Near East Coast of Kamchatka.<br>- H = 16h 23m 05.9s. h about 63 km (USCGS)                                 |       |       |        |        |        |                |                                                   |
|              | Shillong                                                                                                                          | Z     | iP    | 16     | 35     | 49     |                | Slight, distant                                   |
| 31           | Bombay                                                                                                                            | N     | e     | 16     | 59     | 38     |                | Feeble, near                                      |
|              |                                                                                                                                   |       | e     |        | 17     | 03     | 38             |                                                   |
|              | Shillong                                                                                                                          | Z     | e     | 17     | 13     | 50     |                |                                                   |
| 31           | Epc: 51.5°N, 179.7°W. Rat Islands, Aleutian Islands<br>- H = 17h 02m 43.4s. h about 23 km (USCGS)<br>Mag. = 6½ (Pas), 6-6½ (Pal). |       |       |        |        |        |                |                                                   |
|              | Shillong                                                                                                                          | ZNE   | iP    | 17     | 13     | 52     |                | Compression, initial<br>ground motion South-West. |
|              |                                                                                                                                   | NE    | iS    |        | 22     | 58     |                |                                                   |
|              | Dehra Dun                                                                                                                         | Z     | eP    | 17     | 14     | 17     | 8180           |                                                   |
|              |                                                                                                                                   |       | PPP   |        | 19     | 05     |                |                                                   |
|              |                                                                                                                                   | N     | eS    |        | 23     | 47     |                |                                                   |
|              |                                                                                                                                   |       | SS    |        | 23     | 47     |                |                                                   |
|              |                                                                                                                                   |       | Lr    |        | 27     | 06     |                |                                                   |
|              |                                                                                                                                   |       | M     |        | 43     | 30     |                |                                                   |

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| Date   | Station                                                                                              | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                           |
|--------|------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|-----------------------------------|
| 29     | Port Blair                                                                                           | N     | e     | 09     | 18     | 11     |                |                                   |
| Contd. | Dehra Dun                                                                                            | Z     | e     | 09     | 18     | 41     |                | Feeble                            |
|        |                                                                                                      | N     | e     |        | 22     | 59     |                |                                   |
|        | Chatra                                                                                               | Z     | eP    | 09     | 18     | 47     |                | Feeble, distant                   |
|        | Shillong                                                                                             | Z     | eP    | 09     | 18     | 59     |                | Slight, distant                   |
|        | Delhi                                                                                                | Z     | iP    | 09     | 19     | 22     |                | Slight                            |
|        | Calcutta                                                                                             | E     | e     | 09     | 23     | 24     |                | Slight                            |
| 29     | Dehra Dun                                                                                            | Z     | i     | 10     | 31     | 03     |                | Slight, phases not clear          |
|        |                                                                                                      |       | i     |        | 31     | 30     |                |                                   |
| 29     | Shillong                                                                                             | Z     | eP    | 10     | 39     | 53     |                | Slight, near                      |
|        |                                                                                                      |       | i     |        | 40     | 41     |                |                                   |
| 29     | Epc: 30.9°N, 78.4°E. Northern India. - H = 11h 30m 39.3s<br>h about 33 km (USCGS)                    |       |       |        |        |        |                |                                   |
|        | Delhi                                                                                                | Z     | iP    | 11     | 31     | 30     | 270            | Slight, local                     |
|        |                                                                                                      |       | P*    |        | 31     | 33     |                |                                   |
|        |                                                                                                      |       | Pg    |        | 31     | 41     |                |                                   |
|        |                                                                                                      |       | iSg   |        | 32     | 03     |                |                                   |
|        | Chatra                                                                                               | Z     | iP    | 11     | 32     | 52     |                | Feeble, distant, rarefaction      |
|        | Shillong                                                                                             | Z     | eP    | 11     | 33     | 45     |                | Slight, distant                   |
|        |                                                                                                      |       | e     |        | 35     | 43     |                |                                   |
|        | Bokaro                                                                                               | E     | i     | 11     | 34     | 57     |                | Slight, phases not well developed |
|        |                                                                                                      |       | i     |        | 36     | 21     |                |                                   |
|        | Poona                                                                                                | Z     | e     | 11     | 37     | 29     |                | Slight, distant                   |
|        |                                                                                                      | E     | i     |        | 38     | 13     |                |                                   |
| 29     | Shillong                                                                                             | Z     | eP    | 13     | 21     | 33     |                | Slight, distant                   |
| 29     | Bombay                                                                                               | NE    | e     | 20     | 52     | 44     |                | Slight                            |
| 29     | Epc: 34.1°N, 139.1°E. Near East Coast of Honshu, Japan<br>- H = 22h 36m 53.9s. h about 33 km (USCGS) |       |       |        |        |        |                |                                   |
|        | Shillong                                                                                             | Z     | eP    | 22     | 44     | 41     |                | Slight, distant                   |
|        | Chatra                                                                                               | Z     | eP    | 22     | 45     | 14     |                | Feeble, nature uncertain          |
|        | Calcutta                                                                                             | E     | e     | 22     | 45     | 36     |                | Slight                            |
|        | Dehra Dun                                                                                            | Z     | eP    | 22     | 45     | 58     | 5650           | Slight, phases not clear          |
|        |                                                                                                      | N     | eS    |        | 53     | 14     |                |                                   |
|        | Delhi                                                                                                | Z     | iP    | 22     | 46     | 06     | 5790           | Slight, rarefaction               |
|        |                                                                                                      | NE    | eS    |        | 53     | 30     |                |                                   |
|        |                                                                                                      |       | SS    |        | 57     | 12     |                |                                   |
|        |                                                                                                      |       | SSS   |        | 50     | 30     |                |                                   |
|        |                                                                                                      |       | Lr    | 23     | 03     | 23     |                |                                   |
|        |                                                                                                      | N     | M     | -      | -      | -      |                | Per. = 25. secs, Amp = 38.5 mm    |
|        | Port Blair                                                                                           | E     | i     | 22     | 52     | 23     |                |                                   |
|        |                                                                                                      |       | i     | 23     | 05     | 41     |                |                                   |
|        | Bokaro                                                                                               | N     | i     | 22     | 52     | 45     |                | Probably 'M' waves                |



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| Date          | Station                                                                                                | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                |
|---------------|--------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|--------------------------------------------------------|
| 29<br>Cont'd. | Poona                                                                                                  | ZN    | iP    | 22     | 50     | 49     | 2300           | Slight, rarefaction<br>initial ground<br>motion North  |
|               |                                                                                                        | ZNE   | PP    |        | 51     | 15     |                |                                                        |
|               |                                                                                                        | ZN    | iS    |        | 54     | 59     |                |                                                        |
|               |                                                                                                        | Z     | Lq    |        | 55     | 26     |                |                                                        |
|               |                                                                                                        | N     | M     |        | 58     | 12     |                |                                                        |
|               | Hyderabad                                                                                              | NE    | iP    | 22     | 50     | 54     | 2530           | Slight                                                 |
|               |                                                                                                        | E     | PP    |        | 51     | 27     |                |                                                        |
|               |                                                                                                        | NE    | iS    |        | 55     | 00     |                |                                                        |
|               |                                                                                                        | E     | Lr    |        | 57     | 00     |                |                                                        |
|               |                                                                                                        | N     | Lr    |        | 57     | 06     |                |                                                        |
|               |                                                                                                        | E     | M     |        | 57     | 48     |                |                                                        |
|               | Visakhapatnam                                                                                          | E     | eP    | 22     | 51     | 26     | 2010           | Moderate                                               |
|               |                                                                                                        |       | iPPP  |        | 52     | 30     |                |                                                        |
|               |                                                                                                        |       | eS    |        | 56     | 04     |                |                                                        |
|               |                                                                                                        |       | eSSS  |        | 57     | 56     |                |                                                        |
|               | Dehra Dun                                                                                              | Z     | eP    | 22     | 52     | 42     | 3810           | Feeble                                                 |
|               |                                                                                                        | N     | eS    |        | 53     | 09     |                |                                                        |
|               | Chatra                                                                                                 | Z     | iP    | 22     | 52     | 43     |                | Feeble, distant, compression                           |
| 29            | Delhi                                                                                                  | Z     | iP    | 02     | 42     | 53     | 400            | Slight, compression                                    |
|               |                                                                                                        |       | iS    |        | 43     | 40     |                |                                                        |
| 29            | Bombay                                                                                                 | N     | e     | 05     | 33     | 13     |                | Slight                                                 |
| 29            | Dehra Dun                                                                                              | Z     | e     | 03     | 21     | 23     |                | Tremor                                                 |
| 29            | Visakhapatnam                                                                                          | E     | iP    | 03     | 47     | 24     | 3050           | Slight, distant,<br>first ground<br>movement West.     |
|               |                                                                                                        |       | PP    |        | 48     | 13     |                |                                                        |
|               |                                                                                                        |       | PPP   |        | 48     | 29     |                |                                                        |
|               |                                                                                                        |       | iS    |        | 52     | 04     |                |                                                        |
|               | Madras                                                                                                 | E     | e     | 09     | 13     | 22     |                | Surface waves                                          |
|               |                                                                                                        |       | e     |        | 20     | 14     |                |                                                        |
|               |                                                                                                        |       | eM?   |        | 21     | 56     |                |                                                        |
| 29            | Epc: 01.9°S, 67.9°E. North West of Chagos Islands Region<br>- H = 09h 12m 00.4s. h about 33 km (USCGS) |       |       |        |        |        |                |                                                        |
|               | Poona                                                                                                  | ZN    | iP    | 09     | 16     | 46     | 2580           | Slight, rarefaction<br>initial ground<br>motion North. |
|               |                                                                                                        |       | PP    |        | 17     | 13     |                |                                                        |
|               |                                                                                                        | N     | iS    |        | 20     | 54     |                |                                                        |
|               |                                                                                                        |       | Lq    |        | 21     | 19     |                |                                                        |
|               |                                                                                                        |       | M     |        | 24     | 17     |                |                                                        |
|               | Bombay                                                                                                 | NE    | eP    | 09     | 13     | 49     | 2510           | Slight                                                 |
|               |                                                                                                        | ES    | eS    |        | 20     | 53     |                |                                                        |
|               | Hyderabad                                                                                              | E     | iP    | 09     | 13     | 57     | 2500           | Slight                                                 |
|               |                                                                                                        |       | PP    |        | 17     | 24     |                |                                                        |
|               |                                                                                                        |       | iS    |        | 21     | 00     |                |                                                        |
|               |                                                                                                        |       | Lr    |        | 23     | 00     |                |                                                        |
|               |                                                                                                        |       | M     |        | 24     | 42     |                |                                                        |

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| Date         | Station                                                                                                | Compt  | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                                           |  |
|--------------|--------------------------------------------------------------------------------------------------------|--------|-------|--------|--------|--------|----------------|-------------------------------------------------------------------|--|
| 28<br>Contd. | Bokaro<br>Contd.                                                                                       | E      | SS    | 11     | 20     | 14     |                |                                                                   |  |
|              |                                                                                                        |        | SSS   |        | 22     | 27     |                |                                                                   |  |
|              | Kodaikanal                                                                                             | E      | iP    | 11     | 09     | 26     | 6110           | Slight, initial<br>ground movement<br>East                        |  |
| PP           |                                                                                                        |        |       | 11     | 32     |        |                |                                                                   |  |
| iS           |                                                                                                        |        |       | 17     | 07     |        |                |                                                                   |  |
| S            |                                                                                                        |        |       | 17     | 55     |        |                |                                                                   |  |
| SS           |                                                                                                        |        |       | 20     | 55     |        |                |                                                                   |  |
|              |                                                                                                        |        | SSS   |        | 22     | 43     |                |                                                                   |  |
|              | Madras                                                                                                 | E      | iP    | 11     | 09     | 27     | 6090           | Moderate, initial<br>ground motion East                           |  |
| e            |                                                                                                        |        |       | 09     | 54     |        |                |                                                                   |  |
| PcP          |                                                                                                        |        |       | 10     | 19     |        |                |                                                                   |  |
| PP           |                                                                                                        |        |       | 11     | 35     |        |                |                                                                   |  |
| PPP          |                                                                                                        |        |       | 12     | 47     |        |                |                                                                   |  |
| iS           |                                                                                                        |        |       | 17     | 07     |        |                |                                                                   |  |
| PS           |                                                                                                        |        |       | 17     | 20     |        |                |                                                                   |  |
| e            |                                                                                                        |        |       | 17     | 50     |        |                |                                                                   |  |
| e            |                                                                                                        |        |       | 18     | 31     |        |                |                                                                   |  |
| SS           |                                                                                                        |        |       | 20     | 49     |        |                |                                                                   |  |
|              |                                                                                                        | Lq/SSS |       | 23     | 02     |        |                |                                                                   |  |
|              |                                                                                                        | Lr     |       | 25     | 41     |        |                |                                                                   |  |
|              |                                                                                                        | M      |       | 30     | 40     |        |                |                                                                   |  |
|              | Visakhapatnam                                                                                          | NE     | iP    | 11     | 09     | 28     | 6080           | Moderate, distant,<br>first ground motion<br>North-West.          |  |
| iPcP         |                                                                                                        |        |       | 10     | 26     |        |                |                                                                   |  |
| iPP          |                                                                                                        |        |       | 11     | 27     |        |                |                                                                   |  |
| iS           |                                                                                                        |        |       | 17     | 07     |        |                |                                                                   |  |
| iPS          |                                                                                                        |        |       | 17     | 19     |        |                |                                                                   |  |
|              |                                                                                                        | iPPS   |       | 17     | 30     |        |                |                                                                   |  |
|              | Calcutta                                                                                               | E      | i     | 11     | 09     | 34     |                | Moderate                                                          |  |
| i            |                                                                                                        |        |       | 13     | 47     |        |                |                                                                   |  |
| iS           |                                                                                                        |        |       | 17     | 19     |        |                |                                                                   |  |
|              | Shillong                                                                                               | ZNE    | iP    | 11     | 09     | 43     |                | Moderate, initial<br>ground motion South,<br>East and compression |  |
|              | Tocklai                                                                                                | E      | iP    | 11     | 09     | 55     |                | Moderate, distant                                                 |  |
|              | Port Blair                                                                                             | NE     | iP    | 11     | 10     | 21     | 7240           | Slight, initial<br>ground motion<br>South-West.                   |  |
| RcP          |                                                                                                        |        |       | 10     | 44     |        |                |                                                                   |  |
| PP           |                                                                                                        |        |       | 12     | 49     |        |                |                                                                   |  |
| PPP          |                                                                                                        |        |       | 14     | 22     |        |                |                                                                   |  |
| N            |                                                                                                        |        | eS    |        | 19     | 04     |                |                                                                   |  |
| E            |                                                                                                        |        | iS    |        |        |        |                |                                                                   |  |
| N            | PPS                                                                                                    |        | 19    | 38     |        |        |                |                                                                   |  |
| 28           | Madras                                                                                                 | E      | e     | 20     | 50     | 22     |                | Surface waves                                                     |  |
|              |                                                                                                        |        | e     |        | 54     | 13     |                |                                                                   |  |
|              |                                                                                                        |        | M     |        | 53     | 00     |                |                                                                   |  |
| 28           | Epc: 02.2°S, 67.8°E. North-west of Chagos Islands Region<br>- H = 22h 43m 00.8s. h about 33 km (USCGS) |        |       |        |        |        |                |                                                                   |  |
|              | Bombay                                                                                                 | NE     | eP    | 22     | 50     | 48     | 2550           | Slight                                                            |  |
|              |                                                                                                        |        | N     | PP     |        | 51     | 03             |                                                                   |  |
|              |                                                                                                        |        | NE    | eS     |        | 54     | 54             |                                                                   |  |

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| Date      | Station             | Compt   | Phase | G<br>h | M<br>m | T<br>s | Δ<br>km | Remarks               |
|-----------|---------------------|---------|-------|--------|--------|--------|---------|-----------------------|
| 36        | 23 Bombay<br>Contd. | NE      | iP    | 11     | 08     | 22     | E280    | Moderate              |
|           |                     |         | PP    |        | 10     | 14     |         |                       |
|           |                     |         | PPP   |        | 10     | 45     |         |                       |
|           |                     | E<br>NE | i     |        | 11     | 41     |         |                       |
|           |                     |         | iS    |        | 15     | 05     |         |                       |
|           |                     |         | SS    |        | 15     | 47     |         |                       |
|           |                     |         | SS    |        | 19     | 24     |         |                       |
|           |                     |         | SSS   |        | 19     | 04     |         |                       |
|           |                     |         | i     |        | 20     | 52     |         |                       |
| Poona     |                     | ZNE     | iP    | 11     | 08     | 23     | E230    | Moderate, compression |
|           |                     | ZE      | i     |        | 08     | 49     |         | Initial ground motion |
|           |                     | ZNE     | i     |        | 09     | 02     |         | South and East        |
|           |                     | E       | PcP   |        | 09     | 45     |         |                       |
|           |                     | ZNE     | PP    |        | 10     | 23     |         |                       |
|           |                     |         | PPP   |        | 11     | 02     |         |                       |
|           |                     |         | iS    |        | 15     | 21     |         |                       |
|           |                     | NE      | PS    |        | 15     | 23     |         |                       |
|           |                     | Z       | PPS   |        | 15     | 41     |         |                       |
|           |                     |         | i     |        | 17     | 55     |         |                       |
|           |                     |         | ScS   |        | 20     | 06     |         |                       |
|           |                     |         | Lq    |        | 21     | 54     |         |                       |
|           | Lr                  |         |       |        |        |        |         |                       |
| Shore     |                     | N       |       | 11     | 08     | 28     | E240    | Slight                |
|           |                     | NS      | iP    |        | 09     | 56     |         |                       |
|           |                     |         | PcP   |        | 10     | 23     |         |                       |
|           |                     |         | PP    |        | 11     | 04     |         |                       |
|           |                     | N       | PPP   |        | 15     | 21     |         |                       |
|           |                     | NS      | iS    |        | 18     | 12     |         |                       |
|           | ScS                 |         |       |        |        |        |         |                       |
| Hyderabad |                     | NE      | iP    | 11     | 08     | 56     | E350    | Moderate              |
|           |                     | E       | PP    |        | 10     | 59     |         |                       |
|           |                     |         | PPP   |        | 12     | 08     |         |                       |
|           |                     |         | iS    |        | 16     | 12     |         |                       |
|           |                     | NE      | SS    |        | 19     | 05     |         |                       |
|           |                     | E       | Lr    |        | 23     | 47     |         |                       |
|           |                     |         | Lr    |        | 23     | 50     |         |                       |
|           |                     | N       | M     |        | 27     | 47     |         |                       |
|           |                     |         | M     |        | 28     | 02     |         |                       |
|           |                     | E       |       |        |        |        |         |                       |
| Chatra    |                     | Z       | iP    | 11     | 09     | 15     | E380    | Slight, compression   |
|           |                     |         | PcP   |        | 10     | 15     |         |                       |
|           |                     |         | PP    |        | 11     | 09     |         |                       |
|           |                     |         | PPP   |        | 12     | 19     |         |                       |
|           |                     |         | S     |        | 13     | 42     |         |                       |
|           |                     |         | SSP   |        | 13     | 53     |         |                       |
|           |                     |         | ScS   |        | 18     | 52     |         |                       |
|           |                     |         | SS    |        | 20     | 13     |         |                       |
|           |                     |         | SSS   |        | 22     | 06     |         |                       |
|           |                     |         | eLr   |        | 24     | 24     |         |                       |
|           |                     |         | M     |        | 28     | 29     |         |                       |
|           |                     |         |       |        |        |        |         |                       |
| Bokaro    |                     | NE      | iP    | 11     | 09     | 18     | E390    | Slight, initial       |
|           |                     | E       | PcP   |        | 10     | 10     |         | ground motion         |
|           |                     |         | PP    |        | 11     | 16     |         | South and East.       |
|           |                     |         | PPP   |        | 12     | 28     |         |                       |
|           |                     |         | S     |        | 13     | 47     |         |                       |
|           |                     |         | PS    |        | 13     | 54     |         |                       |
|           | ScS                 |         | 19    | 10     |        |        |         |                       |

Per.=12 secs,  $\mu = 5$   
Per.=12 Secs,  $\mu = 4$

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| Date           | Station                                                                                                                                                       | Compt | Phase    | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |  |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|--------|--------|--------|----------------|------------------------------|--|
| 27             | Poona<br>Contd.                                                                                                                                               | Z     | iP       | 19     | 13     | 48     |                |                              |  |
|                |                                                                                                                                                               |       | e        |        |        | 20     | 48             |                              |  |
|                |                                                                                                                                                               |       | i        |        |        | 21     | 36             |                              |  |
|                |                                                                                                                                                               |       | i        |        |        | 22     | 11             |                              |  |
|                | Shillong                                                                                                                                                      | Z     | iP       | 19     | 17     | 28     |                | Slight, distant, rarefaction |  |
| 27             | Shillong                                                                                                                                                      | Z     | e        | 19     | 21     | 07     |                | Slight, distant              |  |
|                | Madras                                                                                                                                                        | E     | e        | 19     | 22     | 52     |                | Slight                       |  |
|                |                                                                                                                                                               |       | e        |        |        | 24     | 48             |                              |  |
|                |                                                                                                                                                               |       | e        |        |        | 25     | 29             |                              |  |
|                |                                                                                                                                                               |       | e        |        |        | 26     | 26             |                              |  |
| 27             | Shillong                                                                                                                                                      | Z     | e        | 23     | 29     | 17     |                | Slight, distant              |  |
| 28             | Shillong                                                                                                                                                      | Z     | eP       | 03     | 52     | 58     |                | Slight, distant              |  |
| 28             | Epc: 34.2°N, 139.3°E. Near East Coast of Honshu, Japan                                                                                                        |       |          |        |        |        |                |                              |  |
|                | - H = 08h 13m 12.4s. h about 23 km (USCGS)                                                                                                                    |       |          |        |        |        |                |                              |  |
|                | Shillong                                                                                                                                                      | Z     | e        | 08     | 21     | 03     |                | Slight, distant              |  |
|                | Delhi                                                                                                                                                         | Z     | iP       | 08     | 22     | 26     |                | Slight                       |  |
|                | Calcutta                                                                                                                                                      | E     | e        | 08     | 33     | 11     |                | Slight                       |  |
| 28             | Epc: 38°N, 23.1°E. Greece. 1 killed, 11 injured and moderate property damage. Felt: Southern Italy. Sicily, Crete, Malra, Southern Yugoslavia. Mag.=3½ (Pas). |       |          |        |        |        |                |                              |  |
|                | - H = 10h 59m 53.5s. h about 120 km (USCGS)                                                                                                                   |       |          |        |        |        |                |                              |  |
|                | Epc: 39°N, 24.5°E. In Algean Sea. - H = 10h 59m 52s (Shillong)                                                                                                |       |          |        |        |        |                |                              |  |
| Delhi          |                                                                                                                                                               | ZNE   | iP       | 11     | 03     | 08     |                | 5090 Moderate, compression,  |  |
|                |                                                                                                                                                               |       | pP       |        |        | 08     | 34             | first ground motion          |  |
|                |                                                                                                                                                               |       | sP       |        |        | 03     | 43             | South East                   |  |
|                |                                                                                                                                                               | ZE    | i        |        |        | 09     | 00             |                              |  |
|                |                                                                                                                                                               |       | i        |        |        | 09     | 24             |                              |  |
|                |                                                                                                                                                               | ZNE   | PP       |        |        | 10     | 01             |                              |  |
|                |                                                                                                                                                               |       | PPP      |        |        | 10     | 43             |                              |  |
|                |                                                                                                                                                               | N     | PcS, ScP |        |        | 13     | 14             |                              |  |
|                |                                                                                                                                                               | ZNE   | iS       |        |        | 14     | 41             |                              |  |
|                |                                                                                                                                                               | E     | PS       |        |        | 15     | 03             |                              |  |
|                |                                                                                                                                                               |       | PPS      |        |        | 15     | 11             |                              |  |
|                |                                                                                                                                                               | NE    | SS       |        |        | 15     | 21             |                              |  |
|                |                                                                                                                                                               | E     | i        |        |        | 16     | 03             |                              |  |
|                |                                                                                                                                                               | ZNE   | i        |        |        | 16     | 47             |                              |  |
|                |                                                                                                                                                               | NE    | SS, ScS  |        |        | 18     | 02             |                              |  |
|                |                                                                                                                                                               | ZNE   | SS, Lq   |        |        | 18     | 58             |                              |  |
| NE             | Lr                                                                                                                                                            |       |          | 21     | 15     |        |                |                              |  |
| N              | M                                                                                                                                                             |       |          | -      | -      |        |                |                              |  |
| Per. = 48 secs |                                                                                                                                                               |       |          |        |        |        |                |                              |  |
| Dehra Dun      |                                                                                                                                                               | Z     | iP       | 11     | 03     | 10     |                | 5190 Moderate                |  |
|                |                                                                                                                                                               |       | PP       |        |        | 10     | 02             |                              |  |
|                |                                                                                                                                                               | N     | PP       |        |        | 11     | 27             |                              |  |
|                |                                                                                                                                                               |       | iS       |        |        | 15     | 00             |                              |  |
|                |                                                                                                                                                               |       | SS       |        |        | 18     | 41             |                              |  |
|                |                                                                                                                                                               |       | SSS      |        |        | 20     | 45             |                              |  |
|                |                                                                                                                                                               |       | Lr       |        |        | 22     | 33             |                              |  |
|                |                                                                                                                                                               |       | M        |        |        | 26     | 46             |                              |  |

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| Date | Station                                                                                              | Compt     | Phase                             | C  | M  | T                                               | $\Delta$ | Remarks                                                 |
|------|------------------------------------------------------------------------------------------------------|-----------|-----------------------------------|----|----|-------------------------------------------------|----------|---------------------------------------------------------|
|      |                                                                                                      |           |                                   | h  | m  | s                                               | km       |                                                         |
| 26   | Chatra                                                                                               | Z         | iP                                | 11 | 23 | 30                                              |          | Feeble, distant, rarefaction                            |
| 26   | Epc: 34.3°N, 139.3°E. Near East Coast of Honshu, Japan<br>- H = 22h 35m 13.7s. h about 54 km (USCGS) |           |                                   |    |    |                                                 |          |                                                         |
|      | Delhi                                                                                                | Z         | eP                                | 22 | 44 | 26                                              |          | Slight                                                  |
| 26   | Epc: 3.7°S, 140.1°E. New Guinea. - H = 23h 30m 33s<br>h about 50 km (USCGS)                          |           |                                   |    |    |                                                 |          |                                                         |
|      | Dehra Dun                                                                                            | Z         | e                                 | 23 | 41 | 36                                              |          | Tremor                                                  |
|      | Delhi                                                                                                | Z         | iP                                | 23 | 41 | 37                                              |          | Slight, compression                                     |
|      | Poona                                                                                                | Z         | iP                                | 23 | 41 | 41                                              |          | Slight, distant, rarefaction                            |
| 27   | Epc: 40.2°N, 137.8°E. Sea of Japan. - H = 02h 18m 58.8s<br>h about 274 km (USCGS)                    |           |                                   |    |    |                                                 |          |                                                         |
|      | Chatra                                                                                               | Z         | eP                                | 02 | 26 | 42                                              |          | Feeble, distant                                         |
|      | Delhi                                                                                                | Z         | iP                                | 02 | 27 | 31                                              |          | Slight, rarefaction                                     |
| 27   | Epc: 27.1°N, 127.4°E. Ryukyu Islands<br>- H = 15h 17m 56.9s. h about 33 km (USCGS)                   |           |                                   |    |    |                                                 |          |                                                         |
|      | Shillong                                                                                             | Z         | e                                 | 15 | 24 | 15                                              |          | Slight, distant                                         |
| 27   | Epc: 28.2°N, 142.4°E. Off East Coast of Honshu, Japan<br>- H = 16h 20m 04.7s. h about 40 km (USCGS)  |           |                                   |    |    |                                                 |          |                                                         |
|      | Shillong                                                                                             | Z         | iP                                | 16 | 29 | 19                                              |          | Slight, distant, compression                            |
|      | Chatra                                                                                               | Z         | iP<br>S                           | 16 | 29 | 39<br>35 55                                     | 5660     | Slight, compression                                     |
|      | Dehra Dun                                                                                            | Z         | e                                 | 16 | 29 | 19                                              |          | Tremor                                                  |
|      | Delhi                                                                                                | ZNE<br>NE | iP<br>iS                          | 16 | 29 | 28<br>37 15                                     | 6220     | Slight, compression, initial ground motion South, West. |
|      | Poona                                                                                                | Z         | iP                                | 16 | 30 | 22                                              |          | Slight, distant, compression                            |
| 27   | Calcutta                                                                                             | E         | e                                 | 16 | 50 | 16                                              |          | Slight                                                  |
| 27   | Epc: 36.3°N, 70.2°E. Hindukush. - H = 19h 12m 49.9s<br>h about 210 km (USCGS)                        |           |                                   |    |    |                                                 |          |                                                         |
|      | Dehra Dun                                                                                            | Z         | iP<br>PPP<br>iS<br>SS<br>SSS<br>M | 19 | 14 | 57<br>15 09<br>13 24<br>13 45<br>16 57<br>17 34 | 940      | Slight                                                  |
|      | Delhi                                                                                                | ZNE       | iP                                | 19 | 15 | 03                                              | 990      | Slight, rarefaction, initial ground motion North, West. |
|      | Chatra                                                                                               | Z         | iP                                | 19 | 13 | 42                                              |          | Feeble, distant, rarefaction                            |

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| Date         | Station                                                                                                          | Compt  | Phase         | G<br>h | M<br>m | T<br>s        | $\Delta$<br>km | Remarks                                           |
|--------------|------------------------------------------------------------------------------------------------------------------|--------|---------------|--------|--------|---------------|----------------|---------------------------------------------------|
| 25<br>Contd. | Bombay                                                                                                           | E      | e             | 08     | 50     | 12            |                | Slight, near                                      |
|              |                                                                                                                  |        | e             |        | 52     | 21            |                |                                                   |
|              |                                                                                                                  | NE     | e             |        | 55     | 14            |                |                                                   |
|              |                                                                                                                  | E      | e             |        | 57     | 14            |                |                                                   |
|              |                                                                                                                  |        | e             |        | 59     | 21            |                |                                                   |
|              | Calcutta                                                                                                         | E      | i             | 03     | 54     | 18            |                | Slight                                            |
| 25           | Shillong                                                                                                         | Z      | iP<br>iS      | 09     | 48     | 43<br>48      |                | Slight                                            |
| 25           | Shillong                                                                                                         | Z      | eP            | 10     | 04     | 36            |                | Slight, near                                      |
|              | Chatra                                                                                                           | Z      | iP            | 10     | 05     | 34            |                | Feeble, distant, compression                      |
| 25           | Chatra                                                                                                           | Z      | ePg<br>Sg     | 10     | 14     | 50<br>15      | 140            | Feeble                                            |
| 25           | Delhi                                                                                                            | Z      | eP            | 16     | 19     | 01            |                | Slight, compression                               |
| 25           | Shillong                                                                                                         | Z      | e             | 18     | 32     | 45            |                | Slight, distant                                   |
| 25           | Shillong                                                                                                         | Z      | eP<br>iS      | 18     | 33     | 21<br>33      | 230            | Slight                                            |
| 25           | Epc: 36.70°N, 1.3°E. Near Coast of Algeria<br>- H = 19h 53m 47.9s. h about 32 km (USCGS)                         |        |               |        |        |               |                |                                                   |
|              | Delhi                                                                                                            | Z      | eP            | 20     | 09     | 08            |                | Tremor, compression                               |
| 23           | Delhi                                                                                                            | Z      | iP            | 01     | 41     | 54            |                | Tremor, compression                               |
| 26           | Epc: 34°N, 139.2°E. Near East Coast of Honshu, Japan.<br>Felt. Tokyo. - H = 06h 48m 57.1s. h about 38 km (USCGS) |        |               |        |        |               |                |                                                   |
|              | Shillong                                                                                                         | Z      | eP<br>i       | 06     | 53     | 42<br>07      |                | Slight, distant                                   |
|              | Dehra Dun                                                                                                        | Z<br>N | e<br>e        | 06     | 58     | 01<br>07      |                | Feeble,                                           |
|              | Delhi                                                                                                            | Z<br>N | iP<br>iS<br>M | 06     | 58     | 09<br>07<br>- | 5310           | Slight, compression<br>Per.=23 secs, Amp.=36.8 mm |
|              | Poona                                                                                                            | Z      | iP            | 06     | 59     | 04            |                | Slight, distant, compression                      |
|              | Calcutta                                                                                                         | E      | e             | 07     | 04     | 01            |                | Slight                                            |
|              | Madras                                                                                                           | E      | e             | 07     | 06     | 50            |                | Slight                                            |
|              |                                                                                                                  |        | e             |        | 08     | 11            |                |                                                   |
|              |                                                                                                                  |        | e             |        | 14     | 07            |                |                                                   |
|              |                                                                                                                  |        | M             |        | 21     | 47            |                |                                                   |
|              | Bombay                                                                                                           | NE     | e             | 07     | 07     | 35            |                | Slight                                            |
|              |                                                                                                                  |        | e             |        | 14     | 00            |                |                                                   |
|              | Delhi                                                                                                            | Z      | iP            | 03     | 07     | 21            |                | Tremor                                            |
| 26           | Delhi                                                                                                            | Z      | eP            | 03     | 53     | 53            |                | Slight, rarefaction                               |

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| Date | Station                                                                             | Compt   | Phase                  | G<br>h | M<br>m | T<br>s                                 | $\Delta$<br>km | Remarks                      |
|------|-------------------------------------------------------------------------------------|---------|------------------------|--------|--------|----------------------------------------|----------------|------------------------------|
| 25   | Epc: 44.4°N, 148.7°E. Kurile Islands.<br>- H = 00h 29m 04.9s. h about 80 km (USCGS) |         |                        |        |        |                                        |                |                              |
|      | Delhi                                                                               | Z       | iP                     | 00     | 38     | 49                                     |                | Slight, compression          |
| 25   | Delhi                                                                               | Z       | eP                     | 02     | 34     | 31                                     |                | Slight, compression          |
| 25   | Chatra                                                                              | Z       | iP<br>S                | 05     | 07     | 00<br>07 57                            | 530            | Feeble, rarefaction          |
| 25   | Epc: 28.5°N, 87°E. East Nepal. - H = 05h 41m 50s GMT                                |         |                        |        |        |                                        |                |                              |
|      | Chatra                                                                              | Z       | iPg<br>Sg              | 05     | 42     | 15<br>42 32                            | 140            | Slight, local<br>compression |
|      | Shillong                                                                            | Z       | eP<br>iS               | 05     | 43     | 00<br>44 02                            | 590            | Slight                       |
|      | Bokaro                                                                              | NE      | eP<br>i<br>e           | 05     | 43     | 00<br>43 43<br>43 52                   |                | Slight, near                 |
|      | Dehra Dun                                                                           | Z       | eP<br>i                | 05     | 44     | 07<br>45 43                            |                | Feeble                       |
|      | Delhi                                                                               | Z       | eP<br>i                | 05     | 44     | 09<br>45 50                            |                | Slight, rarefaction          |
|      | Calcutta                                                                            | E       | eS                     | 05     | 44     | 39                                     |                | Slight                       |
| 25   | Poona                                                                               | Z       | eP                     | 05     | 48     | 59                                     |                | Slight, distant              |
| 25   | Delhi                                                                               | Z       | iP                     | 07     | 42     | 18                                     |                | Tremor, rarefaction          |
| 25   | Delhi                                                                               | Z       | eP                     | 07     | 42     | 57                                     |                | Slight                       |
| 25   | Epc: 20.5°S, 178.5°W. Fiji Islands<br>- H = 08h 31m 48.7s. h about 561 km (USCGS)   |         |                        |        |        |                                        |                |                              |
|      | Shillong                                                                            | Z<br>ZE | eP<br>i<br>e           | 08     | 44     | 27<br>48 36<br>54 03                   |                | Slight, distant              |
|      | Bokaro                                                                              | E       | e<br>i                 | 08     | 49     | 00<br>54 34                            |                | Slight, distant              |
|      | Virakhapatnam                                                                       | E       | eP<br>e<br>i<br>e<br>e | 08     | 49     | 05<br>50 49<br>54 37<br>57 39<br>58 47 |                | Slight, distant              |
|      | Delhi                                                                               | Z       | iP                     | 08     | 49     | 19                                     |                | Slight, rarefaction          |
|      | Dehra Dun                                                                           | Z<br>N  | eP<br>e<br>e           | 08     | 49     | 19<br>50 11<br>55 13                   |                | Feeble                       |
|      | Poona                                                                               | Z       | eP<br>e<br>e           | 08     | 49     | 41<br>50 06<br>59 06                   |                | Slight, distant              |

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| Date         | Station   | Compt | Phase | G<br>h | M<br>m | T<br>s | Δ<br>km | Remarks                        |    |    |
|--------------|-----------|-------|-------|--------|--------|--------|---------|--------------------------------|----|----|
| 23<br>Contd. | Shillong  | Z     | eP    | 15     | 35     | 23     |         | Slight, distant                |    |    |
|              | Chatra    | Z     | eP    | 15     | 36     | 03     |         | Feeble, distant                |    |    |
|              | Behra Dun | Z     | e     | 15     | 37     | 14     |         | Tremor                         |    |    |
|              | Delhi     | Z     | iP    | 15     | 37     | 17     |         | Slight, compression            |    |    |
| 23           | Delhi     | Z     | iP    | 18     | 43     | 25     |         | Slight, compression            |    |    |
| 23           | Delhi     | Z     | eP    | 19     | 12     | 13     |         | Slight, rarefaction            |    |    |
| 23           | Delhi     | Z     | eP    | 21     | 11     | 40     |         | Slight, rarefaction            |    |    |
| 23           | Chatra    | Z     | iP    | 21     | 25     | 32     |         | Feeble, distant, compression   |    |    |
| 23           | Delhi     | Z     | eP    | 22     | 30     | 55     |         | Slight, compression            |    |    |
| 24           | Shillong  | Z     | eP    | 01     | 28     | 53     |         | Slight                         |    |    |
|              |           |       | iSg   |        |        | 29     |         |                                | 12 |    |
| 24           | Shillong  | Z     | e     | 05     | 45     | 10     |         | Slight, distant                |    |    |
| 24           | Shillong  | Z     | e     | 07     | 03     | 52     |         | Slight, distant                |    |    |
|              |           |       | e     |        |        | 05     |         |                                | 45 |    |
| 24           | Delhi     | Z     | eP    | 09     | 23     | 55     |         | Slight, compression            |    |    |
|              |           |       | e     |        |        | 09     |         |                                | 24 | 01 |
|              | Dehra Dun | Z     | i     |        |        | 23     | 28      | Feeble                         |    |    |
| 24           | Delhi     | Z     | eP    | 10     | 43     | 03     |         | Slight                         |    |    |
|              |           |       | e     |        |        | 10     |         |                                | 43 | 03 |
|              | Dehra Dun | Z     | i     |        |        | 50     | 20      | Feeble                         |    |    |
| 24           | Delhi     | Z     | iP    | 13     | 35     | 13     |         | Slight, rarefaction            |    |    |
| 24           | Chatra    | Z     | iPg   | 14     | 17     | 47     | 130     | Feeble, local, compression     |    |    |
| 24           | Delhi     | Z     | eP    | 14     | 57     | 43     |         | Slight, compression            |    |    |
|              |           |       | e     |        |        | 14     |         |                                | 57 | 51 |
|              |           |       | i     |        |        |        |         |                                | 58 | 15 |
|              | Dehra Dun | Z     | i     |        |        | 59     | 54      | Feeble                         |    |    |
| 24           | Shillong  | Z     | e     | 15     | 05     | 13     |         | Slight, distant                |    |    |
| 24           | Delhi     | Z     | iP    | 15     | 09     | 21     |         | Slight, rarefaction            |    |    |
| 24           | Shillong  | Z     | ePg   | 15     | 53     | 41     | 130     | Slight                         |    |    |
|              |           |       | iSg   |        |        | 53     |         |                                | 53 |    |
| 24           | Shillong  | Z     | e     | 13     | 07     | 07     |         | Slight, distant                |    |    |
| 24           | Shillong  | Z     | iP    | 18     | 36     | 01     |         | Slight, distant<br>compression |    |    |
|              |           |       | e     |        |        |        |         |                                |    |    |
| 24           | Chatra    | Z     | iPg   | 21     | 33     | 30     | 120     | Feeble, near<br>compression    |    |    |
|              |           |       | Sg    |        |        |        |         |                                | 33 | 44 |



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| Date | Station                                                                                           | Compt | Phase | G  | M  | T  | $\Delta$ | Remarks                      |
|------|---------------------------------------------------------------------------------------------------|-------|-------|----|----|----|----------|------------------------------|
|      |                                                                                                   |       |       | h  | m  | s  | km       |                              |
| 21   | Epc: 28.7°S, 176.8°W. Kermadec Island Region<br>- H = 21h 06m 00.1s. (GMT). h about 55 km (USCGS) |       |       |    |    |    |          |                              |
|      | Poona                                                                                             | Z     | e     | 21 | 29 | 40 |          |                              |
|      | Dehra Dun                                                                                         | Z     | e     | 21 | 29 | 57 |          |                              |
|      | Delhi                                                                                             | Z     | e     | 21 | 30 | 00 |          | Slight                       |
|      | Bombay                                                                                            | NE    | e     | 21 | 30 | 11 |          | Slight, distant              |
|      |                                                                                                   |       | e     |    | 37 | 37 |          |                              |
|      |                                                                                                   |       | e     |    | 47 | 54 |          |                              |
|      | Madras                                                                                            | E     | e     | 21 | 32 | 38 |          | Slight, beginning            |
|      |                                                                                                   |       | e     |    | 37 | 32 |          | npt clear.                   |
|      |                                                                                                   |       | e     |    | 44 | 29 |          |                              |
|      |                                                                                                   |       | e     |    | 47 | 10 |          |                              |
|      | Hyderabad                                                                                         | E     | M     | 21 | 55 | 01 |          | Per.=18 secs, $\mu = 6$      |
|      |                                                                                                   | N     | M     |    | 55 | 13 |          | Per.=24 secs, $\mu = 13$     |
| 21   | Shillong                                                                                          | Z     | e     | 22 | 29 | 46 |          | Slight, distant              |
| 22   | Epc: 23.1°N, 142.5°E. Valcano Islands Region<br>- H = 04h 32m 29.1s. h about 29 km (USCGS)        |       |       |    |    |    |          |                              |
|      | Shillong                                                                                          | Z     | iP    | 04 | 40 | 47 |          | Slight, distant, rarefaction |
|      | Delhi                                                                                             | Z     | iP    | 04 | 42 | 18 |          | Slight, compression          |
| 22   | Shillong                                                                                          | Z     | e     | 11 | 23 | 53 |          | Slight, distant              |
| 22   | Shillong                                                                                          | Z     | i     | 17 | 44 | 33 |          | Slight, distant              |
| 22   | Shillong                                                                                          | Z     | i     | 18 | 42 | 43 |          | Slight, distant              |
| 22   | Shillong                                                                                          | Z     | iP    | 18 | 43 | 57 |          | Slight, ldcial               |
| 22   | Dehra Dun                                                                                         | Z     | e     | 19 | 55 | 00 |          | Tremor                       |
|      | Delhi                                                                                             | Z     | eP    | 19 | 55 | 01 |          | Slight, compression          |
| 22   | Epc: 8.3°N, 123.8°E. Mendanao, Philippine Islands.<br>- H = 21h 03m 22.9s. h about 125 km (USCGS) |       |       |    |    |    |          |                              |
|      | Shillong                                                                                          | Z     | eP    | 21 | 15 | 05 |          | Slight, distant              |
|      | Chatra                                                                                            | Z     | eP    | 21 | 15 | 47 |          | Feeble, distant              |
|      | Delhi                                                                                             | Z     | eP    | 21 | 16 | 51 |          | Tremor, compression          |
| 22   | Chatra                                                                                            | Z     | eP    | 21 | 55 | 49 | 320      | Feeble                       |
|      |                                                                                                   |       | eS    |    | 56 | 24 |          |                              |
| 23   | Delhi                                                                                             | Z     | eP    | 02 | 14 | 29 |          | Tremor, compression          |
| 23   | Shillong                                                                                          | Z     | eP    | 13 | 57 | 31 |          | Slight, near                 |
| 23   | Epc: 22.9°N, 120.8°E. Near South Coast of Formosa.<br>- H = 15h 29m 43.3s. h about 17 km (USCGS)  |       |       |    |    |    |          |                              |

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| Date | Station                                                                                  | Compt | Phase | G  | M  | T  | Δ    | Remarks                              |
|------|------------------------------------------------------------------------------------------|-------|-------|----|----|----|------|--------------------------------------|
|      |                                                                                          |       |       | h  | m  | s  | km   |                                      |
| 21   | Epc: 41.4°N, 15.5°E. Italy. About 15 dead, 200 injured, major property damage at Nepal's |       |       |    |    |    |      |                                      |
|      | - H = 18h 19m 33.3s GMT. h about 34 km (USCGS)                                           |       |       |    |    |    |      |                                      |
|      | Visakhapatnam                                                                            | E     | e     | 18 | 27 | 56 |      |                                      |
|      |                                                                                          |       | e     |    | 38 | 22 |      |                                      |
|      | Delhi                                                                                    | NE    | eP    | 18 | 28 | 37 | 5720 | Moderate, rarefaction                |
|      |                                                                                          | Z     | iP    |    | 28 | 37 |      |                                      |
|      |                                                                                          |       | i?    |    | 28 | 42 |      |                                      |
|      |                                                                                          | ZN    | i?    |    | 29 | 06 |      |                                      |
|      |                                                                                          | E     | i     |    | 29 | 24 |      |                                      |
|      |                                                                                          | EZ    | PcP   |    | 29 | 54 |      |                                      |
|      |                                                                                          |       | PP    |    | 30 | 26 |      |                                      |
|      |                                                                                          | E     | PPP   |    | 31 | 33 |      |                                      |
|      |                                                                                          | ZNE   | iS    |    | 35 | 57 |      |                                      |
|      |                                                                                          |       | PS    |    | 36 | 04 |      |                                      |
|      |                                                                                          | NE    | PPS   |    | 36 | 14 |      |                                      |
|      |                                                                                          | E     | i?    |    | 36 | 47 |      |                                      |
|      |                                                                                          | ZNE   | ScS   |    | 38 | 01 |      |                                      |
|      |                                                                                          |       | SS    |    | 39 | 31 |      |                                      |
|      |                                                                                          | ZE    | i?    |    | 40 | 24 |      |                                      |
|      |                                                                                          | N     | SSS   |    | 41 | 13 |      |                                      |
|      |                                                                                          | NE    | Lr    |    | 45 | 02 |      |                                      |
|      |                                                                                          | N     | M     |    | -  | -  |      | Per.=22 secs, Amp.=14.5 mm           |
|      | Bombay                                                                                   | NE    | eP    | 13 | 29 | 07 |      |                                      |
|      |                                                                                          |       | i     |    | 31 | 25 |      |                                      |
|      |                                                                                          |       | eS    |    | 33 | 32 |      |                                      |
|      |                                                                                          |       | e     |    | 33 | 51 |      |                                      |
|      |                                                                                          |       | e     |    | 40 | 15 |      |                                      |
|      |                                                                                          |       | M     |    | 51 | -  |      |                                      |
|      | Shillong                                                                                 | Z     | eP    | 13 | 30 | 02 |      | Slight, distant, rarefaction         |
|      | Madras                                                                                   | E     | eP    | 18 | 20 | 05 | 6370 | Moderate                             |
|      |                                                                                          |       | PP    |    | 32 | 28 |      |                                      |
|      |                                                                                          |       | PPP   |    | 34 | 02 |      |                                      |
|      |                                                                                          |       | eS    |    | 38 | 33 |      |                                      |
|      |                                                                                          |       | PS    |    | 38 | 48 |      |                                      |
|      |                                                                                          |       | e     |    | 39 | 21 |      |                                      |
|      |                                                                                          |       | Lq    |    | 45 | 54 |      |                                      |
|      |                                                                                          |       | Lr    |    | 49 | 49 |      |                                      |
|      |                                                                                          |       | M     |    | 54 | 08 |      |                                      |
|      | Hyderabad                                                                                | E     | M     | 18 | 27 | 30 |      | Per.=3 secs, μ= 3                    |
|      |                                                                                          | N     | M     |    | 27 | 31 |      | Per.=9 secs, μ= 5                    |
| 21   | Epc: 41.2°N, 15.2°E. Italy. - H=18h 44m 53.4s. h about 31 km(USCGS)                      |       |       |    |    |    |      |                                      |
|      | Delhi                                                                                    | Z     | iP    | 18 | 54 | 02 |      | Slight, compression                  |
|      | Shillong                                                                                 | Z     | eP    | 13 | 56 | 05 |      | Slight, distant                      |
|      | Chatra                                                                                   | Z     | iP    | 18 | 56 | 23 |      | Feeble, compression nature uncertain |
|      | Delhi                                                                                    | Z     | eP    | 18 | 57 | 56 |      | Slight                               |

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| Date | Station                                                                                        | Compt     | Phase     | G<br>h | M<br>m | T<br>s      | $\Delta$<br>km | Remarks                                        |
|------|------------------------------------------------------------------------------------------------|-----------|-----------|--------|--------|-------------|----------------|------------------------------------------------|
| 20   | Chatra                                                                                         | Z         | ePg<br>Sg | 09     | 24     | 19          | 210            | Feeble                                         |
|      |                                                                                                |           |           |        | 24     | 54          |                |                                                |
| 20   | Dehra Dun                                                                                      | Z         | e         | 12     | 07     | 38          |                | Tremor                                         |
| 20   | Epc: 12.4°S, 112.1°E. 340 miles south of Java<br>- H = 12h 53m 24.1s. h about 87 km (USCGS)    |           |           |        |        |             |                |                                                |
|      | Shillong                                                                                       | Z         | eP        | 13     | 03     | 14          |                | Slight, distant                                |
|      | Chatra                                                                                         | Z         | eP        | 13     | 06     | 41          |                | Feeble, distant                                |
|      | Delhi                                                                                          | Z         | iP        | 13     | 07     | 31          |                | Slight, rarefaction                            |
| 20   | Shillong                                                                                       | Z         | i         | 14     | 45     | 00          |                | Slight, near                                   |
| 20   | Shillong                                                                                       | Z         | i         | 14     | 45     | 55          |                | Slight, near                                   |
| 20   | Delhi                                                                                          | Z         | iP        | 22     | 39     | 23          |                | Slight, compression                            |
| 20   | Shillong                                                                                       | Z         | iP        | 23     | 31     | 00          |                | Slight, distant, compression                   |
| 21   | Epc: 23.9°N, 121.7°E. Near East Coast of Formosa<br>- H = 04h 23m 23.1s. h about 25 km (USCGS) |           |           |        |        |             |                |                                                |
|      | Shillong                                                                                       | Z         | eP        | 04     | 24     | 10          |                | Slight, distant                                |
|      | Delhi                                                                                          | Z         | eP        | 04     | 26     | 00          |                | Slight                                         |
| 21   | Shillong                                                                                       | Z         | e         | 05     | 09     | 33          |                | Slight, distant                                |
| 21   | Shillong                                                                                       | Z         | iP        | 05     | 42     | 47          |                | Slight, near                                   |
| 21   | Port Blair                                                                                     | N<br>NE   | e<br>e    | 15     | 16     | 41<br>17 07 |                | Slight, near                                   |
| 21   | Shillong                                                                                       | Z         | e         | 15     | 23     | 13          |                | Slight, distant                                |
| 21   | Shillong                                                                                       | Z         | eP        | 15     | 29     | 10          |                | Slight, near                                   |
| 21   | Shillong                                                                                       | Z         | eP        | 16     | 53     | 43          |                | Slight, near                                   |
| 21   | Epc: 41.5°N, 15.4°E. Italy. -H=18h 09m 06.3s. h about 36 km(USCGS)                             |           |           |        |        |             |                |                                                |
|      | Dehra Dun                                                                                      | Z         | e<br>ee   | 18     | 18     | 08<br>28 34 |                | Feeble                                         |
|      | Dehli                                                                                          | ZNE<br>NE | iP<br>iS  | 18     | 18     | 12<br>25 30 | 5690           | Slight, rarefaction, first ground motion North |
|      | Poona                                                                                          | Z         | eP<br>e   | 18     | 13     | 32<br>29 00 |                | Slight                                         |
|      | Bokaro                                                                                         | E         | eP        | 18     | 19     | 10          |                | Slight, distant                                |
|      | Chatra                                                                                         | Z         | iP<br>S   | 18     | 19     | 14<br>27 25 | 6550           | Slight, distant rarefaction                    |
|      | Shillong                                                                                       | Z         | eP        | 18     | 19     | 36          |                | Slight, distant rarefaction                    |

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| Date | Station                                                                          | Compt    | Phase                      | G<br>h | M<br>m | T<br>s                           | $\Delta$<br>km | Remarks                                     |
|------|----------------------------------------------------------------------------------|----------|----------------------------|--------|--------|----------------------------------|----------------|---------------------------------------------|
| 19   | Madras<br>Contd.                                                                 | E        | SS<br>SSS<br>Lr<br>M       | 18     | 40     | 22<br>40<br>41<br>44             |                |                                             |
|      | Port Blair                                                                       | NE<br>E  | iP<br>i<br>PP              | 18     | 32     | 25<br>23<br>24                   | 3770           | Moderate, first ground movement South East. |
|      |                                                                                  | NE<br>E  | iS<br>SS<br>SSS<br>M<br>Mn |        |        | 33<br>34<br>40<br>40<br>44<br>55 |                | Per.=14 secs, $\mu$ =14                     |
| 19   | Shillong                                                                         | Z        | eP                         | 18     | 47     | 34                               |                | Slight, near                                |
|      | Chatra                                                                           | Z        | iP<br>S                    | 18     | 48     | 27<br>48                         | 530            | Slight, rarefaction                         |
| 19   | Chatra                                                                           | Z        | eP<br>Sg                   | 21     | 05     | 15<br>05                         | 160            | Feeble                                      |
| 19   | Epc: 04.5°N, 123.2°E. Celebes Sea. - H = 21h 19m 54.6s<br>h about 552 km (USCGS) |          |                            |        |        |                                  |                |                                             |
|      | Delhi                                                                            | Z        | iP                         | 21     | 27     | 56                               |                | Slight, rarefaction                         |
| 19   | Delhi                                                                            | Z        | iP                         | 23     | 02     | 01                               |                | Tremor, rarefaction                         |
| 19   | POONA                                                                            | Z        | iP<br>i                    | 23     | 32     | 29<br>32                         |                | Slight, distant, compression                |
|      | Delhi                                                                            | Z        | iP<br>i<br>i<br>i          | 23     | 32     | 35<br>32<br>32<br>33             |                | Slight, rarefaction                         |
|      | Dehra Dun                                                                        | Z        | e                          | 23     | 32     | 33                               |                | Tremor                                      |
|      | Shillong                                                                         | Z        | eP                         | 23     | 32     | 50                               |                | Slight, distant, rarefaction                |
| 20   | Chatra                                                                           | Z        | iP                         | 04     | 57     | 18                               |                | Feeble, probably local                      |
| 20   | Dehra Dun                                                                        | Z        | e                          | 05     | 01     | 43                               |                | Tremor                                      |
| 20   | Delhi                                                                            | Z        | iP                         | 06     | 03     | 33                               |                | Slight, compression                         |
| 20   | Chatra                                                                           | Z        | iPg<br>Sg                  | 08     | 39     | 09<br>39                         | 30             | Feeble, local compression                   |
| 20   | Epc: 74.4°N, 51.2°E. Novaya Zemlya. - H = 09h 02m 14.5s<br>h about 00 km (USCGS) |          |                            |        |        |                                  |                |                                             |
|      | Shillong                                                                         | Z        | iP<br>eS                   | 09     | 14     | 17<br>14                         |                | Slight                                      |
|      | Delhi                                                                            | N<br>ZNE | e<br>M                     | 09     | 21     | 03<br>28                         |                | Per.=13 secs, Amp.=3.5 mm                   |

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| Date         | Station       | Compt    | Phase    | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                                     |  |
|--------------|---------------|----------|----------|--------|--------|--------|----------------|---------------------------------------------|--|
| 19<br>Contd. | Sehore        | NE       | iP       | 19     | 31     | 31     | 2400           |                                             |  |
|              |               | E        | PP       |        | 31     | 53     |                |                                             |  |
|              |               |          | PPP      |        | 32     | 05     |                |                                             |  |
|              |               | NE       | eS       |        | 35     | 26     |                |                                             |  |
|              |               | N        | SS       |        | 36     | 02     |                |                                             |  |
|              |               |          | SSS      |        | 36     | 16     |                |                                             |  |
|              |               |          | M        |        | 38     | 27     |                |                                             |  |
|              |               | Calcutta | E        | eP     | 18     | 31     | 41             | 2610                                        |  |
|              |               |          | i        |        | 31     | 56     |                |                                             |  |
|              |               |          | iS       |        | 35     | 52     |                |                                             |  |
|              | Bombay        | N        | eP       | 18     | 32     | 17     | 2950           |                                             |  |
|              |               | NE       | e        |        | 32     | 03     |                |                                             |  |
|              |               | N        | eS       |        | 36     | 51     |                |                                             |  |
|              |               | E        | e        |        | 37     | 12     |                |                                             |  |
|              |               | NE       | Lq       |        | 38     | 00     |                |                                             |  |
|              |               | N        | Lr       |        | 39     | 24     |                |                                             |  |
|              |               | E        | M        |        | 41     | 12     |                | Per. = 7 secs, $\mu$ = 12                   |  |
|              |               | N        | M        |        | 43     | 28     |                | Per. = 15 secs, $\mu$ = 15                  |  |
|              | Poona         | ZN       | iP       | 19     | 32     | 18     | 2960           | Compression, initial<br>ground motion South |  |
|              |               | ZNE      | i        |        | 32     | 33     |                |                                             |  |
|              |               |          | i        |        | 32     | 51     |                |                                             |  |
|              |               | ZN       | PPP      |        | 33     | 05     |                |                                             |  |
|              |               | E        | i        |        | 33     | 23     |                |                                             |  |
|              |               | NE       | iS       |        | 36     | 52     |                |                                             |  |
|              |               |          | i        |        | 37     | 10     |                |                                             |  |
|              |               | N        | Lq       |        | 37     | 33     |                |                                             |  |
|              |               | NE       | SS       |        | 37     | 51     |                |                                             |  |
|              |               | ZN       | SSS      |        | 38     | 12     |                |                                             |  |
|              |               | ZE       | i        |        | 39     | 13     |                |                                             |  |
|              | ZN            | M        |          | 41     | 00     |        |                |                                             |  |
|              | Visakhapatnam | N        | iP       | 18     | 32     | 21     | 3190           | Initial ground<br>motion North              |  |
|              |               | E        | eP       |        |        |        |                |                                             |  |
|              |               | NE       | iPP      |        | 33     | 12     |                |                                             |  |
|              |               |          | iPcP     |        | 35     | 20     |                |                                             |  |
|              |               |          | iS       |        | 37     | 10     |                |                                             |  |
|              |               |          | iSS      |        | 38     | 50     |                |                                             |  |
|              |               |          | iSSS     |        | 39     | 16     |                |                                             |  |
|              |               |          | eLr      |        | 40     | 06     |                |                                             |  |
|              | Hyderabad     | NE       | iP       | 18     | 32     | 24     | 2950           |                                             |  |
|              |               |          | iS       |        | 37     | 23     |                |                                             |  |
|              |               | N        | SS       |        | 39     | 22     |                |                                             |  |
|              |               | E        | M        |        | 43     | 37     |                | Per. = 12 secs, $\mu$ = 9                   |  |
|              |               | N        | M        |        | 43     | 49     |                | Per. = 15 secs, $\mu$ = 16                  |  |
|              | Madras        | E        | eP       | 18     | 33     | 09     | 3330           |                                             |  |
|              |               |          | PP       |        | 34     | 16     |                |                                             |  |
|              |               |          | PPP      |        | 34     | 32     |                |                                             |  |
|              |               |          | PcP      |        | 35     | 56     |                |                                             |  |
|              |               |          | e        |        | 37     | 31     |                |                                             |  |
|              |               |          | iS       |        | 38     | 25     |                |                                             |  |
|              |               |          | PcS, ScP |        | 39     | 39     |                |                                             |  |
|              |               |          | Lq       |        | 40     | 10     |                |                                             |  |

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| Date | Station                                                                                                                                                                             | Compt                                 | Phase                                                         | G<br>h | M<br>m | T<br>s                                                                                       | $\Delta$<br>km | Remarks                                                                       |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------|--------|--------|----------------------------------------------------------------------------------------------|----------------|-------------------------------------------------------------------------------|
| 19   | Shillong                                                                                                                                                                            | Z                                     | ePg<br>eSg                                                    | 14     | 32     | 18<br>32 30                                                                                  | 90             | Slight                                                                        |
| 19   | Chatra                                                                                                                                                                              | Z<br>ZNE                              | iP<br>S                                                       | 14     | 33     | 02<br>33 59                                                                                  | 530            | Slight, rarefaction                                                           |
| 19   | Shillong                                                                                                                                                                            | ZNE<br>NE                             | iPg<br>iSg                                                    | 14     | 33     | 44<br>38 59                                                                                  | 120            | Slight                                                                        |
|      | Chatra                                                                                                                                                                              | Z<br>ZNE                              | iP<br>S                                                       | 14     | 39     | 23<br>40 21                                                                                  | 500            | Feeble, rarefaction                                                           |
| 19   | Delhi                                                                                                                                                                               | Z                                     | iP<br>iS                                                      | 15     | 44     | 20<br>45 53                                                                                  | 950            | Slight, compression                                                           |
| 19   | Shillong                                                                                                                                                                            | Z                                     | ePg                                                           | 15     | 59     | 13                                                                                           | 120            | Slight                                                                        |
| 19   | Epc: 44.6°N, 81.7°E. North West Sinkiang Province.<br>- H = 18h 26m 39.6s. h about 33 km (USCGS). Mag= 3½-6 (Pal)<br>Epc: 44°N, 82°E. Tianshan Region. - H = 18h 26m 40s (Shillong) |                                       |                                                               |        |        |                                                                                              |                |                                                                               |
|      | Dehra Dun                                                                                                                                                                           | Z<br>N                                | eP<br>PP<br>rrr<br>iS<br>SS<br>A                              | 13     | 30     | 02<br>30 16<br>30 27<br>32 39<br>33 09<br>34 31                                              | 1530           |                                                                               |
|      | Delhi                                                                                                                                                                               | ZNE<br>ZN<br>N<br>ZNE<br>E<br>NE<br>N | iP<br>i<br>PP<br>i<br>Lq<br>iS<br>SS<br>SSS<br>i?<br>PcP<br>M | 13     | 30     | 23<br>30 23<br>30 37<br>30 49<br>32 05<br>33 22<br>33 34<br>33 47<br>34 02<br>34 17<br>35 21 | 1910           | Compression, initial ground motion South West<br><br>Per.=13 secs, Amp.=70 mm |
|      | Tocklai                                                                                                                                                                             | E                                     | eP<br>i                                                       | 13     | 31     | 15<br>32 16                                                                                  |                | Distant                                                                       |
|      | Chatra                                                                                                                                                                              | ZNE                                   | iP<br>eS                                                      | 13     | 30     | 43<br>34 17                                                                                  | 2170           | Compression                                                                   |
|      | Shillong                                                                                                                                                                            | ZNE<br>Z                              | iP<br>i                                                       | 18     | 31     | 18<br>32 30                                                                                  |                | Compression, initial ground motion South, East                                |
|      | Bokaro                                                                                                                                                                              | NE<br>N                               | iP<br>PP<br>PPP<br>S<br>SS<br>SSS<br>Lr<br>A                  | 18     | 31     | 24<br>31 41<br>31 45<br>35 13<br>35 43<br>36 04<br>36 23<br>38 19                            | 2320           | Initial ground motion South East                                              |

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| Date | Station                                                                                                                      | Compt | Phase      | G  | M  | T           | $\Delta$ | Remarks                                             |
|------|------------------------------------------------------------------------------------------------------------------------------|-------|------------|----|----|-------------|----------|-----------------------------------------------------|
|      |                                                                                                                              |       |            | h  | m  | s           | km       |                                                     |
| 18   | Epc: 62.3°N, 152.5°W. Central Alaska. Felt.<br>- H = 16h 43m 54.3s. h about 32 km (JSCGS)<br>Mag. = 6 -6½ (Pas), 5½-5½ (Pal) |       |            |    |    |             |          |                                                     |
|      | Delhi                                                                                                                        | Z     | iP<br>i    | 16 | 55 | 55<br>56 07 |          | Compression                                         |
|      | Dehra Dun                                                                                                                    | Z     | e          | 16 | 56 | 00          |          |                                                     |
| 18   | Bokaro                                                                                                                       | NE    | i          | 17 | 06 | 33          |          | Slight, distant, other phases not developed         |
| 18   | Calcutta                                                                                                                     | E     | e          | 17 | 29 | 05          |          | Slight                                              |
| 18   | Delhi                                                                                                                        | Z     | iPg<br>iSg | 17 | 52 | 55<br>53 01 | 60       | Slight, compression                                 |
| 18   | Dehra Dun                                                                                                                    | Z     | e          | 17 | 58 | 21          |          | Tremor                                              |
|      | Delhi                                                                                                                        | ZNE   | iP         | 17 | 58 | 26          |          | Slight, compression, first ground motion South West |
|      | Bokaro                                                                                                                       | N     | i          | 17 | 58 | 35          |          | Tremor                                              |
| 18   | Calcutta                                                                                                                     | E     | e          | 17 | 30 | 24          |          | Slight                                              |
| 18   | Dehra Dun                                                                                                                    | Z     | e          | 21 | 12 | 11          |          | Tremor                                              |
| 18   | Delhi                                                                                                                        | Z     | iP         | 21 | 12 | 30          |          | Slight, rarefaction                                 |
| 18   | Dehra Dun                                                                                                                    | Z     | e          | 21 | 56 | 54          |          | Tremor                                              |
|      | Delhi                                                                                                                        | Z     | eP<br>eS   | 21 | 57 | 12<br>58 43 | 380      | Slight                                              |
| 19   | Delhi                                                                                                                        | Z     | iP         | 00 | 42 | 16          |          | Slight, compression                                 |
|      | Dehra Dun                                                                                                                    | Z     | e          | 00 | 42 | 20          |          | Tremor                                              |
| 19   | Chatra                                                                                                                       | ZNE   | iPg<br>Sg  | 05 | 20 | 57<br>21 18 | 180      | Feeble, near                                        |
|      | Shillong                                                                                                                     | Z     | i          | 05 | 22 | 46          |          | Slight, near                                        |
| 19   | Epc: 34.8°N, 134.8°E. Honshu, Japan.<br>- H = 06h 42m 29.1s. h about 49 km (JSCGS)                                           |       |            |    |    |             |          |                                                     |
|      | Delhi                                                                                                                        | Z     | iP         | 06 | 51 | 10          |          | Slight, compression                                 |
| 19   | Delhi                                                                                                                        | Z     | iP<br>iS   | 08 | 17 | 18<br>18 59 | 990      | Slight, rarefaction                                 |
| 19   | Delhi                                                                                                                        | Z     | iP<br>iS   | 09 | 20 | 32<br>20 53 | 180      | Tremor, compression                                 |
| 19   | Delhi                                                                                                                        | Z     | iP         | 10 | 51 | 50          |          | Slight, compression                                 |
| 19   | Delhi                                                                                                                        | Z     | eP         | 13 | 45 | 25          |          | Slight                                              |

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| Date | Station       | Compt | Phase | G  | M     | T   | Δ    | Remarks                   |
|------|---------------|-------|-------|----|-------|-----|------|---------------------------|
|      |               |       |       | h  | m     | s   | km   |                           |
| 17   | Dehra Dun     | N     | Lq    | 05 | 22    | 51  |      |                           |
|      | Contd.        |       | SSS   |    | 23    | 48  |      |                           |
|      |               |       | Lr    |    | 24    | 55  |      |                           |
|      |               |       | M     |    | 29    | 17  |      |                           |
|      | Delhi         | ZE    | iP    | 05 | 12    | 460 | 4970 | Moderate, Compression     |
|      |               | E     | PP    |    | 14    | 33  |      |                           |
|      |               |       | PPP   |    | 15    | 17  |      |                           |
|      |               | NE    | iS    |    | 19    | 22  |      |                           |
|      |               | ZNE   | Lq    |    | 22    | 55  |      |                           |
|      |               | NE    | Lr    |    | 25    | 52  |      |                           |
|      |               | E     | M     |    | -     | -   |      | Amp= 22 mm                |
|      | Poona         | ZE    | iP    | 05 | 13    | 00  | 4210 | Moderate, rarefaction     |
|      |               |       | PPP   |    | 14    | 13  |      | Initial ground motion     |
|      |               | N     | iS    |    | 19    | 52  |      | East                      |
|      |               | Z     | PS    |    | 20    | 00  |      |                           |
|      |               |       | PPS   |    | 20    | 07  |      |                           |
|      |               |       | SSS   |    | 24    | 25  |      |                           |
|      |               |       | i     |    | 39    | 04  |      |                           |
|      |               |       | An    |    | 34/35 |     |      | Per.=15.7 secs, μ=8.2     |
|      | Bombay        | NE    | eP    | 05 | 13    | 15  | 5150 | Slight                    |
|      |               |       | eS    |    | 20    | 02  |      |                           |
|      |               |       | e     |    | 21    | 25  |      |                           |
|      |               | N     | M     |    | 34    | 13  |      | Per.=15 secs, μ=10        |
|      |               | E     | M     |    | 36    | 00  |      | Per.=15 secs, μ= 3        |
| 17   | Chatra        | Z     | iP    | 05 | 17    | 49  | 180  | Feeble, near, compression |
|      |               |       | Sg    |    | 13    | 10  |      |                           |
| 17   | Visakhapatnam | NE    | e     | 05 | 13    | 07  |      |                           |
|      |               |       | e     |    | 20    | 35  |      |                           |
|      |               |       | e     |    | 21    | 13  |      |                           |
|      |               |       | e     |    | 22    | 53  |      |                           |
|      |               |       | e     |    | 27    | 03  |      |                           |
| 17   | Delhi         | Z     | eP    | 07 | 46    | 04  |      | Slight, compression       |
| 17   | Dehra Dun     | Z     | e     | 14 | 05    | 24  |      | Tremor                    |
|      | Delhi         | Z     | iP    | 14 | 05    | 34  |      | Slight, compression       |
|      |               |       | i     |    | 07    | 14  |      |                           |
| 17   | Chatra        | Z     | iP    | 17 | 42    | 54  |      | Feeble, distant           |
| 17   | Delhi         | Z     | eP    | 21 | 35    | 22  |      | Tremor, compression       |
| 18   | Delhi         | Z     | iP    | 10 | 05    | 06  |      | Slight, compression       |
|      |               |       | i     |    | 05    | 41  |      |                           |
|      |               |       | i     |    | 06    | 02  |      |                           |
| 18   | Shillong      | Z     | iP    | 12 | 59    | 19  | 140  | Slight                    |
|      |               |       | iSg   |    | 59    | 36  |      |                           |
| 18   | Chatra        | Z     | iPg   | 13 | 33    | 25  | 60   |                           |
|      |               |       | Sg    |    | 33    | 32  |      |                           |





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| Date         | Station       | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                   |
|--------------|---------------|-------|-------|--------|--------|--------|----------------|---------------------------|
| 17<br>Contd. | Calcutta      | E     | eP    | 05     | 11     | 22     | 3620           | Moderate                  |
|              |               |       | eS    |        | 16     | 33     |                |                           |
|              |               |       | M     |        | 23     | 40     |                |                           |
|              | Chatra        | Z     | eP    | 05     | 11     | 36     |                | Feeble, distant           |
|              | Bokaro        | E     | iP    | 05     | 11     | 37     | 4070           | Slight, initial           |
|              |               |       | PP    |        | 13     | 01     |                | ground motion West.       |
|              |               |       | PPP   |        | 13     | 23     |                |                           |
|              |               |       | S     |        | 17     | 20     |                |                           |
|              |               |       | i     |        | 17     | 37     |                |                           |
|              |               |       | i     |        | 18     | 21     |                |                           |
|              |               |       | Lq    |        | 19     | 53     |                |                           |
|              |               |       | SS    |        | 20     | 07     |                |                           |
|              |               |       | SSS   |        | 20     | 27     |                |                           |
|              |               |       | Lr    |        | 21     | 54     |                |                           |
|              |               |       | M     |        | 23     | 04     |                |                           |
|              | Visakhapatnam | E     | iP    | 05     | 11     | 49     | 4340           | Moderate, distant,        |
|              |               | N     | eP    |        |        |        |                | first ground              |
|              |               | NE    | PP    |        | 13     | 22     |                | motion East.              |
|              |               |       | PPP   |        | 13     | 47     |                |                           |
|              |               |       | PcS   |        | 17     | 41     |                |                           |
|              |               |       | iS    |        | 17     | 49     |                |                           |
|              |               |       | PS    |        | 17     | 56     |                |                           |
|              |               |       | PFS   |        | 18     | 07     |                |                           |
|              |               |       | SS    |        | 20     | 35     |                |                           |
|              |               |       | SSS   |        | 21     | 13     |                |                           |
|              |               |       | eLr   |        | 25     | 23     |                |                           |
|              |               |       | M     |        | 27     | 03     |                |                           |
|              | Madras        | E     | iP    | 05     | 12     | 11     | 4480           | Moderate, initial         |
|              |               |       | e     |        | 12     | 54     |                | ground motion East        |
|              |               |       | PP    |        | 13     | 53     |                |                           |
|              |               |       | PPP   |        | 14     | 18     |                |                           |
|              |               |       | iS    |        | 13     | 19     |                |                           |
|              |               |       | e     |        | 19     | 32     |                |                           |
|              |               |       | SS    |        | 21     | 14     |                |                           |
|              |               |       | SSS   |        | 21     | 45     |                |                           |
|              |               |       | Lr    |        | 22     | 21     |                |                           |
|              |               |       | M     |        | 26     | 42     |                |                           |
|              | Hyderabad     | E     | iP    | 05     | 12     | 27     |                |                           |
|              |               |       | PP    |        | 13     | 59     |                |                           |
|              |               |       | PcP   |        | 14     | 23     |                |                           |
|              |               |       | PPP   |        | 15     | 06     |                |                           |
|              |               |       | SS    |        | 21     | 55     |                |                           |
|              |               |       | Lq    |        | 22     | 29     |                |                           |
|              |               |       | Lr    |        | 24     | 52     |                |                           |
|              |               | N     | M     |        | 23     | 05     |                | Per. = 15 sec, $\mu$ = 10 |
|              |               | E     | M     |        | 23     | 50     |                | Per. = 12, $\mu$ = 7      |
|              | Kodaikanal    | E     | eP    | 05     | 12     | 33     | 4390           | Moderate, distant         |
|              |               |       | iS    |        | 19     | 09     |                |                           |
|              |               |       | i     |        | 23     | 30     |                |                           |
|              | Dehra Dun     | Z     | eP    | 05     | 12     | 43     | 4920           | Slight                    |
|              |               | N     | PPP   |        | 15     | 09     |                |                           |
|              |               |       | iS    |        | 19     | 21     |                |                           |

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| Date   | Station                                                                                                                                                                       | Compt | Phase                                               | G  | M  | T                                                                         | $\Delta$ | Remarks                                                                                           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------|----|----|---------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------|
|        |                                                                                                                                                                               |       |                                                     | h  | m  | s                                                                         | km       |                                                                                                   |
| 15     | Dehra Dun                                                                                                                                                                     | Z     | e                                                   | 12 | 57 | 25                                                                        |          | Feeble                                                                                            |
| Contd. | Delhi                                                                                                                                                                         | Z     | iP                                                  | 12 | 57 | 32                                                                        |          | Slight, compression                                                                               |
| 15     | Epc: 14.5°N, 55.3°E. Socotra Islands. - H = 13h 08m 42s<br>h about 44 km (USCGS)                                                                                              |       |                                                     |    |    |                                                                           |          |                                                                                                   |
|        | Delhi                                                                                                                                                                         | ZNE   | iP                                                  | 13 | 13 | 48                                                                        |          | Slight, rarefaction, first ground motion North, West                                              |
|        | Chatra                                                                                                                                                                        | Z     | er                                                  | 13 | 15 | 00                                                                        |          | Feeble, distant                                                                                   |
|        | Shillong                                                                                                                                                                      | Z     | eP                                                  | 13 | 15 | 33                                                                        |          | Slight, distant                                                                                   |
| 15     | Delhi                                                                                                                                                                         | Z     | iP                                                  | 13 | 13 | 55                                                                        |          | Slight, rarefaction                                                                               |
| 15     | Dehra Dun                                                                                                                                                                     | Z     | e                                                   | 13 | 53 | 23                                                                        |          | Tremor                                                                                            |
|        | Delhi                                                                                                                                                                         | Z     | iP                                                  | 13 | 53 | 50                                                                        |          | Slight, compression                                                                               |
| 15     | Delhi                                                                                                                                                                         | Z     | iP                                                  | 13 | 53 | 25                                                                        |          | Slight                                                                                            |
| 15     | Shillong                                                                                                                                                                      | Z     | eP<br>Sg                                            | 22 | 33 | 33<br>40 25                                                               | 360      | Slight                                                                                            |
| 15     | Delhi                                                                                                                                                                         | Z     | iP                                                  | 22 | 42 | 10                                                                        |          | Slight, rarefaction                                                                               |
| 15     | Delhi                                                                                                                                                                         | Z     | iP                                                  | 22 | 44 | 41                                                                        |          | Slight, compression                                                                               |
| 16     | Dehra Dun                                                                                                                                                                     | Z     | e                                                   | 12 | 20 | 54                                                                        |          | Tremor                                                                                            |
| 16     | Delhi                                                                                                                                                                         | Z     | iPg                                                 | 13 | 13 | 27                                                                        |          | Compression, local                                                                                |
|        | Dehra Dun                                                                                                                                                                     | Z     | e                                                   | 18 | 13 | 59                                                                        |          |                                                                                                   |
| 17     | Delhi                                                                                                                                                                         | Z     | iP<br>i                                             | 03 | 43 | 13<br>43 21                                                               |          | Slight, compression                                                                               |
|        | Dehra Dun                                                                                                                                                                     | Z     | e                                                   | 03 | 43 | 26                                                                        |          |                                                                                                   |
| 17     | Epc: 10.6°N, 121.6°E. Panay Region, Philippine Island<br>- H = 05h 04m 31.5s. h about 32 km (USCGS)<br>Epc: 12°N, 121.5°E. Philippine Islands<br>- H = 05h 04m 35s (Shillong) |       |                                                     |    |    |                                                                           |          |                                                                                                   |
|        | Port Blair                                                                                                                                                                    | E     | iP<br>PP<br>PPP<br>iS<br>SS<br>SSS<br>Lr<br>M<br>Mn | 05 | 10 | 42<br>11 30<br>11 45<br>15 30<br>16 40<br>17 11<br>17 55<br>20 15<br>25 - | 3170     | Moderate, initial ground motion East<br><br><br><br><br><br><br><br><br>Per. = 13 sec, $\mu = 53$ |
|        | Shillong                                                                                                                                                                      | NE    | iP<br>eS                                            | 05 | 10 | 54<br>13 03                                                               | 3480     | Moderate, initial ground motion West                                                              |

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| Date | Station                                                                                               | Compt | Phase | G<br>h | M<br>m | T<br>s | $\Delta$<br>km | Remarks                      |
|------|-------------------------------------------------------------------------------------------------------|-------|-------|--------|--------|--------|----------------|------------------------------|
| 14   | Dehra Dun                                                                                             | Z     | e     | 18     | 28     | 57     |                | Tremor                       |
|      | Delhi                                                                                                 | Z     | iP    | 18     | 29     | 11     |                | Slight, compression          |
| 14   | Delhi                                                                                                 | Z     | iP    | 18     | 30     | 48     |                | Slight, compression          |
| 14   | Epc: 9.3°S, 110.3°E. Off South Coast of Java<br>- H = 19h 54m 56.6s. h about 182 km (JSCGS)           |       |       |        |        |        |                |                              |
|      | Shillong                                                                                              | Z     | eP    | 20     | 02     | 05     |                | Slight, distant              |
|      | Delhi                                                                                                 | Z     | iP    | 20     | 03     | 31     |                | Slight, rarefaction          |
| 14   | Dehra Dun                                                                                             | Z     | e     | 22     | 00     | 20     |                | Tremor                       |
|      | Delhi                                                                                                 | Z     | iP    | 22     | 00     | 33     | 320            | Slight, rarefaction          |
|      |                                                                                                       |       | Pg    |        | 00     | 43     |                |                              |
|      |                                                                                                       |       | S     |        | 01     | 10     |                |                              |
|      |                                                                                                       |       | Sg    |        | 01     | 21     |                |                              |
| 14   | Dehra Dun                                                                                             | Z     | e     | 22     | 11     | 19     |                | Tremor                       |
| 14   | Shillong                                                                                              | Z     | e     | 22     | 23     | 35     |                | Tremor, distant              |
| 14   | Shillong                                                                                              | Z     | eP    | 23     | 57     | 50     |                | Slight, near                 |
| 15   | Delhi                                                                                                 | Z     | iP    | 05     | 23     | 48     |                | Slight, compression          |
| 15   | Epc: 54.6°N, 161.5°E. Near East Coast of Kamchatka.<br>- H = 08h 19m 37.8s h about 52 km (USCGS)      |       |       |        |        |        |                |                              |
|      | Shillong                                                                                              | Z     | e     | 08     | 23     | 23     |                | Slight, distant              |
|      | Chatra                                                                                                | Z     | eP    | 08     | 29     | 42     |                | Very feeble, distant         |
|      | Delhi                                                                                                 | Z     | iP    | 08     | 30     | 06     |                | Slight, rarefaction          |
| 15   | Epc: 04.7°N, 122.6°E. Celebes Sea. - H = 08h 29m 46.7s.<br>h about 620 km (JSCGS)                     |       |       |        |        |        |                |                              |
|      | Shillong                                                                                              | Z     | iP    | 08     | 36     | 01     |                | Slight, distant, rarefaction |
|      | Delhi                                                                                                 | Z     | iP    | 08     | 37     | 40     |                | Slight, rarefaction          |
| 15   | Chatra                                                                                                | Z     | ePg   | 09     | 18     | 41     | 120            | Feeble                       |
|      |                                                                                                       |       | Sg    |        | 13     | 55     |                |                              |
| 15   | Shillong                                                                                              | Z     | eP    | 10     | 14     | 11     |                | Slight, distant              |
|      | Chatra                                                                                                | Z     | eP    | 10     | 14     | 33     |                | Feeble                       |
|      | Delhi                                                                                                 | Z     | iP    | 10     | 15     | 17     |                | Slight, compression          |
|      |                                                                                                       |       | i     |        | 16     | 57     |                |                              |
| 15   | Epc: 51.3°N, 177°W. Andreanof Islands, Aleutian Islands<br>- H = 11h 20m 44.5s. h about 53 km (USCGS) |       |       |        |        |        |                |                              |
|      | Shillong                                                                                              | Z     | eP    | 11     | 31     | 59     |                | Slight, distant, compression |
|      | Chatra                                                                                                | Z     | iP    | 11     | 32     | 11     |                | Feeble, distant, compression |

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| Date | Station                                                                                   | Compt | Phase    | G  | M  | T           | $\Delta$ | Remarks                             |
|------|-------------------------------------------------------------------------------------------|-------|----------|----|----|-------------|----------|-------------------------------------|
|      |                                                                                           |       |          | h  | m  | s           | km       |                                     |
| 12   | Shillong                                                                                  | Z     | iP       | 02 | 09 | 23          |          | Slight, near                        |
| 12   | Epc: 37.5°N, 30.7°E. Turkey. - H = 04h 49m 28.4s<br>h about 33 km (USCGS)                 |       |          |    |    |             |          |                                     |
|      | Delhi                                                                                     | Z     | iP       | 04 | 56 | 58          |          | Slight, compression                 |
| 12   | Shillong                                                                                  | Z     | eP       | 11 | 22 | 27          |          | Slight, distant                     |
| 13   | Delhi                                                                                     | Z     | iP<br>iS | 01 | 08 | 35<br>10 12 | 390      | Slight, compression                 |
| 13   | Dehra Dun                                                                                 | Z     | e        | 06 | 55 | 24          |          | Tremor                              |
|      | Delhi                                                                                     | Z     | iP       | 06 | 55 | 30          |          | Slight, compression                 |
|      | Chatra                                                                                    | Z     | iP       | 06 | 55 | 47          |          | Feeble, distant, rarefaction        |
|      | Poona                                                                                     | Z     | iP       | 06 | 55 | 48          |          | Slight, distant, compression        |
|      | Shillong                                                                                  | Z     | eP       | 06 | 55 | 49          |          | Slight, distant                     |
| 13   | Shillong                                                                                  | Z     | eP       | 14 | 52 | 23          |          | Slight, distant, rarefaction        |
|      | Delhi                                                                                     | Z     | iP       | 14 | 54 | 01          |          | Slight, rarefaction                 |
| 13   | Shillong                                                                                  | Z     | iP       | 18 | 59 | 00          |          | Slight, near                        |
| 13   | Chatra                                                                                    | Z     | eP       | 18 | 59 | 55          |          | Feeble, distant                     |
| 13   | Shillong                                                                                  | Z     | eP       | 19 | 00 | 23          |          | Slight, distant                     |
| 13   | Epc: 51.9°N, 110.2°E. Buryatskaya, S. S. R.<br>- H = 20h 11m 36.1s. h about 33 km (USCGS) |       |          |    |    |             |          |                                     |
|      | Chatra                                                                                    | Z     | iP       | 20 | 17 | 57          |          | Very feeble, distant<br>compression |
|      | Dehra Dun                                                                                 | Z     | e        | 20 | 18 | 07          |          | Tremor                              |
|      | Delhi                                                                                     | Z     | iP       | 20 | 18 | 21          |          | Slight                              |
| 14   | Dehra Dun                                                                                 | Z     | e        | 01 | 08 | 24          |          | Tremor                              |
| 14   | Delhi                                                                                     | Z     | iP       | 07 | 32 | 04          |          | Slight, rarefaction                 |
|      | Dehra Dun                                                                                 | Z     | e        | 07 | 32 | 12          |          | Feeble                              |
|      | Chatra                                                                                    | Z     | eP       | 07 | 33 | 37          |          | Feeble, distant                     |
| 14   | Dehra Dun                                                                                 | Z     | e        | 11 | 10 | 17          |          | Tremor                              |
| 14   | Dehra Dun                                                                                 | Z     | e        | 12 | 33 | 47          |          | Tremor                              |
| 14   | Dehra Dun                                                                                 | Z     | e        | 16 | 04 | 27          |          | Tremor                              |
| 14   | Delhi                                                                                     | Z     | iP<br>iS | 16 | 04 | 49<br>06 10 | 780      | Slight, compression                 |

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MICROSEISMIC TABULATION

| Date              | Hour | K   | Mean Amplitude | Mean Period | Date              | Hour | K   | Mean Amplitude | Mean Period |
|-------------------|------|-----|----------------|-------------|-------------------|------|-----|----------------|-------------|
|                   | GMT  |     | in mm          | in sec      |                   | GMT  |     | in mm          | in sec      |
| Station: Shillong |      |     |                |             | Station: Shillong |      |     |                |             |
| 01                | 00   | 3   | 0.3            | 4.5         | 13                | 00   | 3   | 0.2            | 4.5         |
|                   | 06   | ... | ...            | ...         |                   | 06   | 3   | 0.3            | 4.5         |
|                   | 12   | 3   | 0.3            | 4.5         |                   | 12   | 3   | 0.3            | 4.4         |
|                   | 18   | 3   | 0.3            | 4.6         |                   | 18   | 3   | 0.3            | 4.8         |
| 02                | 00   | 3   | 0.3            | 4.2         | 14                | 00   | 3   | 0.4            | 5.0         |
|                   | 06   | 3   | 0.3            | 4.3         |                   | 06   | 3   | 0.4            | 4.8         |
|                   | 12   | 3   | 0.3            | 4.6         |                   | 12   | 3   | 0.4            | 5.0         |
|                   | 18   | 3   | 0.2            | 4.4         |                   | 18   | 3   | 0.3            | 4.4         |
| 03                | 00   | 3   | 0.3            | 4.3         | 15                | 00   | 3   | 0.2            | 4.0         |
|                   | 06   | 3   | 0.3            | 4.7         |                   | 06   | 3   | 0.2            | 4.0         |
|                   | 12   | 3   | 0.3            | 4.9         |                   | 12   | 3   | 0.2            | 4.0         |
|                   | 18   | ... | ...            | ...         |                   | 18   | 3   | 0.2            | 4.2         |
| 04                | 00   | 3   | 0.3            | 4.2         | 16                | 00   | 3   | 0.2            | 4.2         |
|                   | 06   | ... | ...            | ...         |                   | 06   | 3   | 0.2            | 4.5         |
|                   | 12   | 3   | 0.3            | 4.4         |                   | 12   | 3   | 0.3            | 5.0         |
|                   | 18   | 3   | 0.3            | 4.8         |                   | 18   | 3   | 0.3            | 5.0         |
| 05                | 00   | 3   | 0.3            | 4.5         | 17                | 00   | ... | ...            | ...         |
|                   | 06   | 3   | 0.3            | 4.5         |                   | 06   | ... | ...            | ...         |
|                   | 12   | 3   | 0.3            | 4.3         |                   | 12   | 3   | 0.3            | 5.2         |
|                   | 18   | ... | ...            | ...         |                   | 18   | ... | ...            | ...         |
| 06                | 00   | ... | ...            | ...         | 18                | 00   | 3   | 0.3            | 5.5         |
|                   | 06   | 3   | 0.3            | 4.3         |                   | 06   | 3   | 0.3            | 5.6         |
|                   | 12   | 3   | 0.3            | 5.0         |                   | 12   | 3   | 0.2            | 5.0         |
|                   | 18   | 3   | 0.3            | 4.6         |                   | 18   | ... | ...            | ...         |
| 07                | 00   | ... | ...            | ...         | 19                | 00   | 3   | 0.2            | 4.8         |
|                   | 06   | 3   | 0.3            | 4.8         |                   | 06   | 3   | 0.3            | 5.2         |
|                   | 12   | 3   | 0.3            | 4.9         |                   | 12   | 3   | 0.2            | 4.5         |
|                   | 18   | 3   | 0.3            | 4.7         |                   | 18   | 3   | 0.2            | 5.0         |
| 08                | 00   | 3   | 0.3            | 4.5         | 20                | 00   | 3   | 0.2            | 5.4         |
|                   | 06   | 3   | 0.3            | 4.5         |                   | 06   | 3   | 0.3            | 5.7         |
|                   | 12   | 3   | 0.3            | 4.5         |                   | 12   | 3   | 0.3            | 5.3         |
|                   | 18   | 3   | 0.3            | 5.0         |                   | 18   | 3   | 0.2            | 5.5         |
| 09                | 00   | 3   | 0.3            | 5.0         | 21                | 00   | 3   | 0.2            | 4.7         |
|                   | 06   | 3   | 0.3            | 4.6         |                   | 06   | 3   | 0.2            | 5.2         |
|                   | 12   | 3   | 0.3            | 4.5         |                   | 12   | 3   | 0.2            | 4.6         |
|                   | 18   | 3   | 0.3            | 4.5         |                   | 18   | 3   | 0.2            | 5.4         |
| 10                | 00   | 3   | 0.3            | 4.3         | 22                | 00   | 3   | 0.2            | 4.6         |
|                   | 06   | 3   | 0.3            | 5.1         |                   | 06   | 3   | 0.3            | 6.0         |
|                   | 12   | 3   | 0.3            | 4.6         |                   | 12   | 3   | 0.3            | 5.2         |
|                   | 18   | 3   | 0.3            | 4.5         |                   | 18   | 3   | 0.2            | 4.3         |
| 11                | 00   | 3   | 0.3            | 4.8         | 23                | 00   | 3   | 0.2            | 4.5         |
|                   | 06   | 3   | 0.2            | 4.6         |                   | 06   | 3   | 0.2            | 6.0         |
|                   | 12   | 3   | 0.2            | 4.3         |                   | 12   | 3   | 0.2            | 5.3         |
|                   | 18   | 3   | 0.2            | 4.5         |                   | 18   | 3   | 0.2            | 5.5         |
| 12                | 00   | 3   | 0.2            | 4.5         | 24                | 00   | 3   | 0.2            | 4.7         |
|                   | 06   | 3   | 0.3            | 4.5         |                   | 06   | 3   | 0.3            | 4.1         |
|                   | 12   | 3   | 0.3            | 4.5         |                   | 12   | 3   | 0.3            | 4.1         |
|                   | 18   | 3   | 0.2            | 4.5         |                   | 18   | 3   | 0.2            | 4.3         |

Date Hour K Mean Mean  
GMT Amplitude Period  
..... in mm ..... in sec

Date Hour K Mean Mean  
GMT Amplitude Period  
..... in mm ..... in sec

Station: Shillong

Station: Shillong

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 25 | 00 | 3   | 0.3 | 4.6 |
|    | 06 | 3   | 0.3 | 4.5 |
|    | 12 | 3   | 0.3 | 4.6 |
|    | 18 | 3   | 0.3 | 4.6 |
| 26 | 00 | 3   | 0.3 | 4.3 |
|    | 06 | 3   | 0.3 | 4.2 |
|    | 12 | 3   | 0.3 | 4.5 |
|    | 18 | ... | ... | ... |
| 27 | 00 | ... | ... | ... |
|    | 06 | 3   | 0.3 | 4.5 |
|    | 12 | 3   | 0.3 | 4.5 |
|    | 18 | 3   | 0.3 | 5.3 |
| 28 | 00 | 3   | 0.3 | 5.2 |
|    | 06 | 3   | 0.3 | 4.3 |
|    | 12 | ... | ... | ... |
|    | 18 | ... | ... | ... |
| 29 | 00 | ... | ... | ... |
|    | 06 | 3   | 0.2 | 4.3 |
|    | 12 | 3   | 0.3 | 4.3 |
|    | 18 | 3   | 0.3 | 5.0 |
| 30 | 00 | 3   | 0.3 | 4.3 |
|    | 06 | 3   | 0.3 | 4.2 |
|    | 12 | 3   | 0.3 | 4.3 |
|    | 18 | 3   | 0.3 | 4.5 |
| 31 | 00 | 3   | 0.3 | 4.4 |
|    | 06 | 3   | 0.3 | 4.3 |
|    | 12 | 3   | 0.3 | 5.8 |
|    | 18 | ... | ... | ... |

|    |       |     |     |     |
|----|-------|-----|-----|-----|
| 11 | 00    | 3   | 0.3 | 3.4 |
|    | 06    | 3   | 0.3 | 3.2 |
|    | 12    | 3   | 0.3 | 3.2 |
|    | 18    | 3   | 0.4 | 3.2 |
| 12 | 00    | 3   | 0.4 | 3.2 |
|    | 06    | 3   | 0.4 | 3.4 |
|    | 12    | 3   | 0.4 | 3.4 |
|    | 18    | 3   | 0.4 | 4.0 |
| 13 | 00    | 3   | 0.4 | 4.2 |
|    | 06    | 3   | 0.5 | 4.4 |
|    | 12    | 3   | 0.5 | 4.2 |
|    | 18    | 3   | 0.5 | 4.2 |
| 14 | 00    | 3   | 0.4 | 4.0 |
|    | 06    | 3   | 0.5 | 4.5 |
|    | 12    | 3   | 0.5 | 4.5 |
|    | 18    | 3   | 0.3 | 4.5 |
| 15 | 00    | 3   | 0.5 | 4.0 |
|    | 06    | 3   | 0.5 | 4.0 |
|    | 12    | 3   | 0.6 | 4.5 |
|    | 18    | 3   | 0.5 | 4.2 |
| 16 | 00    | 3   | 0.5 | 4.5 |
|    | 06    | 3   | 0.6 | 4.7 |
|    | 12    | 3   | 0.5 | 4.0 |
|    | 18    | 3   | 0.5 | 4.5 |
| 17 | 00    | 3   | 0.6 | 5.0 |
|    | 06    | ... | -   | -   |
|    | 12    | 3   | 0.5 | 4.3 |
|    | 18    | 3   | 0.5 | 4.5 |
| 18 | 00    | 3   | 0.5 | 4.2 |
|    | 06    | 0,0 | -   | -   |
|    | 12    | 0,0 | -   | -   |
|    | 18    | 3   | 0.4 | 3.0 |
| 19 | 00    | 3   | 0.4 | 4.5 |
|    | 06    | 3   | 0.4 | 4.2 |
|    | 12    | 3   | 0.3 | 3.7 |
|    | 18    | 0,0 | -   | -   |
| 20 | 00 to |     |     |     |
|    | 18    | 0,0 | -   | -   |
| 21 | 00    | 0,0 | -   | -   |
|    | 06    | 3   | 0.4 | 4.0 |
|    | 12    | 3   | 0.4 | 4.0 |
|    | 18    | 3   | 0.4 | 3.3 |
| 22 | 00    | 3   | 0.4 | 3.3 |
|    | 06 to |     |     |     |
|    | 18    | ... | -   | -   |

Station: Bokaro

|    |       |     |     |     |
|----|-------|-----|-----|-----|
| 07 | 00    | 0,0 | -   | -   |
|    | 06    | 3   | 0.5 | 4.8 |
|    | 12    | 3   | 0.5 | 4.3 |
|    | 18    | 3   | 0.5 | 4.5 |
| 08 | 00    | 3   | 0.5 | 4.6 |
|    | 06    | 3   | 0.3 | 4.0 |
|    | 12    | 3   | 0.3 | 4.0 |
|    | 18    | 3   | 0.4 | 4.0 |
| 09 | 00    | 3   | 0.4 | 4.0 |
|    | 06    | 3   | 0.3 | 3.3 |
|    | 12    | 3   | 0.3 | 4.0 |
|    | 18    | 3   | 0.3 | 4.0 |
| 10 | 00    | 3   | 0.3 | 3.3 |
|    | 06 to |     |     |     |
|    | 18    | 3   | 0.3 | 3.4 |

August 1962

Date Hour K Mean Amplitude Mean Period  
GMT in mm in sec

Date Hour K Mean Amplitude Mean Period  
GMT in mm in sec

Station: Bokaro (Contd.)

Station: Madras

|    |       |     |     |     |
|----|-------|-----|-----|-----|
| 23 | 00    | ... | -   | -   |
|    | 06    | 3   | 0.3 | 3.0 |
|    | 12    | 3   | 0.3 | 2.0 |
|    | 18    | ... | -   | -   |
| 24 | 00    | 3   | 0.4 | 3.2 |
|    | 06    | 3   | 0.4 | 3.4 |
|    | 12    | 3   | 0.4 | 3.5 |
|    | 18    | 3   | 0.4 | 4.0 |
| 25 | 00    | 3   | 0.4 | 3.3 |
|    | 06    | 3   | 0.4 | 3.3 |
|    | 12    | 3   | 0.4 | 3.2 |
|    | 18    | 3   | 0.4 | 3.2 |
| 26 | 00    | 3   | 0.4 | 3.2 |
|    | 03    | 3   | 0.4 | 3.5 |
|    | 12    | 0,0 | -   | -   |
|    | 18    | 3   | 0.4 | 3.2 |
| 27 | 00    | 3   | 0.4 | 3.0 |
|    | 06    | 3   | 0.4 | 3.2 |
| 28 | 00    | 3   | 0.4 | 3.2 |
|    | 06    | 3   | 0.3 | 4.0 |
|    | 12    | ... | -   | -   |
|    | 18    | 3   | 0.5 | 4.0 |
| 29 | 00    | 3   | 0.4 | 4.0 |
|    | 06    | 3   | 0.4 | 4.0 |
|    | 12    | 0,0 | -   | -   |
|    | 18    | 3   | 0.2 | 3.2 |
| 30 | 00    | 3   | 0.5 | 4.5 |
|    | 06    | 3   | 0.3 | 3.0 |
|    | 12    | 0,0 | -   | -   |
|    | 18    | 0,0 | -   | -   |
| 31 | 00    | 3   | 0.3 | 3.5 |
|    | 06 to |     |     |     |
|    | 18    | 0,0 | -   | -   |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 02 | 00 | 3 | 1.0 | 4.4 |
|    | 3  | 3 | 0.5 | 2.8 |
|    | 03 | 3 | 0.9 | 4.5 |
|    |    | 3 | 0.3 | 2.7 |
|    | 06 | 3 | 1.1 | 4.4 |
|    |    | 3 | 0.6 | 2.3 |
|    | 12 | 1 | 1.3 | 4.6 |
|    |    | 1 | 0.7 | 2.9 |
|    |    | 3 | 0.1 | 1.7 |
|    | 18 | 1 | 1.4 | 4.7 |
|    |    | 1 | 0.7 | 2.7 |
| 03 | 00 | 3 | 1.4 | 4.6 |
|    |    | 1 | 1.0 | 2.9 |
|    | 03 | 1 | 1.4 | 4.3 |
|    |    | 1 | 0.8 | 2.9 |
|    | 03 | 1 | 1.3 | 4.6 |
|    |    | 3 | 0.6 | 2.7 |
|    | 12 | 1 | 1.4 | 4.7 |
|    |    | 1 | 0.7 | 2.7 |
|    | 18 | 1 | 1.4 | 4.7 |
|    |    | 1 | 0.7 | 2.7 |
| 04 | 00 | 1 | 1.3 | 4.7 |
|    |    | 3 | 0.6 | 2.7 |
|    | 03 | 1 | 1.4 | 4.3 |
|    |    | 3 | 0.5 | 2.8 |
|    | 06 | 1 | 1.4 | 4.8 |
|    | 12 | 1 | 1.4 | 5.0 |
|    | 18 | 1 | 1.5 | 5.1 |
| 05 | 00 | 1 | 1.4 | 4.7 |
|    | 03 | 3 | 1.4 | 4.9 |
|    |    | 3 | 0.4 | 2.6 |
|    | 06 | 3 | 1.4 | 4.3 |
|    | 12 | 3 | 1.3 | 5.0 |
|    |    | 3 | 0.5 | 2.7 |
|    | 18 | 3 | 1.3 | 4.3 |
|    |    | 3 | 0.5 | 2.7 |
| 06 | 00 | 3 | 1.2 | 4.7 |
|    |    | 3 | 0.5 | 2.7 |
|    | 03 | 3 | 1.2 | 4.7 |
|    |    | 3 | 0.6 | 2.7 |
|    | 06 | 3 | 1.2 | 4.7 |
|    |    | 3 | 1.3 | 4.3 |
|    | 12 | 3 | 1.3 | 4.5 |
|    |    | 3 | 0.6 | 2.7 |
|    | 18 | 3 | 1.4 | 4.5 |
|    |    | 3 | 0.6 | 3.0 |
| 07 | 00 | 3 | 1.4 | 4.3 |
|    |    | 3 | 0.5 | 2.6 |
|    | 03 | 3 | 1.3 | 4.6 |
|    |    | 1 | 0.6 | 2.6 |

Station: Madras

|    |    |     |            |     |
|----|----|-----|------------|-----|
| 01 | 00 | 3   | 0.6        | 4.3 |
|    |    | 3   | 0.4        | 2.7 |
|    | 03 | 3   | 0.6        | 4.4 |
|    |    | 3   | 0.4        | 2.5 |
|    |    | 3   | 0.2        | 1.8 |
|    | 06 | ... | Earthquake |     |
|    | 12 | 3   | 0.7        | 4.0 |
|    |    | 3   | 0.5        | 2.7 |
|    | 18 | 3   | 0.9        | 4.5 |
|    |    | 3   | 0.5        | 2.7 |

| Date                           | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec | Date                  | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec |
|--------------------------------|----------|---|----------------------|--------------------|-----------------------|----------|-----|----------------------|--------------------|
| <i>Station Madras (Contd.)</i> |          |   |                      |                    | <i>Station Madras</i> |          |     |                      |                    |
| 07                             | 03       | 1 | 1.4                  | 4.9                | 13                    | 13       | 3   | 0.8                  | 4.5                |
| Contd.                         |          | 1 | 0.8                  | 2.8                |                       |          | 3   | 0.7                  | 3.9                |
|                                | 12       | 1 | 1.4                  | 4.3                |                       |          | 3   | 0.4                  | 2.6                |
|                                |          |   | 0.3                  | 2.9                |                       |          |     |                      |                    |
|                                | 13       | 1 | 1.4                  | 4.3                | 14                    | 00       | 3   | 0.7                  | 4.5                |
|                                |          | 3 | 0.7                  | 2.3                |                       |          | 3   | 0.6                  | 2.5                |
| 08                             | 00       | 3 | 1.3                  | 4.3                |                       |          | 3   | 0.4                  | 2.7                |
|                                |          | 3 | 0.6                  | 2.3                | 03                    | 03       | 3   | 0.7                  | 4.5                |
|                                | 03       | 1 | 1.3                  | 4.7                |                       |          | 3   | 0.3                  | 2.5                |
|                                |          | 3 | 0.5                  | 2.6                | 06                    | 03       | 3   | 0.8                  | 4.4                |
|                                | 03       | 1 | 1.2                  | 4.4                |                       |          | 3   | 0.5                  | 2.7                |
|                                |          | 3 | 0.4                  | 2.4                | 12                    | 03       | 3   | 0.9                  | 4.7                |
|                                | 12       | 1 | 1.3                  | 4.5                |                       |          | 3   | 0.4                  | 2.3                |
|                                |          | 3 | 0.6                  | 2.8                | 13                    | 13       | 1   | 1.0                  | 4.7                |
|                                | 18       | 1 | 1.4                  | 5.0                | 15                    | 00       | 1   | 1.0                  | 4.6                |
| 09                             | 00       | 1 | 1.4                  | 5.0                |                       | 03       | 1   | 1.0                  | 4.7                |
|                                |          | 3 | 0.3                  | 2.6                |                       | 06       | 1   | 1.1                  | 4.6                |
|                                | 03       | 1 | 1.3                  | 4.9                |                       | 12       | 1   | 1.1                  | 4.7                |
|                                | 03       | 1 | 1.2                  | 5.2                |                       | 18       | 1   | 1.1                  | 4.7                |
|                                | 12       | 1 | 1.3                  | 4.9                | 16                    | 00       | 1   | 1.1                  | 4.7                |
|                                | 13       | 1 | 1.2                  | 4.9                |                       | 03       | 1   | 1.1                  | 4.8                |
| 10                             | 00       | 1 | 1.2                  | 5.0                |                       | 06       | 1   | 1.1                  | 4.6                |
|                                | 03       | 1 | 1.3                  | 5.2                |                       | 12       | 1   | 1.2                  | 4.7                |
|                                | 03       | 1 | 1.2                  | 4.9                |                       | 18       | 1   | 1.1                  | 4.7                |
|                                |          | 3 | 0.4                  | 2.3                | 17                    | 00       | 1   | 1.0                  | 4.8                |
|                                | 12       | 1 | 1.1                  | 4.3                |                       | 03       | 1   | 0.9                  | 4.6                |
|                                |          | 3 | 0.5                  | 3.1                |                       | 06       | ... | Earthquake           |                    |
|                                | 18       | 1 | 1.2                  | 5.1                |                       | 12       | 1   | 0.9                  | 4.7                |
|                                |          |   |                      |                    |                       | 18       | 1   | 0.3                  | 4.6                |
| 11                             | 00       | 1 | 1.2                  | 4.9                | 18                    | 00       | 1   | p.7                  | 4.5                |
|                                | 03       | 1 | 1.1                  | 4.9                |                       |          | 3   | 0.1                  | 1.7                |
|                                | 06       | 1 | 1.0                  | 4.5                |                       | 03       | 1   | 0.7                  | 4.4                |
|                                | 12       | 1 | 1.0                  | 4.7                |                       | 03       | 1   | 0.7                  | 4.4                |
|                                | 18       | 1 | 1.0                  | 4.5                |                       | 12       | 1   | 0.8                  | 4.4                |
| 12                             | 00       | 3 | 0.8                  | 4.5                |                       | 18       | 1   | 0.7                  | 4.4                |
|                                | 03       | 3 | 0.8                  | 4.5                | 19                    | 00       | 1   | 0.7                  | 4.4                |
|                                |          | 3 | 0.4                  | 2.6                |                       |          | 3   | 0.2                  | 2.1                |
|                                | 06       | 3 | 0.7                  | 4.5                |                       | 03       | 1   | 0.7                  | 4.3                |
|                                |          | 3 | 0.5                  | 2.7                |                       |          | 3   | 0.2                  | 2.2                |
|                                | 12       | 3 | 1.0                  | 5.1                |                       | 06       | 1   | 0.7                  | 4.3                |
|                                |          | 3 | 0.6                  | 2.9                |                       |          | 3   | 0.2                  | 2.1                |
|                                | 18       | 3 | 1.0                  | 5.0                |                       | 12       | 1   | 0.6                  | 4.3                |
|                                |          | 3 | 0.5                  | 2.9                |                       | 18       | 1   | 0.6                  | 4.5                |
| 13                             | 00       | 3 | 0.9                  | 4.7                | 20                    | 00       | 3   | 0.6                  | 4.3                |
|                                |          | 3 | 0.5                  | 2.7                |                       |          | 3   | 0.1                  | 1.8                |
|                                | 03       | 3 | 0.9                  | 4.6                |                       | 03       | 3   | 0.5                  | 4.4                |
|                                |          | 3 | 0.5                  | 2.5                |                       | 06       | 3   | 0.5                  | 4.3                |
|                                | 06       | 3 | 0.9                  | 4.5                |                       | 12       | 3   | 0.5                  | 4.3                |
|                                |          | 3 | 0.4                  | 2.7                |                       | 13       | 3   | 0.4                  | 4.3                |
|                                | 12       | 3 | 0.7                  | 4.6                |                       |          |     |                      |                    |
|                                |          | 3 | 0.5                  | 2.9                |                       |          |     |                      |                    |



August 1962

47

| Date                            | Hour GMT | K   | Mean Amplitude in mm | Mean Period in sec | Date                             | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|---------------------------------|----------|-----|----------------------|--------------------|----------------------------------|----------|---|----------------------|--------------------|
| <i>Station: Madras (Contd.)</i> |          |     |                      |                    | <i>Station: Madras</i>           |          |   |                      |                    |
| 21                              | 00       | 3   | 0.4                  | 4.3                | 28                               | 18       | 1 | 0.5                  | 3.9                |
|                                 |          | 3   | 0.2                  | 2.1                | Contd.                           |          | 3 | 0.1                  | 1.7                |
|                                 | 03       | 3   | 0.2                  | 2.5                | 29                               | 00       | 3 | 0.5                  | 3.7                |
|                                 | 06       | 3   | 0.3                  | 2.4                |                                  | 03       | 3 | 0.5                  | 3.7                |
|                                 | 12       | 3   | 0.2                  | 2.6                |                                  | 06       | 3 | 0.5                  | 3.6                |
|                                 |          | 3   | 0.4                  | 3.9                |                                  |          | 3 | 0.1                  | 1.6                |
|                                 | 18       | 3   | 0.2                  | 2.4                |                                  | 12       | 3 | 0.5                  | 3.9                |
|                                 |          | 3   | 0.4                  | 4.0                |                                  | 13       | 3 | 0.5                  | 3.9                |
| 22                              | 00       | 3   | 0.2                  | 2.3                | 30                               | 00       | 3 | 0.5                  | 4.1                |
|                                 |          | 3   | 0.1                  | 1.4                |                                  |          | 3 | 0.5                  | 4.9                |
|                                 | 03       | 3   | 0.1                  | 1.4                | 03                               |          | 3 | 0.5                  | 4.2                |
|                                 | 03       | 3   | 0.1                  | 1.3                |                                  |          | 3 | 0.5                  | 4.9                |
|                                 |          | 3   | 0.2                  | 2.0                | 06                               |          | 3 | 0.5                  | 4.2                |
|                                 | 12       | 3   | 0.2                  | 2.0                |                                  |          | 3 | 0.5                  | 4.9                |
|                                 |          | 3   | 0.3                  | 2.3                | 12                               |          | 3 | 0.5                  | 4.1                |
|                                 | 18       | 3   | 0.2                  | 1.7                |                                  |          | 3 | 0.6                  | 5.5                |
|                                 |          | 3   | 0.3                  | 2.2                | 18                               |          | 3 | 0.5                  | 4.3                |
|                                 |          |     |                      |                    |                                  |          | 3 | 0.6                  | 5.2                |
| 23                              | 00       | 3   | 0.2                  | 2.1                | 31                               | 00       | 3 | 0.6                  | 5.1                |
|                                 | 03       | 3   | 0.4                  | 2.4                |                                  |          | 3 | 0.4                  | 4.2                |
|                                 | 06       | 3   | 0.3                  | 2.5                | 03                               |          | 3 | 0.6                  | 5.2                |
|                                 | 12       | 1   | 0.6                  | 2.6                |                                  |          | 3 | 0.4                  | 3.8                |
|                                 | 18       | 1   | 0.7                  | 2.7                | 06                               |          | 3 | 0.6                  | 5.1                |
| 24                              | 00       | 1   | 0.5                  | 2.9                |                                  |          | 3 | 0.4                  | 4.0                |
|                                 | 03       | 1   | 0.5                  | 2.8                | 12                               |          | 3 | 0.7                  | 5.3                |
|                                 | 06       | 1   | 0.4                  | 2.7                |                                  |          | 3 | 0.4                  | 3.7                |
|                                 | 12       | 1   | 0.4                  | 2.7                | 13                               | ...      |   | Earthquake           |                    |
|                                 | 18       | 1   | 0.5                  | 2.7                |                                  |          |   |                      |                    |
| 25                              | 00       | 3   | 0.4                  | 2.7                | <i>Station: Bombay (Colaba).</i> |          |   |                      |                    |
|                                 |          | 3   | 0.1                  | 1.4                | 01 to 00 to                      |          |   |                      |                    |
|                                 | 03       | 3   | 0.3                  | 2.6                | 02 18                            |          |   |                      |                    |
|                                 |          | 3   | 0.4                  | 3.3                | 03 00                            |          |   |                      |                    |
|                                 | 06       | 3   | 0.3                  | 2.9                |                                  | 03       | 3 | 1.6                  | 3.8                |
|                                 |          | 3   | 0.4                  | 3.3                |                                  |          |   | 0.7                  | 2.0                |
|                                 | 12       | 3   | 0.4                  | 2.9                |                                  | 12       | 3 | 1.3                  | 4.2                |
|                                 | 18       | 3   | 0.4                  | 3.1                |                                  |          |   | 0.7                  | 2.0                |
| 26                              | 00       | 3   | 0.4                  | 3.3                |                                  | 13       | 3 | 1.4                  | 4.2                |
|                                 | 03       | 3   | 0.3                  | 3.1                |                                  |          |   | 0.9                  | 2.2                |
|                                 | 06       | 3   | 0.5                  | 3.4                | 04                               | 00       | 3 | 1.6                  | 4.2                |
|                                 | 12       | 3   | 0.5                  | 3.5                |                                  |          |   | 0.7                  | 2.0                |
|                                 | 18       | 3   | 0.5                  | 3.5                | 03                               |          | 3 | 1.3                  | 4.2                |
| 27                              | 00       | 3   | 0.5                  | 3.4                |                                  |          |   | 0.6                  | 2.3                |
|                                 | 03       | 3   | 0.3                  | 3.3                | 12                               |          | 3 | 1.7                  | 4.4                |
|                                 | 06       | 3   | 0.5                  | 3.6                |                                  |          |   | 0.9                  | 3.0                |
|                                 | 12       | 3   | 0.5                  | 3.6                |                                  |          |   | 0.9                  | 2.3                |
|                                 | 18       | 3   | 0.5                  | 3.7                | 18                               |          | 3 | 1.7                  | 4.3                |
|                                 |          | 3   | 0.1                  | 1.3                |                                  |          |   | 0.8                  | 3.0                |
| 28                              | 00       | 3   | 0.4                  | 2.5                |                                  |          |   | 0.8                  | 2.0                |
|                                 |          | 1   | 0.2                  | 1.6                | 05                               | 00       | 3 | 1.6                  | 4.4                |
|                                 | 03       | 3   | 0.5                  | 3.5                |                                  |          |   | 1.0                  | 2.5                |
|                                 |          | 3   | 0.3                  | 2.3                | 06                               |          | 3 | 2.1                  | 4.0                |
|                                 | 06       | 3   | 0.5                  | 3.7                |                                  |          |   | 0.6                  | 1.9                |
|                                 |          | 3   | 0.2                  | 2.1                |                                  |          |   |                      |                    |
|                                 | 12       | ... | Earthquake           |                    |                                  |          |   |                      |                    |

48

August 1962

| Date | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|------|----------|---|----------------------|--------------------|
|------|----------|---|----------------------|--------------------|

| Date | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|------|----------|---|----------------------|--------------------|
|------|----------|---|----------------------|--------------------|

Station: Bombay (Colaba)

Station: Bombay (Colaba)

|        |    |   |     |     |
|--------|----|---|-----|-----|
| 05     | 12 | 3 | 1.9 | 4.0 |
| Contd. |    |   | 0.7 | 4.0 |
|        | 18 | 3 | 1.7 | 4.3 |
|        |    |   | 0.6 | 2.0 |
| 06     | 00 | 3 | 1.7 | 4.3 |
|        |    |   | 0.6 | 2.0 |
|        | 06 | . | .   | .   |
|        | 12 | 3 | 1.7 | 3.9 |
|        |    |   | 0.7 | 1.8 |
|        | 18 | 3 | 1.3 | 4.1 |
|        |    |   | 0.8 | 2.0 |
| 07     | 00 | 3 | 1.8 | 4.0 |
|        |    |   | 0.7 | 2.0 |
|        | 06 | . | .   | .   |
|        | 12 | 3 | 1.8 | 4.4 |
|        |    |   | 0.7 | 2.2 |
|        | 18 | 3 | 1.7 | 4.4 |
|        |    |   | 0.8 | 2.6 |
| 08     | 00 | 3 | 1.3 | 4.4 |
|        |    |   | 0.6 | 2.5 |
|        | 06 | . | .   | .   |
|        | 12 | 3 | 1.3 | 4.3 |
|        |    |   | 0.6 | 2.3 |
|        | 18 | 3 | 1.3 | 4.5 |
|        |    |   | 0.5 | 2.0 |
| 09     | 00 | 3 | 1.4 | 4.0 |
|        |    |   | 0.5 | 2.5 |
|        | 06 | 3 | 1.3 | 4.3 |
|        |    |   | 0.6 | 2.0 |
|        | 12 | 3 | 1.4 | 4.3 |
|        |    |   | 0.5 | 2.0 |
|        | 18 | 3 | 1.1 | 4.4 |
|        |    |   | 0.6 | 2.0 |
| 10     | 00 | 3 | 1.6 | 4.3 |
|        |    |   | 0.4 | 1.9 |
|        | 06 | 3 | 1.5 | 4.1 |
|        |    |   | 0.4 | 2.5 |
|        | 12 | 3 | 1.5 | 4.2 |
|        |    |   | 0.6 | 2.0 |
|        | 18 | 3 | 1.3 | 4.3 |
|        |    |   | 0.5 | 2.2 |
| 11     | 00 | 3 | 1.3 | 4.5 |
|        |    |   | 0.6 | 2.0 |
|        | 06 | 3 | 1.3 | 4.5 |
|        |    |   | 0.5 | 2.2 |
|        | 12 | 3 | 1.5 | 4.2 |
|        |    |   | 0.6 | 2.0 |

|        |    |    |     |     |
|--------|----|----|-----|-----|
| 11     | 18 | 3  | 1.4 | 4.3 |
| Contd. |    |    | 0.7 | 2.0 |
|        | 12 | 00 | 3   | 1.3 |
|        |    |    | 0.7 | 1.9 |
|        | 06 | 3  | 1.6 | 4.1 |
|        |    |    | 0.5 | 2.0 |
|        | 12 | 3  | 1.7 | 3.8 |
|        |    |    | 1.0 | 2.4 |
|        |    |    | 0.4 | 1.5 |
|        | 18 | 3  | 1.7 | 3.7 |
|        |    |    | 0.9 | 2.3 |
|        |    |    | 0.4 | 1.3 |
|        | 13 | 00 | 3   | 1.6 |
|        |    |    | 0.7 | 2.0 |
|        | 06 | .  | .   | .   |
|        | 12 | .  | .   | .   |
|        | 18 | 3  | 2.0 | 3.8 |
|        |    |    | 1.0 | 1.8 |
|        | 14 | 00 | 3   | 2.0 |
|        |    |    | 1.8 | 3.0 |
|        |    |    | 1.2 | 2.0 |
|        | 06 | 3  | 2.3 | 3.8 |
|        |    |    | 1.7 | 3.0 |
|        |    |    | 1.3 | 2.0 |
|        | 12 | 3  | 2.6 | 3.9 |
|        |    |    | 1.5 | 2.5 |
|        |    |    | 0.9 | 1.9 |
|        | 18 | 3  | 2.7 | 3.5 |
|        |    |    | 2.0 | 3.0 |
|        |    |    | 1.4 | 2.0 |
|        | 15 | 00 | 3   | 2.6 |
|        |    |    | 1.6 | 2.6 |
|        |    |    | 0.8 | 1.9 |
|        | 06 | 3  | 2.5 | 3.2 |
|        |    |    | 1.8 | 2.5 |
|        |    |    | 1.0 | 2.0 |
|        | 12 | 3  | 2.3 | 3.2 |
|        |    |    | 2.0 | 2.5 |
|        |    |    | 0.6 | 1.7 |
|        | 18 | 3  | 2.2 | 3.4 |
|        |    |    | 1.7 | 2.3 |
|        |    |    | 0.8 | 1.7 |

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| Date                            | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|---------------------------------|----------|---|----------------------|--------------------|
| <i>Station: Bombay (Colaba)</i> |          |   |                      |                    |
| 16                              | 00       | . | .                    | .                  |
|                                 | 06       | 3 | 1.2                  | 2.3                |
|                                 |          |   | 1.8                  | 4.1                |
|                                 | 12       | 3 | 2.0                  | 4.2                |
|                                 |          |   | 1.1                  | 2.2                |
|                                 | 18       | 3 | 1.9                  | 4.4                |
|                                 |          |   | 1.0                  | 2.3                |
| 17                              | 00 to 18 | . | .                    | .                  |
| 18                              | 00       | . | .                    | .                  |
|                                 | 06       | 3 | 1.0                  | 4.6                |
|                                 |          |   | 0.6                  | 2.2                |
|                                 | 12       | 3 | 1.2                  | 4.4                |
|                                 |          |   | 0.6                  | 2.5                |
|                                 | 18       | 3 | 1.0                  | 4.1                |
|                                 |          |   | 0.5                  | 2.0                |
| 19                              | 00       | 3 | 1.2                  | 4.0                |
|                                 |          |   | 0.6                  | 2.0                |
|                                 | 06       | 3 | 1.1                  | 4.1                |
|                                 |          |   | 0.6                  | 2.0                |
|                                 | 12       | 3 | 0.9                  | 4.0                |
|                                 |          |   | 0.7                  | 2.0                |
|                                 | 18       | 3 | 1.0                  | 4.4                |
|                                 |          |   | 0.8                  | 2.0                |
| 20                              | 00       | 3 | 1.0                  | 4.2                |
|                                 |          |   | 0.7                  | 2.3                |
|                                 | 06       | . | .                    | .                  |
|                                 | 12       | . | .                    | .                  |
|                                 | 18       | 3 | 1.0                  | 4.2                |
|                                 |          |   | 0.9                  | 2.3                |
| 21                              | 00       | 3 | 1.0                  | 4.4                |
|                                 |          |   | 0.8                  | 2.1                |
|                                 | 06       | . | .                    | .                  |
|                                 | 12       | 3 | 1.1                  | 4.4                |
|                                 |          |   | 0.6                  | 2.0                |
|                                 | 18       | 3 | 0.9                  | 4.6                |
|                                 |          |   | 0.6                  | 2.0                |
| 22                              | 00 to 18 | . | .                    | .                  |
| 23                              | 00       | . | .                    | .                  |
|                                 | 06       | . | .                    | .                  |
|                                 | 12       | 2 | 0.6                  | 2.2                |
|                                 | 18       | 2 | 0.6                  | 2.2                |
| 24                              | 00       | 2 | 0.5                  | 2.6                |
|                                 | 06 to 18 | . | .                    | .                  |
| 25                              | 00       | . | .                    | .                  |
|                                 | 06       | . | .                    | .                  |

| Date                            | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|---------------------------------|----------|---|----------------------|--------------------|
| <i>Station: Bombay (Colaba)</i> |          |   |                      |                    |
| 25                              | 12       | 2 | 0.6                  | 3.5                |
|                                 | 18       | 2 | 0.7                  | 3.7                |
| 26                              | 00       | . | .                    | .                  |
|                                 | 06       | 2 | 0.7                  | 3.6                |
|                                 | 12       | 2 | 0.6                  | 3.3                |
|                                 | 18       | 2 | 0.7                  | 3.7                |
| 27                              | 00       | . | .                    | .                  |
|                                 | 06       | . | .                    | .                  |
|                                 | 12       | 3 | 0.7                  | 3.6                |
|                                 |          |   | 0.4                  | 2.0                |
|                                 | 18       | 3 | 0.8                  | 3.7                |
|                                 |          |   | 0.3                  | 1.9                |
| 28                              | 00       | . | .                    | .                  |
|                                 | 06       | 3 | 0.8                  | 3.7                |
|                                 |          |   | 1.2                  | 2.0                |
|                                 | 12       | . | .                    | .                  |
|                                 | 18       | 3 | 1.1                  | 3.9                |
|                                 |          |   | 0.4                  | 2.1                |
| 29                              | 00       | 3 | 1.0                  | 4.2                |
|                                 |          |   | 0.5                  | 2.6                |
|                                 | 06       | . | .                    | .                  |
|                                 | 12       | . | .                    | .                  |
|                                 | 18       | 3 | 1.0                  | 4.0                |
|                                 |          |   | 0.4                  | 1.8                |
| 30                              | 00       | 3 | 0.9                  | 4.2                |
|                                 |          |   | 0.4                  | 2.0                |
|                                 | 06       | 3 | 0.9                  | 4.2                |
|                                 |          |   | 0.3                  | 2.3                |
|                                 | 12       | 3 | 0.9                  | 4.1                |
|                                 |          |   | 0.3                  | 1.7                |
|                                 | 18       | 3 | 0.9                  | 4.4                |
|                                 |          |   | 0.3                  | 1.8                |
| 31                              | 00       | 3 | 1.0                  | 4.5                |
|                                 |          |   | 0.4                  | 2.3                |
|                                 | 06       | . | .                    | .                  |
|                                 | 12       | 3 | 0.8                  | 4.4                |
|                                 |          |   | 0.3                  | 2.0                |
|                                 | 18       | . | .                    | .                  |

*Station: Visakhapatnam*

|    |    |   |     |     |
|----|----|---|-----|-----|
| 01 | 00 | 2 | 0.5 | 3.9 |
|    | 06 | 2 | 0.6 | 2.9 |
|    | 12 | 2 | 0.6 | 3.5 |
|    | 18 | 2 | 0.5 | 3.7 |
| 02 | 00 | 2 | 0.5 | 3.9 |
|    | 06 | 2 | 0.6 | 3.9 |
|    | 12 | 2 | 0.3 | 3.6 |
|    | 18 | 2 | 0.6 | 4.2 |

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August 1962

| Date | Hour<br>GMT | K | Mean<br>Amplitude<br>in mm | Mean<br>Period<br>in sec |
|------|-------------|---|----------------------------|--------------------------|
|------|-------------|---|----------------------------|--------------------------|

| Date | Hour<br>GMT | K | Mean<br>Amplitude<br>in mm | Mean<br>Period<br>in sec |
|------|-------------|---|----------------------------|--------------------------|
|------|-------------|---|----------------------------|--------------------------|

Station: Visakhapatnam

Station: Visakhapatnam

|    |    |   |     |     |
|----|----|---|-----|-----|
| 03 | 00 | 2 | 0.6 | 4.0 |
|    | 03 | 2 | 0.8 | 4.0 |
|    | 12 | 2 | 0.8 | 4.4 |
|    | 18 | 2 | 0.8 | 4.3 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 14 | 00 | 2 | 0.6 | 3.6 |
|    | 03 | 2 | 0.3 | 3.6 |
|    | 12 | 2 | 0.7 | 3.9 |
|    | 18 | 2 | 0.8 | 4.5 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 04 | 00 | 2 | 0.7 | 4.5 |
|    | 03 | 2 | 0.8 | 4.1 |
|    | 12 | 2 | 0.7 | 4.1 |
|    | 18 | 2 | 0.7 | 4.1 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 15 | 00 | 2 | 0.7 | 4.4 |
|    | 03 | 2 | 0.7 | 3.8 |
|    | 12 | 2 | 0.7 | 4.9 |
|    | 18 | 2 | 0.8 | 4.2 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 05 | 00 | 2 | 0.8 | 4.3 |
|    | 03 | 2 | 0.9 | 4.4 |
|    | 12 | 2 | 0.7 | 4.5 |
|    | 18 | 2 | 0.6 | 3.7 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 16 | 00 | 2 | 0.6 | 4.5 |
|    | 03 | 2 | 0.6 | 3.6 |
|    | 12 | 2 | 0.6 | 4.0 |
|    | 18 | 2 | 0.5 | 3.6 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 06 | 00 | 2 | 0.6 | 4.1 |
|    | 03 | 2 | 0.7 | 3.6 |
|    | 12 | 2 | 0.8 | 4.6 |
|    | 18 | 2 | 0.7 | 4.0 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 17 | 00 | 2 | 0.5 | 3.7 |
|    | 03 | 2 | 0.3 | 3.4 |
|    | 12 | 2 | 0.5 | 3.3 |
|    | 18 | 2 | 0.5 | 3.2 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 07 | 00 | 2 | 0.8 | 4.5 |
|    | 03 | 2 | 0.8 | 4.3 |
|    | 12 | 2 | 0.8 | 4.7 |
|    | 18 | 2 | 0.7 | 4.3 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 18 | 00 | 2 | 0.4 | 4.4 |
|    | 03 | 2 | 0.4 | 2.9 |
|    | 12 | 2 | 0.4 | 4.7 |
|    | 18 | 2 | 0.3 | 2.7 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 08 | 00 | 2 | 0.7 | 4.5 |
|    | 03 | 2 | 0.3 | 4.4 |
|    | 12 | 2 | 0.7 | 4.5 |
|    | 18 | 2 | 0.3 | 4.7 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 19 | 00 | 0,0 | -   | -   |
|    | 03 | 2   | 0.4 | 3.6 |
|    | 12 | 2   | 0.3 | 4.5 |
|    | 18 | 2   | 0.3 | 4.4 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 09 | 00 | 2   | 0.6 | 4.0 |
|    | 03 | ... | -   | -   |
|    | 12 | 2   | 0.7 | 4.3 |
|    | 18 | 2   | 0.5 | 4.0 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 20 | 00 | 0,0 | -   | -   |
|    | 03 | 2   | 0.3 | 3.7 |
|    | 12 | 2   | 0.3 | 3.9 |
|    | 18 | 2   | 0.3 | 3.6 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 10 | 00 | 2 | 0.3 | 3.7 |
|    | 03 | 2 | 0.5 | 3.7 |
|    | 12 | 2 | 0.5 | 4.3 |
|    | 18 | 2 | 0.5 | 4.6 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 21 | 00 | 2   | 0.3 | 3.1 |
|    | 03 | 2   | 0.3 | 3.0 |
|    | 12 | 2   | 0.3 | 3.5 |
|    | 18 | 0,0 | -   | -   |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 11 | 00 | 0,0 | -   | -   |
|    | 03 | 2   | 0.3 | 3.4 |
|    | 12 | 2   | 0.3 | 3.6 |
|    | 18 | 2   | 0.3 | 4.4 |

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 22 | 00 | 0,0 | -   | -   |
|    | 03 | 2   | 0.3 | 2.9 |
|    | 12 | 2   | 0.3 | 2.9 |
|    | 18 | 2   | 0.3 | 2.7 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 12 | 00 | 2 | 0.6 | 3.7 |
|    | 03 | 2 | 0.7 | 3.2 |
|    | 12 | 2 | 0.7 | 3.6 |
|    | 18 | 2 | 0.6 | 3.5 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 23 | 00 | 2 | 0.3 | 3.5 |
|    | 03 | 2 | 0.3 | 3.5 |
|    | 12 | 2 | 0.3 | 3.6 |
|    | 18 | 2 | 0.3 | 2.9 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 13 | 00 | 1 | 1.2 | 3.9 |
|    | 03 | 2 | 0.8 | 3.8 |
|    | 12 | 2 | 0.9 | 3.7 |
|    | 18 | 2 | 0.5 | 3.4 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 24 | 00 | 2 | 0.3 | 3.3 |
|    | 03 | 2 | 0.3 | 3.1 |
|    | 12 | 2 | 0.3 | 3.2 |
|    | 18 | 2 | 0.3 | 4.2 |

August 1962

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| Date | Hour GMT | K | Mean Amplitude in mm | Mean Period in sec |
|------|----------|---|----------------------|--------------------|
|------|----------|---|----------------------|--------------------|

| Date | Hour GMT | K | Mean Amplitude (Micron) | Mean Period in sec |
|------|----------|---|-------------------------|--------------------|
|------|----------|---|-------------------------|--------------------|

Station: Visakhapatnam

|    |    |     |     |     |
|----|----|-----|-----|-----|
| 25 | 00 | 2   | 0.2 | 3.2 |
|    | 06 | 2   | 0.4 | 4.0 |
|    | 12 | 2   | 0.4 | 3.6 |
|    | 18 | 2   | 0.3 | 3.1 |
| 26 | 00 | 2   | 0.2 | 2.8 |
|    | 06 | 2   | 0.3 | 3.4 |
|    | 12 | 2   | 0.4 | 3.7 |
|    | 18 | 2   | 0.3 | 3.3 |
| 27 | 00 | 2   | 0.3 | 3.2 |
|    | 06 | 2   | 0.3 | 3.4 |
|    | 12 | 2   | 0.3 | 4.0 |
|    | 18 | 2   | 0.2 | 3.7 |
| 28 | 00 | 2   | 0.2 | 3.2 |
|    | 06 | 2   | 0.4 | 3.9 |
|    | 12 | ... | -   | -   |
|    | 18 | 2   | 0.4 | 3.9 |
| 29 | 00 | 2   | 0.3 | 4.1 |
|    | 06 | 2   | 0.4 | 3.9 |
|    | 12 | 2   | 0.4 | 4.2 |
|    | 18 | 2   | 0.3 | 3.8 |
| 30 | 00 | 2   | 0.3 | 3.9 |
|    | 06 | 2   | 0.4 | 4.2 |
|    | 12 | 2   | 0.4 | 4.2 |
|    | 18 | 2   | 0.4 | 4.1 |
| 31 | 00 | 2   | 0.3 | 4.2 |
|    | 06 | 2   | 0.5 | 4.8 |
|    | 12 | 2   | 0.5 | 5.0 |
|    | 18 | ... | -   | -   |

Station: Port Blair

|    |    |     |     |   |
|----|----|-----|-----|---|
| 01 | 00 | 1   | 0.3 | 3 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.4 | 3 |
|    | 18 | 1   | 1.2 | 3 |
| 02 | 00 | 1   | 1.2 | 3 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 1.2 | 3 |
|    | 18 | ... | -   | - |
| 03 | 00 | 1   | 1.6 | 5 |
|    | 06 | 1   | 1.2 | 5 |
|    | 12 | 1   | 2.0 | 3 |
|    | 18 | 1   | 1.6 | 5 |

Station: Port Blair

|    |       |     |     |   |
|----|-------|-----|-----|---|
| 04 | 00    | 1   | 1.6 | 4 |
|    | 06    | ... | -   | - |
|    | 12    | 1   | 0.8 | 7 |
|    | 18    | 1   | 0.8 | 7 |
| 05 | 00 to |     |     |   |
|    | 12    | 1   | 1.6 | 3 |
|    | 18    | 1   | 1.2 | 3 |
| 06 | 00    | 1   | 2.0 | 3 |
|    | 06    | 1   | 1.2 | 3 |
|    | 12    | ... | -   | - |
|    | 18    | 1   | -   | - |
| 07 | 00    | 1   | 0.8 | 4 |
|    | 06 to |     |     |   |
|    | 18    | ... | -   | - |
| 08 | 00    | ... | -   | - |
|    | 06    | -   | -   | - |
|    | 12    | 1   | 0.8 | 4 |
| 09 | 18    | 1   | 0.8 | 4 |
|    | 00    | 1   | 0.8 | 4 |
| 10 | 06    | 1   | 0.8 | 3 |
|    | 12    | 1   | 0.4 | 3 |
|    | 00 to |     |     |   |
| 11 | 06    | ... | -   | - |
|    | 12    | 1   | 0.4 | 3 |
|    | 18    | 1   | 0.4 | 3 |
|    | 00    | 1   | 0.4 | 3 |
| 12 | 06    | ... | -   | - |
|    | 12    | ... | -   | - |
|    | 18    | 1   | 1.2 | 3 |
| 13 | 00    | 1   | 0.8 | 3 |
|    | 06    | 1   | 0.8 | 3 |
|    | 12    | 1   | 0.4 | 3 |
|    | 18    | 1   | 0.4 | 3 |
| 14 | 00    | 1   | 0.4 | 3 |
|    | 06    | 1   | 0.4 | 3 |
|    | 12    | ... | -   | - |
|    | 18    | 1   | 0.4 | 3 |

| Date                       | Hour GMT | K   | Mean Amplitude (Micron) | Mean Period in sec | Date                       | Hour GMT | K   | Mean Amplitude (Micron) | Mean Period in sec |
|----------------------------|----------|-----|-------------------------|--------------------|----------------------------|----------|-----|-------------------------|--------------------|
| <i>Station: Port Blair</i> |          |     |                         |                    | <i>Station: Port Blair</i> |          |     |                         |                    |
| 15                         | 00       | 1   | 0.4                     | 8                  | 23                         | 12       | 1   | 0.8                     | 7                  |
|                            | 06       | ... | -                       | -                  |                            | 18       | 1   | 0.8                     | 7                  |
|                            | 12       | ... | -                       | -                  | 24                         | 00       | 1   | 0.8                     | 7                  |
|                            | 18       | 1   | 0.8                     | 7                  |                            | 06       | ... | -                       | -                  |
| 16                         | 00       | 1   | 0.4                     | 7                  |                            | 12       | 1   | 0.8                     | 7                  |
|                            | 06       | ... | -                       | -                  |                            | 18       | 1   | 1.5                     | 7                  |
|                            | 12       | 1   | 0.8                     | 7                  | 25                         | 00       | 1   | 1.6                     | 7                  |
|                            | 18       | 1   | 0.8                     | 7                  |                            | 06       | 1   | 1.2                     | 7                  |
| 17                         | 00       | 1   | 0.8                     | 7                  |                            | 12       | 1   | 1.6                     | 7                  |
|                            | 06       | ... | -                       | -                  |                            | 18       | 1   | 1.6                     | 7                  |
|                            | 12       | ... | -                       | -                  | 26                         | 00       | 1   | 1.2                     | 7                  |
|                            | 18       | 1   | 0.8                     | 7                  |                            | 06       | ... | -                       | -                  |
| 18                         | 00       | 1   | 0.8                     | 7                  |                            | 12       | 1   | 1.2                     | 7                  |
|                            | 06       | ... | -                       | -                  |                            | 18       | 1   | 1.6                     | 7                  |
|                            | 12       | ... | -                       | -                  | 27                         | 00       | 1   | 1.6                     | 7                  |
|                            | 18       | 1   | 0.8                     | 6                  |                            | 06       | ... | -                       | -                  |
| 19                         | 00       | 1   | 0.8                     | 6                  |                            | 12       | 1   | 2.0                     | 7                  |
|                            | 06       | ... | -                       | -                  |                            | 18       | 1   | 2.0                     | 7                  |
|                            | 12       | ... | -                       | -                  | 28                         | 00       | 1   | 2.0                     | 7                  |
|                            | 18       | 1   | 0.8                     | 7                  |                            | 06       | ... | -                       | -                  |
| 20                         | 00       | 1   | 0.4                     | 7                  |                            | 12       | ... | -                       | -                  |
|                            | 06       | ... | -                       | -                  |                            | 18       | 1   | 1.2                     | 7                  |
|                            | 12       | 1   | 1.2                     | 7                  | 29                         | 00       | 1   | 1.2                     | 7                  |
|                            | 18       | 1   | 0.8                     | 7                  |                            | 06       | ... | -                       | -                  |
| 21                         | 00 to    |     |                         |                    |                            | 12       | ... | -                       | -                  |
|                            | 18       | 1   | 0.9                     | 7                  |                            | 18       | 1   | 0.8                     | 5                  |
| 22                         | 00       | 1   | 0.8                     | 7                  | 30                         | 00       | 1   | 0.8                     | 7                  |
|                            | 06 to    |     |                         |                    |                            | 06       | ... | -                       | -                  |
|                            | 18       | 1   | 1.2                     | 7                  |                            | 12       | ... | -                       | -                  |
| 23                         | 00       | 1   | 0.8                     | 7                  |                            | 18       | 1   | 1.2                     | 7                  |
|                            | 06       | ... | -                       | -                  | 31                         | 00       | 1   | 0.8                     | 6                  |
|                            |          |     |                         |                    |                            | 06       | ... | -                       | -                  |
|                            |          |     |                         |                    |                            | 12       | 1   | 1.2                     | 6                  |
|                            |          |     |                         |                    |                            | 18       | ... | -                       | -                  |





# SEISMOLOGICAL BULLETIN

SEP 1962

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and Constants

| Station              | Latitude | Longitude   | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation                         | Instrument           | Compt | Period<br>in<br>secs | Static<br>Magnifi-<br>cation | Damping<br>ratio | Paper<br>speed<br>mm/min |
|----------------------|----------|-------------|--------------------------------|----------------------------------------------------|----------------------|-------|----------------------|------------------------------|------------------|--------------------------|
| Agra                 |          |             |                                |                                                    | Columbia             | E     | To = 15              | Tg = 100                     |                  | 15                       |
|                      |          |             |                                |                                                    | Long Period          | N     | To = 15              | Tg = 85                      |                  | 15                       |
|                      |          |             |                                |                                                    | - do -               | Z     | To = 15              | Tg = 70                      |                  | 15                       |
| Bombay               | 18.54°N  | 72.40°E     | 5                              | Deccan Trap                                        | Milne-Shaw           | N     | 12                   | 350                          | 13:1             | 16                       |
|                      |          |             |                                |                                                    | Milne-Shaw           | E     | 12                   | 350                          | 23:1             | 8                        |
|                      |          |             |                                |                                                    | Sprengnether         | E     | To = Tg = 7 secs     |                              | 30               |                          |
| Bokaro               | 23.50°N  | 85.48°E     |                                | Rock                                               | Milne-Shaw           | N     | 12                   | 250                          | 20:1             | 15                       |
|                      |          |             |                                |                                                    | Milne-Shaw           | E     | 12                   | 250                          | 20:1             | 15                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | E     | 0.8                  | 950                          | h = 0.8          | 60                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | N     | 0.8                  | 1000                         | h = 0.8          | 50                       |
| Calcutta             | 22.32°N, | 88.22°E (1) | 7                              | Alluvium                                           | Milne-Shaw           | E     | 12                   | 250                          | 20:1             | 8                        |
|                      |          |             |                                |                                                    | Omori-Ewing          | N     | 2                    | 870                          | Critical         | 30                       |
|                      |          |             |                                |                                                    | Omori-Ewing          | N     | 16                   | 32                           | -                | 25.4                     |
|                      |          |             |                                |                                                    | Omori-Ewing          | E     | 21                   | 30                           | -                | 25.4                     |
| Chatra               | 25.50°N, | 87.10°E     | 161                            | Sand Stone                                         | Milne-Shaw           | E     | 12                   | 250                          | 20:1             | 15                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | N     | 1                    | 1000                         | 30:1             | 60                       |
|                      |          |             |                                |                                                    | Benloff              | Z     | To = 0               | Tg = 0.45<br>secs            | Critical         | 60                       |
|                      |          |             |                                |                                                    | Wenner-Accelerograph | ZNE   | -                    | -                            | -                | -                        |
| Colombo              | 05.54°N  | 79.52°E     | 7                              | Beach Sand                                         | Milne-Shaw           | E     | 12                   | 250                          | 20:1             | -                        |
| Dehra Dun            | 30.10°N  | 78.02°E     | 682                            | Gravel                                             | Wood-Anderson        | N     | 0.8                  | 950                          | Critical         | 60                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | E     | 0.8                  | 850                          | Critical         | 60                       |
|                      |          |             |                                |                                                    | Milne-Shaw           | N     | 12                   | 250                          | 20:1             | 8                        |
|                      |          |             |                                |                                                    | Milne-Shaw           | E     | 12                   | 250                          | 20:1             | 8                        |
| Hyderabad            | 17.25°N, | 78.27°E     | 535                            | Granite                                            | Milne-Shaw           | E     | 12                   | 250                          | 20:1             | 8                        |
|                      |          |             |                                |                                                    | Milne-Shaw           | N     | 12                   | 250                          | 20:1             | 8                        |
| Kodaikanal           | 10.14°N, | 77.28°E     | 2345                           | Rock                                               | Milne-Shaw           | E     | 10                   | 250                          | 20:1             | 8                        |
| Madras               | 13.00°N, | 80.11°E     | 15                             | -                                                  | Sprengnether         | E     | To = Tg = 72 secs    |                              | Critical         | 30                       |
| New Delhi            | 28.35°N, | 77.12°E     | 207                            | Massive Quartzite                                  |                      |       |                      |                              |                  |                          |
| Poona                | 18.32°N  | 73.51°E     | 550                            | Deccan Trap                                        | Sprengnether         | Z     | To = Tg = 1.5        |                              | Critical         | 30                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | E     | 4                    | 1000                         | 20:1             | 15                       |
|                      |          |             |                                |                                                    | Milne-Shaw           | N     | 12                   | 280                          | 20:1             | 8                        |
| Port Blair           | 11.49°N  | 92.43°E     |                                |                                                    | Wood-Anderson        | N     | 2                    | 1000                         | 20:1             | 30                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | E     | 0.8                  | 1000                         | 65:1             | 30                       |
|                      |          |             |                                |                                                    | Milne-Shaw           | N     | 12                   | 350                          | 20:1             | 8                        |
| Sehore               |          |             |                                |                                                    | Wood-Anderson        | N     | 0.8                  | 980                          | Critical         | 30                       |
| Shillong             | 25.34°N, | 91.53°E     | 1500                           | Quartzite<br>Sand Stone<br>(Shillong<br>Quartzite) | Wood-Anderson        | N     | 0.8                  | 1000                         | h = 0.8          | 30                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | E     | 0.8                  | 1000                         | h = 0.8          | 30                       |
|                      |          |             |                                |                                                    | Milne-Shaw           | N     | 12                   | 250                          | 20:1             | 8                        |
|                      |          |             |                                |                                                    | Benloff              | Z     | To = 1.0             | Tg = 18                      |                  | 40                       |
|                      |          |             |                                |                                                    | Sprengnether         | E     | To = Tg = 6.3        |                              | Critical         | 30                       |
| Wenner Accelerograph | ZNE      | -           | -                              | -                                                  | -                    |       |                      |                              |                  |                          |
| Tocklai              | 28.45°N  | 94.45°E     |                                | Alluvium                                           | Wood-Anderson        | E     | 0.8                  | 970                          | h = 0.8          | 60                       |
| Visianagram          | 18.07°N, | 83.27°E     |                                |                                                    | Wood-Anderson        | E     | 0.8                  | 1000                         | h = 0.8          | 30                       |
|                      |          |             |                                |                                                    | Wood-Anderson        | N     | 2                    | 1000                         | 20:1             | 30                       |



List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude                        | Longitude    | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation | Instrument    | Compt   | Period<br>in<br>secs | Static<br>Magnifi-<br>cation | Damping<br>ratio | Paper<br>speed<br>mm/min   |
|---------------|---------------------------------|--------------|--------------------------------|----------------------------|---------------|---------|----------------------|------------------------------|------------------|----------------------------|
| Bombay        | 18.54°N, 72.40°E                |              |                                | Deccan Trap                | Milne-Shaw    | N       | 12                   | 350                          | 21:1             | 8                          |
|               |                                 |              |                                |                            | Milne-Shaw    | E       | 12                   | 250                          | 21:1             | 8                          |
|               |                                 |              |                                |                            | Sprengnether  | E       | To=7.3               | 5000                         | 2.39:1           | 30                         |
|               |                                 |              |                                |                            |               |         | Tg=7.3               |                              |                  |                            |
|               |                                 |              |                                |                            | Benioff       | Z       | -                    | -                            | -                | 50 for S.P.<br>30 for L.P. |
| Bokaro        | 23.50°N, 85.48°E                |              |                                | Rock                       | Sprengnether  | E       | To=Tg=5.5            | 5200                         | 2.39:1           | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 930                          | Critical         | 50                         |
|               |                                 |              |                                |                            | Wood-Anderson | F       | 0.8                  | 830                          | Critical         | 50                         |
|               |                                 |              |                                |                            | Milne-Shaw    | E       | 12                   | 270                          | 20:1             | 15                         |
|               |                                 |              |                                |                            | Milne-Shaw    | N       | 12                   | 250                          | 20:1             | 15                         |
| Calcutta      | 22.32°N, 88.22°E (1) 7<br>(2) 5 |              |                                | Omori-Ewing<br>Alluvium    | Milne-Shaw    | E       | 12                   | 300                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 2                    | 1000                         | Critical         | 30                         |
|               |                                 |              |                                |                            | Omori-Ewing   | E       | 10                   | 30                           |                  | 25.4                       |
|               |                                 |              |                                |                            | Omori-Ewing   | N       | 15                   | 32                           |                  | 25.4                       |
| Chatra        | 25.50°N, 87.10°E                |              | 151                            | Sand Stone                 | Milne-Shaw    | N       | 10                   | 250                          | 20:1             | 15                         |
|               |                                 |              |                                |                            | Milne-Shaw    | E       | 10                   | 250                          | 20:1             | 15                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 940                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 970                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Benioff(S.P)  | Z       | To=0.72              | -                            | Es=23:1          | 60                         |
|               |                                 |              |                                |                            |               | Tg=0.45 |                      | Eg=Critical                  |                  |                            |
| Delhi         | 28.41°N, 77.13°E                |              | 207                            | Quartzite<br>Sand Stone    | Sprengnether  | E       | To=Tg=7.5            | 5000                         | Critical         | 30                         |
|               |                                 |              |                                |                            | Milne-Shaw    | N       | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |              |                                |                            | Benioff       | Z       | To=Tg=1.0            | -                            | -                | 60                         |
|               |                                 |              |                                |                            | Press Ewing   | Z       | To=30 Tg=100         | -                            | -                | 15                         |
|               |                                 |              |                                |                            | Press Ewing   | N       | To=30 Tg=100         | -                            | -                | 15                         |
| Press Ewing   | E                               | To=30 Tg=100 | -                              | -                          | 15            |         |                      |                              |                  |                            |
| Dehra Dun     | 30.19°N, 78.02°E                |              | 592                            | Gravel                     | Wilson Lamson | Z       | To=Tg=1.5            | -                            | -                | 60                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | E       | 0.8                  | 1000                         | Critical         | 30                         |
|               |                                 |              |                                |                            | Milne-Shaw    | N       | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Milne-Shaw    | E       | 12                   | 250                          | 20:1             | 8                          |
| Hyderabad     | 17.25°N, 78.27°E                |              |                                | Granite                    | Milne-Shaw    | E       | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Milne-Shaw    | N       | 12                   | 250                          | 20:1             | 8                          |
| Kodakamal     | 10.14°N, 77.29°E                |              | 2345                           | Rock                       | Milne-Shaw    | E       | 10                   | 250                          | 20:1             | 8                          |
| Madras        | 13.00°N, 80.11°E                |              | 15                             |                            | Sprengnether  | E       | To=Tg=7.5            | 5000                         | 23:1             | 30                         |
| Poona         | 18.32°N, 73.51°E                |              | 550                            | Deccan Trap                | Milne-Shaw    | N       | 12                   | 280                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Wood-Anderson | E       | 4.0                  | 1000                         | 20:1             | 16                         |
|               |                                 |              |                                |                            | Sprengnether  | Z       | 1.5                  | 3000                         | 2.1:1            | 30                         |
| Port Blair    | 11.49°N, 92.43°E                |              |                                |                            | Milne-Shaw    | F       | 12                   | 290                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 2.0                  | 950                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | E       | 0.8                  | 970                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Benioff       | Z       | To=1.0 Tg=1.6        | -                            | -                | 30                         |
| Sehore        | 23.10°N, 77.08°E                |              |                                |                            | Wood-Anderson | E       | 0.8                  | 840                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 900                          | Critical         | 30                         |
| Shillong      | 25.34°N, 91.53°E                |              |                                | Quartzite<br>Sand Stone    | Milne-Shaw    | N       | 12                   | 250                          | 20:1             | 8                          |
|               |                                 |              |                                |                            | Benioff       | Z       | To=1.0 Tg=1.0        | -                            | -                | 50                         |
|               |                                 |              |                                |                            | Wood-Anderson | E       | 0.8                  | 900                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | 0.8                  | 970                          | Critical         | 30                         |
| Tocklai       | 28.45°N, 94.45°E                |              |                                | Alluvium                   | Sprengnether  | E       | To=5.5<br>Tg=5.5     | 3900                         | 2.4:1            | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | E       | 0.8                  | 970                          | h=0.8            | 60                         |
|               |                                 |              |                                |                            |               |         |                      |                              |                  |                            |
| Visakhapatnam | 18.07°N, 83.27°E                |              |                                |                            | Sprengnether  | E       | To=Tg=5.9            | 5000                         | 1.2:1            | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | N       | To=2.0               | 970                          | Critical         | 30                         |
|               |                                 |              |                                |                            | Wood-Anderson | E       | To=0.8               | 970                          | Critical         | 30                         |



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STATION  
Bombay  
01

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 DATE STATION COMPT. PHASE G M T.  $\Delta$  REMARKS  
 h. m. s. km.  
 -----

September, 1962.

|    |                                                                                                                                     |                                                   |                                                                          |                                                                                                              |      |                                                |
|----|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------|------------------------------------------------|
| 01 | Delhi                                                                                                                               | Z                                                 | iP<br>iS                                                                 | 00 08 58<br>01 41                                                                                            | 1000 | Slight, compression.                           |
|    | Shillong                                                                                                                            | Z                                                 | iP                                                                       | 00 11 14                                                                                                     |      | Slight, distant, rarefaction.                  |
| 01 | Shillong                                                                                                                            | Z                                                 | iP<br>e                                                                  | 00 54 48<br>55 19                                                                                            |      | Local, rarefaction.                            |
| 01 | Delhi                                                                                                                               | Z                                                 | eP                                                                       | 00 54 57                                                                                                     |      | Slight, distant, compression.                  |
| 01 | Delhi                                                                                                                               | Z                                                 | iP<br>iS                                                                 | 01 10 36<br>11 44                                                                                            | 650  | Slight, rarefaction.                           |
| 01 | Delhi                                                                                                                               | Z                                                 | iP                                                                       | 03 24 29                                                                                                     |      | Slight, compression.                           |
| 01 | Shillong                                                                                                                            | Z                                                 | ePp<br>Sg                                                                | 03 40 24<br>40 30                                                                                            | 50   | Slight, local.                                 |
| 01 | Epc:- 51.3°N, 179.7°W, Rat Islands, Aleutian Islands,<br>Mag. = 6½(Pas), 6 (Pal), h = about 25 km.<br>H = 03h. 46m. 05.0s. (USCGS). |                                                   |                                                                          |                                                                                                              |      |                                                |
|    | Shillong                                                                                                                            | ZNE                                               | iP<br>eS                                                                 | 03 57 13<br>04 06 15                                                                                         | 7600 | Compression. Initial ground motion North West. |
|    | Chatra                                                                                                                              | ZNE<br>NE                                         | iP<br>iS                                                                 | 03 57 24<br>04 06 37                                                                                         | 7850 |                                                |
|    | Dehra Dun                                                                                                                           | Z<br>N                                            | eP<br>PP<br>PPP<br>iS<br>SS<br>Lq<br>Lr<br>M                             | 03 57 38<br>04 00 28<br>02 13<br>07 09<br>12 01<br>04 16 15<br>19 30<br>25 39                                | 8200 |                                                |
|    | Bokaro                                                                                                                              | NE                                                | iP<br>iS                                                                 | 03 57 45<br>04 07 17                                                                                         | 8220 | Initial ground motion South-West.              |
|    | Delhi                                                                                                                               | ZNE<br>Z<br>ZNE<br>NE<br>PS<br>SS<br>E<br>NE<br>Z | iP<br>PcP<br>ePP<br>PPP<br>iS<br>SKS<br>PS<br>SS<br>SSS<br>Lq<br>Lr<br>M | 03 57 46<br>57 59<br>04 00 36<br>02 30<br>07 23<br>07 28<br>07 59<br>12 28<br>15 40<br>18 04<br>21 04<br>- - | 8310 | Compression. Initial ground motion South West. |

Period = 20 secs.  
Am. = 22 mm.

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|                         |                                                          | COMPT | PHASE | G. M. T. | $\Delta$ | REMARKS.                                  |
|-------------------------|----------------------------------------------------------|-------|-------|----------|----------|-------------------------------------------|
|                         |                                                          |       |       | h. m. s. | km.      |                                           |
| <u>September, 1962.</u> |                                                          |       |       |          |          |                                           |
|                         |                                                          | ZNE   | eP    | 03 58 44 | 9490     |                                           |
|                         |                                                          | NE    | PP    | 04 02 00 |          |                                           |
|                         |                                                          |       | eS    | 09 15    |          |                                           |
|                         |                                                          |       | PS    | 10 05    |          |                                           |
|                         |                                                          |       | PPS   | 10 26    |          |                                           |
|                         |                                                          |       | M     | 39 23    |          | Period = 21 secs.                         |
|                         |                                                          | E     | M     | 39 43    |          | Gr. dis = 9 $\mu$ .                       |
|                         |                                                          |       |       |          |          | Period = 18 secs.                         |
|                         |                                                          |       |       |          |          | Gr. dis = 3 $\mu$ .                       |
|                         | Calcutta                                                 | E     | e     | 03 59 03 |          |                                           |
|                         | Poona                                                    | NE    | i     | 04 08 13 |          | Distant.                                  |
|                         | Hyderabad                                                | NE    | i     | 04 08 54 |          |                                           |
|                         |                                                          | E     | M     | 32 25    |          | Period = 18 secs.                         |
|                         |                                                          |       |       |          |          | Gr. dis = 7 $\mu$                         |
|                         |                                                          | N     | M     | 32 35    |          | Period = 21 secs.                         |
|                         |                                                          |       |       |          |          | Gr. dis = 13 $\mu$ .                      |
|                         | Madras                                                   | E     | e     | 04 09 20 |          | Earlier phases not recorded.              |
|                         |                                                          |       | e     | 10 03    |          |                                           |
| 01                      | Shillong                                                 | Z     | eP    | 04 09 27 |          | Distant, compression.                     |
|                         | Chatra                                                   | Z     | eP    | 04 09 40 |          | Distant.                                  |
| 01                      | Epc: - 51.3° N 179.9° W, Rat Islands, Aleutian Islands.  |       |       |          |          |                                           |
|                         | h = about 37 Km.                                         |       |       |          |          |                                           |
|                         | -H = 04 h 41 m 41.5 s (USCGS).                           |       |       |          |          |                                           |
|                         | Shillong                                                 | Z     | iP    | 04 52 47 |          | Slight, distant, compression.             |
|                         | Chatra                                                   | Z     | iP    | 04 52 58 |          | Distant, feeble.                          |
|                         | Dehra Dun                                                | Z     | e     | 04 53 12 |          | Tremor.                                   |
|                         | Bokaro                                                   | E     | iP    | 04 53 17 |          | Initial ground motion West.               |
|                         |                                                          |       | i     | 05 02 47 |          |                                           |
|                         | Delhi                                                    | Z     | iP    | 04 53 20 |          | Slight, compression.                      |
|                         | Bombay                                                   | ZNE   | eP    | 04 54 18 |          | Slight.                                   |
| 01                      | Epc: - Lat 15.9° S Long. 168.2° E, New Hebrides Islands. |       |       |          |          |                                           |
|                         | h = about 244 Km.                                        |       |       |          |          |                                           |
|                         | -H = 04 h 52 m 14.5 s .                                  |       |       |          |          |                                           |
| 01                      | Port Blair                                               | NE    | eP    | 05 03 56 | 8450     | Slight.                                   |
|                         |                                                          |       | iS    | 13 39    |          |                                           |
| 01                      | Shillong                                                 | ZE    | iP    | 05 04 23 | 8780     | Moderate. Compression.                    |
|                         |                                                          | E     | iS    | 14 22    |          | Initial ground motion towards North West. |
|                         |                                                          |       | e     | 04 24    |          |                                           |
| 01                      | Chatra                                                   | ZNE   | iP    | 05 04 44 |          | Slight.                                   |
|                         |                                                          |       | i     | 14 48    |          |                                           |

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| DATE                   | STATION                                                                                                                                 | COMPT        | PHASE                   | G. M. T.<br>h. m. s.                         | $\Delta$<br>km | REMARKS                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------|----------------------------------------------|----------------|-------------------------------------------------------|
| S e p t e m b e r 1962 |                                                                                                                                         |              |                         |                                              |                |                                                       |
| 01                     | Visakhapatnam                                                                                                                           | E            | iP<br>e<br>e<br>e<br>eS | 05 04 47<br>05 44<br>09 29<br>11 13<br>14 53 | 9450           | Slight, distant<br>First ground<br>movement East.     |
|                        | Madras                                                                                                                                  | E            | iP<br>iS<br>e<br>e      | 05 04 56<br>15 06<br>15 36<br>16 47          | 9020           | Moderate, 'Deep'.<br>Initial ground<br>motion East.   |
|                        | Delhi                                                                                                                                   | Z            | iP                      | 05 05 20                                     |                | Slight, distant.<br>Compression.                      |
|                        | Dehra Dun                                                                                                                               | Z<br>N       | eP<br>iS                | 05 05 21<br>15 36                            | 9130           | Slight.                                               |
|                        | Poona                                                                                                                                   | E<br>NE<br>N | i<br>i<br>i             | 05 05 27<br>15 42<br>16 35                   |                | Slight, distant.                                      |
|                        | Bombay                                                                                                                                  | NE           | e<br>e<br>e             | 05 05 33<br>15 43<br>16 40                   |                | Slight.                                               |
|                        | Delhi                                                                                                                                   | Z<br>NE      | eP<br>iS                | 05 10 14<br>15 33                            | 3680           | Slight, compression.                                  |
|                        | Shillong                                                                                                                                | Z            | eP                      | 05 14 22                                     |                | Slight, distant,<br>compression.                      |
|                        | Calcutta                                                                                                                                | E            | iS                      | 05 14 35                                     |                | Slight.                                               |
|                        | Bokaro                                                                                                                                  | E            | iP<br>i                 | 05 14 51<br>15 15                            |                | Slight, distant.<br>First direction East.             |
|                        | Hyderabad                                                                                                                               | NE           | i                       | 05 15 17                                     |                |                                                       |
|                        | Chatra                                                                                                                                  | Z            | iP<br>eS                | 06 00 37<br>01 12                            | 320            | Feeble.                                               |
| 01                     | Shillong                                                                                                                                | Z            | eP                      | 06 00 49                                     |                | Slight, near.                                         |
| 01                     | Port Blair                                                                                                                              | NE           | e                       | 06 50 47                                     |                |                                                       |
| 01                     | Shillong                                                                                                                                | Z            | eP                      | 07 53 13                                     |                | Slight.                                               |
| 01                     | Epc:- 51.3°N, 179.9°W, Rat Islands, Aleutian Islands.<br>h = about 42 km.<br>- H = 07h. 51m. 08.2s. (USCGS).<br>Mag: 6½ (Pas), 6 (Pal). |              |                         |                                              |                |                                                       |
| 01                     | Shillong                                                                                                                                | ZE<br>E      | iP<br>eS                | 08 02 13<br>11 18                            | 7670           | Compression. Initial<br>ground motion North,<br>West. |
|                        | Chatra                                                                                                                                  | Z            | iP                      | 08 02 25                                     |                | Distant.                                              |

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| DATE                    | STATION                                                                                                  | COMPT                                    | PHASE                                           | G. M. T.<br>h. m. s.                                                                 | $\Delta$<br>km. | REMARKS.                                                                                                         |
|-------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                          |                                          |                                                 |                                                                                      |                 |                                                                                                                  |
| 01                      | Dehra Dun                                                                                                | Z<br>N                                   | e(P)<br>e(S)                                    | 08 02 38<br>12 07                                                                    | 8150            |                                                                                                                  |
|                         | Bokaro                                                                                                   | NE                                       | iP<br>iS                                        | 08 02 45<br>12 20                                                                    | 8280            | Initial ground motion South-West.                                                                                |
|                         | Delhi                                                                                                    | ZNE<br>Z<br>NE<br><br>Z<br>NE<br>N<br>NE | iP<br>PcP<br>iS<br><br>e<br>e<br>SS<br>Lq<br>Lr | 08 02 48<br>02 59<br>12 27<br>12 33<br>12 41<br>17 31<br>23 19<br>26 01              | 8350            | Slight, compression. Initial ground motion South, West.                                                          |
|                         | Bombay                                                                                                   | ZNE<br>Z<br>NE                           | eP<br>e<br>eS                                   | 08 03 45<br>03 57<br>14 11                                                           | 9380            | Slight, compression.                                                                                             |
|                         | Hyderabad                                                                                                | E<br>E<br><br>N                          | iS<br>M<br><br>M                                | 08 13 48<br>40 25<br><br>40 33                                                       |                 | Period = 19 secs.<br>Gr. dis = 7 $\mu$ .<br>Period = 20 secs.<br>Gr. dis = 10 $\mu$ .                            |
|                         | Poona                                                                                                    | E                                        | iS                                              | 08 14 12                                                                             |                 | Slight, distant.                                                                                                 |
| 01                      | Shillong                                                                                                 | Z                                        | iP                                              | 08 58 13                                                                             |                 | Slight, distant.                                                                                                 |
| 01                      | Epc:- 25.8° N 65.3° E, Near coast of West Pakistan.<br>h = about 46 Km.<br>-H= 15 h 01 m 04.6 s (USCGS). |                                          |                                                 |                                                                                      |                 |                                                                                                                  |
|                         | Bombay                                                                                                   | N<br>Z<br>N<br>N<br><br>E                | eP<br>eS<br>Lr<br>M<br><br>M                    | 15 03 26<br>05 28<br>07 00<br>09 53<br><br>11 07                                     | 1050            | Slight, rarefaction.<br><br>Period = 13 secs.<br>Gr. dis = 10 $\mu$ .<br>Period = 7 secs.<br>Gr. dis = 5 $\mu$ . |
|                         | Poona                                                                                                    | NE<br><br>E<br>NE<br>E<br><br>NE         | iP<br><br>i<br>i<br>i<br>i<br>i<br>i<br>i       | 15 03 33<br><br>03 51<br>04 03<br>07 06<br>07 12<br>07 37<br>07 51<br>08 02<br>09 34 |                 | Slight. Initial ground movement towards South and West.                                                          |
|                         | Delhi                                                                                                    | ZE<br>N<br>ZNE                           | iP<br>eP<br>S                                   | 15 03 37<br>03 37<br>05 32                                                           | 1120            | Slight. First ground motion towards East. Compression.                                                           |
|                         | Dehra Dun                                                                                                | Z<br>N                                   | eP<br>iS<br>SS<br>M                             | 15 03 57<br>06 03<br>06 31<br>07 42                                                  | 1230            | Slight.                                                                                                          |

| DATE                    | STATION                                                                                                                                                                                                                                             | COMPT     | PHASE                           | G. M. T.<br>h. m. s.                                  | $\Delta$<br>km. | REMARKS.                                                                                                                |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------------|-------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                                                                                                                                                     |           |                                 |                                                       |                 |                                                                                                                         |
| 01                      | Hyderabad                                                                                                                                                                                                                                           | E         | iP<br>iS<br>SS<br>Lr<br>Lr<br>M | 15 04 22<br>08 22<br>09 25<br>10 04<br>10 06<br>12 15 | 2450            | Slight, intensity westward.<br><br>Period = 15 secs.<br>Gr. dis = 7 $\mu$ .<br>Period = 15 secs.<br>Gr. dis = 8 $\mu$ . |
|                         |                                                                                                                                                                                                                                                     | N         | M                               | 12 29                                                 |                 |                                                                                                                         |
|                         | Visakhapatnam                                                                                                                                                                                                                                       | E         | iP<br>iPP<br>i                  | 15 05 16<br>05 38<br>08 08                            | 2280            | Moderate, distant.<br>First ground movement East.                                                                       |
|                         |                                                                                                                                                                                                                                                     | NE        | iS<br>eSS                       | 09 01<br>09 27                                        |                 |                                                                                                                         |
|                         |                                                                                                                                                                                                                                                     | E         | iScP                            | 12 46                                                 |                 |                                                                                                                         |
|                         | Bokaro                                                                                                                                                                                                                                              | E         | eP<br>eS                        | 15 05 19<br>09 07                                     | 2310            | Slight, phases not well defined.                                                                                        |
|                         | Madras                                                                                                                                                                                                                                              | E         | eP<br>eS<br>M                   | 15 05 20<br>08 55<br>11 58                            | 2160            | Slight.                                                                                                                 |
|                         | Kodaikanal                                                                                                                                                                                                                                          | E         | iP<br>M                         | 15 05 22<br>13 04                                     |                 | Slight, distant.<br>Initial ground motion West.                                                                         |
|                         | Calcutta                                                                                                                                                                                                                                            | E         | eP<br>PP<br>eS<br>M             | 15 05 55<br>06 25<br>09 57<br>13 17                   | 2480            | Slight.                                                                                                                 |
| 01                      | Shillong                                                                                                                                                                                                                                            | ZNE       | eP                              | 18 48 24                                              |                 | Slight, near.                                                                                                           |
|                         | Chatra                                                                                                                                                                                                                                              | Z         | eP                              | 18 50 14                                              |                 | Slight.                                                                                                                 |
| 01                      | Shillong                                                                                                                                                                                                                                            | Z         | ePg<br>Sg                       | 18 51 57<br>52 05                                     | 70              | Slight, near.                                                                                                           |
| 01                      | Epc:- 36 <sup>o</sup> N 49 <sup>o</sup> E (Shillong).<br>- H = 19 h 20 m 30 s .                                                                                                                                                                     |           |                                 |                                                       |                 |                                                                                                                         |
| 01                      | Epc:-35.6 <sup>o</sup> N 50.0 <sup>o</sup> E, North West Iran. Over 10,000 killed many injured and extensive property damage.<br>h= about 21 Km.<br>-H= 19 h 20 m 38.5 s (USCGS).<br>Mag. 7- $\frac{1}{4}$ (Pas), 7- $\frac{3}{4}$ (Berk), 7 (Pal). |           |                                 |                                                       |                 |                                                                                                                         |
|                         | Delhi                                                                                                                                                                                                                                               | ZNE<br>NE | iP<br>i<br>PP<br>PPP            | 19 25 54<br>26 10<br>26 28<br>26 41                   | 2730            | Initial ground motion South East.<br>Compression.                                                                       |
|                         |                                                                                                                                                                                                                                                     | ZNE       | S                               | 30 13                                                 |                 |                                                                                                                         |

| DATE                    | STATION   | COMPT | PHASE | G. M. T. | $\Delta$ | REMARKS.                                  |
|-------------------------|-----------|-------|-------|----------|----------|-------------------------------------------|
|                         |           |       |       | h. m. s. | km.      |                                           |
| <u>September, 1962.</u> |           |       |       |          |          |                                           |
| 01<br>(Contd.)          | Dehra Dun | Z     | eP    | 19 25 56 | 2810     |                                           |
|                         |           | N     | PP    | 26 40    |          |                                           |
|                         |           |       | PPP   | 27 00    |          |                                           |
|                         |           |       | iS    | 30 20    |          |                                           |
|                         |           |       | Lq    | 31 31    |          |                                           |
|                         |           |       | SS    | 31 55    |          |                                           |
|                         |           |       | SSS   | 32 12    |          |                                           |
|                         |           |       | Lr    | 32 57    |          |                                           |
|                         |           |       | M     | 34 16    |          |                                           |
|                         | Bombay    | ZNE   | iP    | 19 26 16 | 2890     | Compression.                              |
|                         |           | NE    | i     | 26 34    |          |                                           |
|                         |           |       | PP    | 26 47    |          |                                           |
|                         |           |       | PPP   | 27 07    |          |                                           |
|                         |           |       | PcP   | 29 30    |          |                                           |
|                         |           | ZN    | eS    | 30 45    |          |                                           |
|                         |           | ZNE   | i     | 31 00    |          |                                           |
|                         |           | NE    | Lq    | 31 23    |          |                                           |
|                         |           |       | SS    | 31 56    |          |                                           |
|                         |           |       | Lr    | 32 45    |          |                                           |
|                         |           | E     | M     | 39/40    |          | Period = 15 secs.<br>Gr. dis. = 245 $\mu$ |
|                         |           | N     | M     | 39/40    |          | Period = 17 secs.<br>Gr. dis. = 211 $\mu$ |
|                         | Sehore    | NE    | iP    | 19 26 21 | 3250     |                                           |
|                         |           | N     | PP    | 27 09    |          |                                           |
|                         |           |       | PPP   | 28 36    |          |                                           |
|                         |           |       | iS    | 31 14    |          |                                           |
|                         |           |       | SS    | 32 46    |          |                                           |
|                         |           |       | Lr    | 33 53    |          |                                           |
|                         |           |       | M     | 36 21    |          |                                           |
|                         | Poona     | NE    | iP    | 19 26 27 | 3250     | Initial ground<br>movement South East.    |
|                         |           |       | PP    | 27 13    |          |                                           |
|                         |           | E     | PPP   | 27 29    |          |                                           |
|                         |           | NE    | iS    | 31 19    |          |                                           |
|                         |           | E     | Lq    | 32 29    |          |                                           |
|                         |           | N     | SS    | 32 39    |          |                                           |
|                         |           | E     | SSS   | 32 58    |          |                                           |
|                         |           | NE    | LR    | 33 58    |          |                                           |
|                         |           |       | M     | 38 03    |          |                                           |
|                         |           | N     | Mn    | 38/39-   |          | Period = 18 secs.<br>$\mu$ = 238.1        |
|                         | Hyderabad | E     | iP    | 19 26 53 | 3700     | South East.                               |
|                         |           | NE    | PP    | 28 07    |          |                                           |
|                         |           |       | PPP   | 28 28    |          |                                           |
|                         |           |       | PcP   | 29 35    |          |                                           |
|                         |           |       | S     | 32 13    |          |                                           |
|                         |           |       | SS    | 34 25    |          |                                           |
|                         |           |       | SSS   | 34 57    |          |                                           |
|                         |           | N     | Lr    | 35 24    |          |                                           |
|                         |           | E     | Lr    | 35 29    |          |                                           |
|                         |           | E     | M     | 38 02    |          | Period = 16 secs.<br>$\mu$ = 290.         |
|                         |           | N     | M     | 39 23    |          | Period = 9 secs.<br>$\mu$ = 196.          |



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| DATE                    | STATION       | COMPT        | PHASE                                                       | G. M. T.<br>h. m. s.                                                                      | $\Delta$<br>km. | REMARKS.                                                           |
|-------------------------|---------------|--------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------|
| <u>September, 1962.</u> |               |              |                                                             |                                                                                           |                 |                                                                    |
| 01                      | Chatra        | ZNE          | iP<br>S                                                     | 19 27 15<br>32 33                                                                         | 3670            |                                                                    |
|                         | Bokaro        | E            | iP<br>S                                                     | 19 27 18<br>32 35                                                                         | 3620            | Phases overlapping.<br>First direction<br>East.                    |
|                         | Visakhapatnam | NE           | iP<br>iPP<br>iS<br>iSS<br>iSSS<br>E eLr<br>eM               | 19 27 28<br>28 56<br>33 14<br>35 46<br>36 19<br>37 50<br>41 00                            | 4110            | Initial ground<br>motion North West.                               |
|                         | Kodaikanal    | E            | iP<br>PP<br>PPP<br>i<br>iS<br>SS, Lq<br>M                   | 19 27 36<br>29 00<br>29 24<br>31 36<br>33 24<br>35 48<br>-- --                            | 4140            | Initial ground<br>movement towards<br>West.                        |
|                         | Madras        | E            | iP<br>PP<br>PPP<br>PcP<br>iS<br>Lq/SS<br>SSS<br>Lr<br>M     | 19 27 37<br>29 03<br>29 24<br>29 59<br>33 23<br>35 51<br>36 23<br>37 41<br>41 29          | 4110            | Initial ground<br>motion East.                                     |
|                         | Calcutta      | E            | iP<br>iS<br>Lr<br>M                                         | 19 27 39<br>33 26<br>37 59<br>41 29                                                       | 4110            | Initial movement<br>East.<br><br>Period = 12 secs.<br>$\mu = 370.$ |
|                         | Shillong      | ZNE          | iP<br>PP<br>PPP<br>eS<br>SS<br>SSS                          | 19 27 51<br>29 14<br>29 33<br>33 43<br>36 12<br>36 27                                     | 4210            |                                                                    |
| 01                      | Tocklai       | E            | iP<br>PP<br>PPP<br>iS                                       | 19 28 07<br>29 41<br>30 06<br>34 00                                                       |                 |                                                                    |
|                         | Port Blair    | NE<br>E<br>E | e<br>PcP<br>PP<br>PPP<br>PcS<br>iS<br>PPS<br>SSS<br>Lr<br>M | 19 28 59<br>30 25<br>30 59<br>31 43<br>34 02<br>35 55<br>36 13<br>40 47<br>43 10<br>46 29 | 5300            | Initial ground<br>motion South East.                               |

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| DATE                    | STATION                                                                                      | COMPT | PHASE  | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                           |
|-------------------------|----------------------------------------------------------------------------------------------|-------|--------|----------------------|-----------------|------------------------------------|
| <u>September, 1962.</u> |                                                                                              |       |        |                      |                 |                                    |
| 01                      | Epc:- 35.3° N 49.6° E. North west Iran.<br>h = about 33 Km.<br>-H= 20 h 27 m 37.2 s (USCGS). |       |        |                      |                 |                                    |
|                         | Delhi                                                                                        | Z     | iP     | 20 32 55             |                 | Slight, compression.               |
|                         |                                                                                              | Z     | i      | 32 56                |                 |                                    |
|                         | Dehra Dun                                                                                    | Z     | eP     | 20 32 56             |                 | Slight.                            |
|                         | Bombay                                                                                       | Z     | eP     | 20 33 18             |                 |                                    |
|                         | Chatra                                                                                       | Z     | iP     | 20 34 13             |                 | Slight, distant.                   |
|                         | Shillong                                                                                     | Z     | eP     | 20 34 49             |                 | Slight, distant,<br>compression.   |
|                         | Shillong                                                                                     | Z     | iP     | 20 55 41             |                 | Slight, rarefaction.               |
|                         |                                                                                              |       | i      | 56 20                |                 |                                    |
| 01                      | Shillong                                                                                     | Z     | eP     | 21 12 05             |                 | Slight, distant,<br>compression.   |
| 01                      | Dehra Dun                                                                                    | Z     | e      | 21 36 05             |                 | Slight.                            |
|                         | Delhi                                                                                        | Z     | iP     | 21 36 25             | 260             | Slight, rarefaction.               |
|                         |                                                                                              |       | i      | 36 27                |                 |                                    |
|                         |                                                                                              |       | S      | 36 54                |                 |                                    |
|                         | Shillong                                                                                     | Z     | eP     | 21 52 32             |                 | Slight, near.                      |
|                         | Sehore                                                                                       | N     | iP     | 21 52 51             | 490             | Slight, other<br>phases not clear. |
|                         |                                                                                              |       | eS     | 53 43                |                 |                                    |
|                         | Bombay                                                                                       | Z     | eP     | 21 52 57             |                 | Slight.                            |
|                         |                                                                                              |       | eS     | 53 58                |                 |                                    |
|                         | Delhi                                                                                        | Z     | iP     | 21 53 01             | 620             | Slight, compression.               |
|                         |                                                                                              |       | iS     | 54 05                |                 |                                    |
|                         | Dehra Dun                                                                                    | Z     | e      | 21 53 23             |                 | Feeble.                            |
|                         |                                                                                              |       | i      | 54 48                |                 |                                    |
|                         |                                                                                              |       | i      | 55 33                |                 |                                    |
|                         | Poona                                                                                        | E     | i      | 21 54 31             |                 | Slight, near.                      |
|                         |                                                                                              |       | iSg(?) | 54 36                |                 |                                    |
|                         |                                                                                              |       | i      | 54 49                |                 |                                    |
|                         | Chatra                                                                                       | Z     | eP     | 21 54 38             | 1370            | Slight.                            |
|                         |                                                                                              |       | eS     | 56 57                |                 |                                    |
|                         | Bokaro                                                                                       | E     | e      | 21 56 01             |                 | Slight, near.                      |
|                         |                                                                                              |       | i      | 57 43                |                 |                                    |
|                         | Madras                                                                                       | E     | e      | 21 56 53             |                 | Feeble.                            |
|                         |                                                                                              |       | e      | 58 21                |                 |                                    |
|                         |                                                                                              |       | e      | 58 46                |                 |                                    |

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| DATE                    | STATION                                                                                     | COMPT  | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|---------------------------------------------------------------------------------------------|--------|----------|----------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                             |        |          |                      |                 |                                  |
| 01                      | Shillong                                                                                    | Z      | eP       | 22 00 32             |                 | Slight, distant,<br>compression. |
| 01                      | Delhi                                                                                       | Z      | iP       | 22 28 02             |                 | Slight, rarefaction.             |
| 01                      | Shillong                                                                                    | Z      | eP       | 23 27 11             |                 | Slight, tremor.                  |
| 02                      | Shillong                                                                                    | Z      | eP<br>i  | 00 53 08<br>53 16    |                 | Slight, near,<br>rarefaction.    |
| 02                      | Chatra                                                                                      | Z      | eP<br>eS | 03 03 20<br>03 46    | 230             | Feeble.                          |
|                         | Shillong                                                                                    | Z      | eP<br>eS | 03 03 23<br>03 52    | 255             | Slight, near.                    |
| 02                      | Shillong                                                                                    | Z      | iP       | 03 13 38             |                 | Slight, distant,<br>rarefaction. |
| 02                      | Chatra                                                                                      | Z      | iP       | 03 13 51             |                 | Feeble, distant.                 |
|                         | Dehra Dun                                                                                   | Z      | e        | 03 14 04             |                 | Tremor.                          |
|                         | Delhi                                                                                       | Z      | iP       | 03 14 13             |                 | Slight, compression.             |
| 02                      | Shillong                                                                                    | Z      | e        | 04 38 45             |                 | Slight, tremor.                  |
| 02                      | Shillong                                                                                    | Z      | iP<br>i  | 05 16 01<br>16 23    |                 | Slight, near,<br>rarefaction.    |
| 02                      | Epc:- 27.5° N 127.0° E, Ryukyu Islands, h = about 58 km.<br>-H= 05 h 33 m 05.4 s (USCGS)    |        |          |                      |                 |                                  |
|                         | Chatra                                                                                      | Z      | eP       | 05 39 59             |                 | Slight, distant.                 |
|                         | Dehra Dun                                                                                   | Z      | e        | 05 41 00             |                 | Tremor, slight.                  |
|                         | Delhi                                                                                       | Z      | iP       | 05 42 06             |                 | Slight, rarefaction.             |
| 02                      | Chatra                                                                                      | Z      | eP       | 06 40 36             |                 | Slight.                          |
| 02                      | Epc:- 35.6° N 49.2° E, Northwest Iran.<br>h = about 33 km.<br>-H= 07 h 12 m 02.4 s (USCGS). |        |          |                      |                 |                                  |
|                         | Delhi                                                                                       | Z      | iP       | 07 17 19             |                 | Slight, compression.             |
|                         | Dehra Dun                                                                                   | Z<br>N | e<br>e   | 07 17 21<br>21 42    |                 | Feeble.                          |
| 02                      | Dehra Dun                                                                                   | Z      | e        | 09 29 46             |                 | Slight.                          |
|                         | Delhi                                                                                       | Z      | iP       | 09 31 48             |                 | Slight, rarefaction.             |
| 02                      | Shillong                                                                                    | Z      | eP       | 09 40 50             |                 | Slight, near,<br>rarefaction.    |

| DATE                    | STATION                                                                                           | COMPT | PHASE     | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|---------------------------------------------------------------------------------------------------|-------|-----------|----------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                                   |       |           |                      |                 |                                  |
| 02                      | Delhi                                                                                             | Z     | iP        | 13 26 46             |                 | Slight, rarefaction.             |
|                         | Dehra Dun                                                                                         | Z     | e         | 13 26 49             |                 | Tremor.                          |
|                         | Chatra                                                                                            | Z     | eP        | 13 28 03             |                 | Feeble, distant.                 |
|                         | Shillong                                                                                          | Z     | eP        | 13 28 39             |                 | Slight, distant,<br>compression. |
| 02                      | Shillong                                                                                          | Z     | e         | 14 55 45             |                 | Slight, tremor.                  |
| 02                      | Epc:- 10.2° S 120.3° E Soemba Island region.<br>h = about 33 Km.<br>-H= 15 h 21 m 55.0 s (USCGS). |       |           |                      |                 |                                  |
|                         | Chatra                                                                                            | Z     | iP        | 15 29 41             |                 | Feeble, distant.                 |
|                         | Shillong                                                                                          | Z     | eP        | 15 30 09             | 4930            | Slight, distant,<br>compression. |
|                         |                                                                                                   | E     | eS        | 36 45                |                 |                                  |
|                         |                                                                                                   | Z     | i         | 40 22                |                 |                                  |
|                         |                                                                                                   |       | i         | 40 31                |                 |                                  |
|                         | Madras                                                                                            | E     | eP        | 15 30 25             | 5020            | Slight.                          |
|                         |                                                                                                   |       | PPP       | 32 46                |                 |                                  |
|                         |                                                                                                   |       | eS        | 37 05                |                 |                                  |
|                         |                                                                                                   |       | Lq        | 41 00                |                 |                                  |
|                         |                                                                                                   |       | Lr        | 43 19                |                 |                                  |
|                         |                                                                                                   |       | M         | 47 11                |                 |                                  |
|                         | Dehra Dun                                                                                         | Z     | eP        | 15 31 13             |                 | Feeble.                          |
|                         |                                                                                                   | N     | e         | 39 40                |                 |                                  |
|                         | Delhi                                                                                             | Z     | iP        | 15 31 35             | 6340            | Slight, compression.             |
|                         |                                                                                                   | NE    | eP        | 31 35                |                 |                                  |
|                         |                                                                                                   | N     | eS        | 39 29                |                 |                                  |
|                         | Bombay                                                                                            | NE    | eP        | 15 31 36             | 5890            | Slight.                          |
|                         |                                                                                                   |       | eS        | 39 05                |                 |                                  |
|                         | Calcutta                                                                                          | E     | iS        | 15 36 57             |                 | Slight.                          |
| 02                      | Shillong                                                                                          | Z     | eP        | 15 47 05             |                 | Slight, distant.                 |
|                         | Chatra                                                                                            | Z     | eP        | 15 47 31             |                 | Feeble, distant.                 |
| 02                      | Shillong                                                                                          | Z     | iPg<br>Sg | 16 00 45<br>00 50    | 50              | Slight, local.                   |
| 02                      | Shillong                                                                                          | Z     | eP        | 16 09 57             |                 | Slight, distant,<br>rarefaction. |
| 02                      | Shillong                                                                                          | Z     | e         | 18 13 08             |                 | Slight.                          |
|                         | Delhi                                                                                             | Z     | iP        | 18 14 07             |                 | Slight, rarefaction.             |
| 02                      | Shillong                                                                                          | Z     | eP<br>i   | 18 21 58<br>22 28    |                 | Slight, near.                    |

| DATE                   | STATION   | COMPT | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-----------|-------|----------|----------------------|-----------------|----------------------------------|
| <u>September, 1962</u> |           |       |          |                      |                 |                                  |
| 02                     | Shillong  | Z     | eP<br>i  | 18 55 25<br>56 23    |                 | Slight, near.                    |
| 02                     | Shillong  | Z     | eP<br>i  | 19 41 35<br>41 58    |                 | Slight.                          |
| 02                     | Shillong  | Z     | eP<br>i  | 20 47 48<br>48 21    |                 | Slight, near.                    |
| 02                     | Shillong  | Z     | eP       | 22 26 16             |                 | Slight, near.                    |
|                        | Chatra    | Z     | eP       | 22 28 02             |                 | Slight, near.                    |
| 03                     | Shillong  | Z     | iP       | 00 04 33             |                 | Slight, distant,<br>compression. |
|                        | Chatra    | Z     | iP       | 00 05 06             |                 | Slight, distant.                 |
|                        | Delhi     | Z     | iP       | 00 06 00             |                 | Tremor, rarefaction.             |
|                        | Dehra Dun | Z     | e        | 00 06 05             |                 | Tremor.                          |
| 03                     | Delhi     | Z     | iP       | 00 13 19             |                 | Slight, rarefaction.             |
| 03                     | Chatra    | Z     | iP       | 00 36 20             |                 | Slight, distant.                 |
| 03                     | Dehra Dun | Z     | e        | 11 01 00             |                 | Tremor.                          |
|                        | Delhi     | Z     | iP<br>iS | 11 01 10<br>02 47    | 930             | Slight, compression.             |
| 03                     | Shillong  | Z     | eP       | 18 28 38             |                 | Slight.                          |
| 03                     | Shillong  | Z     | eP       | 19 56 23             |                 | Slight.                          |
| 03                     | Shillong  | Z     | eP       | 21 22 20             |                 | Slight, distant,<br>rarefaction. |
| 03                     | Shillong  | Z     | e        | 21 24 14             |                 | Slight.                          |
| 03                     | Dehra Dun | Z     | eP<br>eS | 23 24 57<br>26 31    | 910             | Slight.                          |
|                        | Delhi     | Z     | iP<br>iS | 23 25 01<br>26 32    | 880             | Slight, compression.             |
| 03                     | Shillong  | Z     | eP       | 23 27 41             |                 | Slight, distant,<br>rarefaction. |
| 04                     | Shillong  | Z     | eP       | 00 05 20             |                 | Slight, near,<br>compression.    |
| 04                     | Shillong  | Z     | eP       | 00 06 37             |                 | Slight, near.                    |
| 04                     | Shillong  | Z     | eP       | 00 18 20             |                 | Slight, near,<br>rarefaction.    |
| 04                     | Dehra Dun | Z     | e        | 00 37 30             |                 | Slight.                          |

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| DATE                   | STATION                                                                                                             | COMPT     | PHASE      | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                           |
|------------------------|---------------------------------------------------------------------------------------------------------------------|-----------|------------|----------------------|-----------------|--------------------------------------------------------------------|
| <u>September, 1963</u> |                                                                                                                     |           |            |                      |                 |                                                                    |
| 04                     | Dehra Dun                                                                                                           | Z         | eP         | 06 16 47             |                 | Tremor.                                                            |
|                        | Delhi                                                                                                               | Z<br>Z    | iP<br>iS   | 06 16 58<br>17 38    | 970             | Slight, compression.                                               |
|                        | Chatra                                                                                                              | Z         | iP<br>i    | 06 18 31<br>21 23    |                 | Slight, distant.                                                   |
|                        | Shillong                                                                                                            | Z         | eP         | 06 19 17             |                 | Slight, near,<br>rarefaction.                                      |
| 04                     | Chatra                                                                                                              | Z         | iPg<br>Sg  | 07 27 21<br>27 30    | 70              | Slight, local.                                                     |
| 04                     | Epc:- 35.6° N 49.7° E Northwest Iran.<br>h = about 24 km.<br>-H= 13 h 30 m 10.9 s (USCGS).                          |           |            |                      |                 |                                                                    |
|                        | Delhi                                                                                                               | ZNE       | iP<br>iS   | 13 35 28<br>39 50    | 2780            | Slight. First ground<br>motion South East.<br>Compression.         |
|                        | Dehra Dun                                                                                                           | Z<br>N    | e<br>e     | 13 35 28<br>39 56    | 2880            | Feeble.                                                            |
| 04                     | Bombay                                                                                                              | ZNE<br>NE | eP<br>eS   | 13 35 51<br>40 30    | 3040            | Slight.                                                            |
|                        | Chatra                                                                                                              | Z         | iP         | 13 36 49             |                 | Slight, distant.                                                   |
|                        | Shillong                                                                                                            | ZNE<br>Z  | iP<br>e    | 13 37 24<br>37 36    |                 | Slight, distant,<br>compression.                                   |
|                        | Madras                                                                                                              | E         | e<br>e     | 13 45 55<br>51 16    |                 |                                                                    |
|                        | Calcutta                                                                                                            | E         | e          | 13 46 54             |                 | Slight.                                                            |
|                        | Hyderabad                                                                                                           | E<br>N    | M<br>M     | 13 49 08<br>49 35    |                 | Period = 12 secs.<br>$\mu = 5$ .<br>Period = 12 secs.<br>$\mu = 4$ |
| 04                     | Port Blair                                                                                                          | N         | ePg<br>iSg | 15 09 36<br>09 40    | 40              | Slight.                                                            |
| 04                     | Shillong                                                                                                            | Z         | eP         | 15 39 15             |                 | Slight, distant,<br>compression.                                   |
| 04                     | Shillong                                                                                                            | ZNE<br>NE | eP<br>i    | 16 24 48<br>25 02    |                 | Slight, near.                                                      |
| 04                     | Shillong                                                                                                            | Z         | e          | 17 24 22             |                 | Slight, distant,<br>tremor.                                        |
| 04                     | Epc:- 15.5° S 167.7° E New Hebrides Islands.<br>Felt : Santo.<br>h = about 133 km.<br>-H= 19 h 28 m 37.0 s (USCGS). |           |            |                      |                 |                                                                    |

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| DATE                   | STATION                                                                                                                                     | COMPT.    | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|----------------------|-----------------|------------------------------------------------------------|
| <u>September, 1962</u> |                                                                                                                                             |           |          |                      |                 |                                                            |
| 04                     | Shillong                                                                                                                                    | Z         | eP<br>i  | 19 40 56<br>41 28    |                 | Slight, distant,<br>compression.                           |
| 04                     | Shillong                                                                                                                                    | Z         | eP       | 20 33 33             |                 | Slight, local.                                             |
| 04                     | Shillong                                                                                                                                    | Z         | eP<br>i  | 20 50 37<br>51 12    |                 | Slight, near,<br>compression.                              |
| 04                     | Epc:- 39.9° N 44.2° E, Turkey Armenia, S.S.R. border.<br>Felt : Diyadinand Dogrubazit.<br>h = about 33 km.<br>-H= 22 h 59 m 19.4 s (USCGS). |           |          |                      |                 |                                                            |
|                        | Dehra Dun                                                                                                                                   | Z<br>N    | e<br>i   | 23 05 19<br>10 42    | 3740            | Feeble.                                                    |
|                        | Delhi                                                                                                                                       | ZNE<br>E  | iP<br>eS | 23 05 23<br>10 18    | 3300            | Slight. First ground<br>motion South East,<br>compression. |
|                        | Bombay                                                                                                                                      | ZNE<br>NE | eP<br>eS | 23 05 52<br>11 14    | 3740            | Slight, compression.                                       |
|                        | Poonā                                                                                                                                       | NE        | i        | 23 05 58             |                 | Slight, distant.                                           |
|                        | Chatra                                                                                                                                      | Z         | iP       | 23 06 37             |                 | Feeble, distant.                                           |
|                        | Bokaro                                                                                                                                      | NE        | eP       | 23 06 39             |                 | Slight, other phases<br>not clear.                         |
|                        | Shillong                                                                                                                                    | Z         | eP       | 23 07 10             |                 | Slight, distant,<br>compression.                           |
|                        | Calcutta                                                                                                                                    | ZE        | e        | 23 18 45             |                 | Slight.                                                    |
|                        | Hyderabad                                                                                                                                   | E<br>N    | M<br>M   | 23 20 31<br>20 34    |                 | Period = 18 secs.<br>p = 7.<br>Period = 15 secs.<br>p = 7. |
| 05                     | Shillong                                                                                                                                    | ZNE       | eP       | 00 29 53             |                 | Slight, near,<br>compression.                              |
| 05                     | Dehra Dun                                                                                                                                   | Z         | e        | 06 16 22             |                 | Tremor.                                                    |
| 05                     | Bokaro                                                                                                                                      | NE        | eP       | 06 39 23             |                 | Slight, near. Other<br>phases not clear.                   |
|                        | Chatra                                                                                                                                      | Z         | eP<br>eS | 06 39 31<br>40 21    | 460             | Feeble, near.                                              |
| 05                     | Shillong                                                                                                                                    | Z         | eP<br>i  | 10 11 54<br>12 11    |                 | Slight, near,<br>rarefaction.                              |
| 05                     | Shillong                                                                                                                                    | Z         | eP       | 10 54 07             |                 | Slight, distant,<br>rarefaction.                           |
| 05                     | Delhi                                                                                                                                       | Z         | eP       | 11 20 28             |                 | Slight, compression.                                       |

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| DATE                    | STATION                                                                                                                                      | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                                                                              |       |       |                      |                 |                                  |
| 05                      | Epc:- $3.3^{\circ}$ S $139.9^{\circ}$ E, New Guinea.<br>h = about 110 km.<br>-H= 11 h 17 m 06.7 s (USCGS).                                   |       |       |                      |                 |                                  |
|                         | Shillong                                                                                                                                     | Z     | eP    | 11 26 25             |                 | Slight, distant,<br>compression. |
|                         | Dehra Dun                                                                                                                                    | Z     | e     | 11 27 54             |                 | Slight.                          |
|                         | Delhi                                                                                                                                        | Z     | iP    | 11 27 54             |                 | Slight.compression.              |
| 05                      | Shillong                                                                                                                                     | Z     | eP    | 11 44 45             |                 | Slight, distant,<br>rarefaction. |
|                         | Delhi                                                                                                                                        | Z     | eP    | 11 46 09             |                 | Slight, rarefaction.             |
| 05                      | Delhi                                                                                                                                        | Z     | iP    | 14 14 05             |                 | Slight,rarefaction.              |
| 05                      | Chatra                                                                                                                                       | Z     | iP    | 21 47 15             |                 | Slight, distant.                 |
| 06                      | Bokaro                                                                                                                                       | NE    | iP    | 06 36 56             |                 | Tremor.                          |
| 06                      | Shillong                                                                                                                                     | Z     | eP    | 07 14 26             |                 | Slight, distant,<br>rarefaction. |
| 06                      | Shillong                                                                                                                                     | Z     | eP    | 08 20 10             | 556             | Slight, near,<br>rarefaction.    |
|                         |                                                                                                                                              |       | eS    | 21 09                |                 |                                  |
|                         |                                                                                                                                              |       | iSS   | 21 19                |                 |                                  |
|                         |                                                                                                                                              |       | eSSS  | 21 27                |                 |                                  |
|                         |                                                                                                                                              |       | eSg/M | 21 35                |                 |                                  |
| 06                      | Epc:- $4.0^{\circ}$ S $126.4^{\circ}$ E. Ceram Sea.<br>h = about 33 Km.<br>-H= 11 h 10 m 50.3 s (USCGS).                                     |       |       |                      |                 |                                  |
|                         | Shillong                                                                                                                                     | Z     | eP    | 11 19 02             |                 | Slight, compression.             |
|                         | Chatra                                                                                                                                       | Z     | eP    | 11 19 35             |                 | Feeble.                          |
|                         | Delhi                                                                                                                                        | Z     | eP    | 11 20 34             |                 | Slight,rarefaction,              |
|                         |                                                                                                                                              |       | i?    | 20 42                |                 |                                  |
|                         | Dehra Dun                                                                                                                                    | Z     | e     | 11 20 35             |                 | Slight.                          |
| 06                      | Delhi                                                                                                                                        | Z     | iP    | 13 13 08             |                 | Slight,compression.              |
| 06                      | Dehra Dun                                                                                                                                    | Z     | e     | 13 47 39             |                 | Slight.                          |
| 06                      | Epc:- $8.4^{\circ}$ S $158.8^{\circ}$ E, Solomon Islands region.<br>Felt : New Georgia.<br>h = about 95 km.<br>-H= 15 h 03 m 01.9 s (USCGS). |       |       |                      |                 |                                  |
|                         | Shillong                                                                                                                                     | Z     | iP    | 15 14 26             |                 | Slight, distant,<br>rarefaction. |
| 06                      | Shillong                                                                                                                                     | Z     | eP    | 15 50 57             |                 | Slight.                          |



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| DATE                    | STATION                                                                                                          | COMPT | PHASE   | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                           |
|-------------------------|------------------------------------------------------------------------------------------------------------------|-------|---------|----------------------|-----------------|--------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                  |       |         |                      |                 |                                                                    |
| 06                      | Shillong                                                                                                         | Z     | iP      | 16 03 05             |                 | Slight.                                                            |
| 06                      | Shillong                                                                                                         | Z     | eP      | 16 05 30             |                 | Slight.                                                            |
| 06                      | Delhi                                                                                                            | Z     | iP      | 17 09 40             |                 | Slight, rarefaction.                                               |
|                         | Shillong                                                                                                         | Z     | eP      | 17 11 37             |                 | Slight.                                                            |
| 06                      | Shillong                                                                                                         | Z     | iP      | 17 50 07             |                 | Slight, near,<br>compression.                                      |
| 06                      | Shillong                                                                                                         | Z     | iP      | 18 08 02             |                 | Slight, distant,<br>compression.                                   |
| 06                      | Delhi                                                                                                            | Z     | iP      | 18 09 40             |                 | Tremor, rarefaction.                                               |
| 06                      | Shillong                                                                                                         | Z     | iP      | 18 42 34             |                 | Moderate, near. Initial<br>ground motion South<br>and rarefaction. |
|                         | Chatra                                                                                                           | Z     | iP<br>S | 18 43 36<br>44 54    | 760             | Slight, distant.                                                   |
|                         | Delhi                                                                                                            | Z     | eP      | 18 45 38             |                 | Slight, rarefaction.                                               |
| 06                      | Delhi                                                                                                            | Z     | iP      | 18 48 28             |                 | Slight, rarefaction.                                               |
| 06                      | Shillong                                                                                                         | Z     | iP<br>e | 22 51 40<br>52 00    |                 | Slight, near,<br>compression.                                      |
| 07                      | Shillong                                                                                                         | Z     | iP      | 07 05 10 46          |                 | Slight, near,<br>compression.                                      |
| 07                      | Shillong                                                                                                         | Z     | eP      | 07 24 37             |                 | Slight, local.                                                     |
| 07                      | Epc:- $6.3^{\circ}$ S $130.0^{\circ}$ E. Banda Sea region.<br>h = about 180 km.<br>-H= 07 h 41 m 51.0 s (USCGS). |       |         |                      |                 |                                                                    |
|                         | Shillong                                                                                                         | Z     | eP      | 07 50 21             |                 | Slight, distant,<br>compression.                                   |
|                         | Chatra                                                                                                           | Z     | iP      | 07 50 53             |                 | Feeble, distant.                                                   |
|                         | Poona                                                                                                            | Z     | iP      | 07 51 43             |                 | Slight, distant,<br>compression.                                   |
|                         | Delhi                                                                                                            | Z     | iP      | 07 51 51             |                 | Slight, compression.                                               |
|                         | Dehra Dun                                                                                                        | Z     | e       | 07 51 53             |                 | Slight.                                                            |
|                         | Bokaro                                                                                                           | NE    | iP      | 07 56 54             |                 | Slight.                                                            |
| 07                      | Shillong                                                                                                         | Z     | eP      | 08 31 57             |                 | Slight.                                                            |
| 07                      | Chatra                                                                                                           | Z     | iP      | 10 05 37             |                 | Slight.                                                            |

| DATE                    | STATION                                                                                                              | COMPT | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|----------------------------------------------------------------------------------------------------------------------|-------|--------------|----------------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                                                      |       |              |                            |                 |                                  |
| 07                      | Shillong                                                                                                             | Z     | eP           | 10 05 56                   |                 | Slight.                          |
| 07                      | Shillong                                                                                                             | Z     | eP           | 11 53 21                   |                 | Slight.                          |
| 07                      | Shillong                                                                                                             | Z     | eP           | 13 35 31                   |                 | Slight.                          |
| 07                      | Shillong                                                                                                             | Z     | eP           | 15 48 16                   |                 | Slight, distant,<br>rarefaction. |
| 07                      | Shillong                                                                                                             | Z     | eP           | 16 59 05                   |                 | Tremor.                          |
| 07                      | Shillong                                                                                                             | Z     | eP           | 17 19 40                   |                 | Slight.                          |
| 07                      | Shillong                                                                                                             | Z     | eP           | 17 57 31                   |                 | Slight, local.                   |
| 07                      | Shillong                                                                                                             | Z     | eP           | 18 01 45                   |                 | Tremor.                          |
| 07                      | Delhi                                                                                                                | Z     | iP           | 19 22 19                   |                 | Slight, rarefaction.             |
| 07                      | Delhi                                                                                                                | Z     | iP           | 19 39 46                   |                 | Slight, rarefaction.             |
| 07                      | Shillong                                                                                                             | Z     | eP           | 19 41 42                   |                 | Slight.                          |
| 07                      | Dehra Dun                                                                                                            | Z     | c            | 21 22 56                   |                 | Tremor.                          |
|                         | Delhi                                                                                                                | Z     | iP           | 21 23 06                   |                 | Slight, compression.             |
| 07                      | Shillong                                                                                                             | Z     | eP           | 21 25 25                   |                 | Slight.                          |
| 07                      | Shillong                                                                                                             | Z     | eP           | 23 35 19                   |                 | Slight.                          |
| 08                      | Shillong                                                                                                             | Z     | eP           | 00 03 32                   |                 | Slight, distant.                 |
| 08                      | Shillong                                                                                                             | Z     | eP           | 05 18 51                   |                 | Slight, distant.                 |
| 08                      | Shillong                                                                                                             | Z     | iP           | 12 00 36                   |                 | Slight, near,<br>rarefaction.    |
| 08                      | Delhi                                                                                                                | Z     | iP           | 12 03 57                   |                 | Slight, rarefaction.             |
| 08                      | Shillong                                                                                                             | Z     | eP<br>e      | 17 36 54<br>37 28          |                 | Slight, near,<br>compression.    |
| 08                      | Shillong                                                                                                             | Z     | iP           | 17 39 23                   |                 | Slight, distant,<br>rarefaction. |
| 08                      | Dehra Dun                                                                                                            | Z     | e            | 20 22 07                   |                 | Tremor.                          |
| 09                      | Epc:- 10.3° N 121.4° E, Near coast of Panay, Philippine Islands.<br>h = about 58 km.<br>H= 01 h 34 m 38.5 s (USCGS). |       |              |                            |                 |                                  |
|                         | Shillong                                                                                                             | Z     | eP           | 01 40 59                   |                 | Slight, distant,<br>compression. |
| 09                      | Delhi                                                                                                                | Z     | iP<br>i<br>i | 03 41 31<br>41 35<br>41 41 |                 | Slight, compression.             |

| DATE                   | STATION                                                                                                                                 | COMPT | PHASE   | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------|---------|----------------------|-----------------|----------------------------------|
| <u>September, 1963</u> |                                                                                                                                         |       |         |                      |                 |                                  |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 03 41 48             |                 | Slight, distant,<br>compression. |
| 09                     | Shillong                                                                                                                                | Z     | iP      | 03 44 38             |                 | Slight, distant,<br>rarefaction. |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 03 50 13             |                 | Slight, near,<br>compression.    |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 04 47 38             |                 | Slight, tremor.                  |
| 09                     | Dehra Dun                                                                                                                               | Z     | e<br>i  | 11 15 53<br>17 31    |                 | Slight.                          |
| 09                     | Epc:- $10.5^{\circ}$ N $121.8^{\circ}$ E, Near coast of Panay, Philippine Islands.<br>h = about 33 km.<br>-H= 11 h 23 m 41.6 s (USCGS). |       |         |                      |                 |                                  |
|                        | Shillong                                                                                                                                | Z     | eP      | 11 30 09             |                 | Slight, distant,<br>compression. |
| 09                     | Shillong                                                                                                                                | Z     | eP<br>i | 11 34 34<br>34 47    |                 | Slight, near.                    |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 11 41 59             |                 | Slight, local.                   |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 12 17 12             |                 | Slight, near.                    |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 15 24 52             |                 | Slight, distant,<br>compression. |
| 09                     | Epc:- $10.1^{\circ}$ N $147.3^{\circ}$ E, Mariana Islands region.<br>h = about 217 km.<br>-H= 15 h 15 m 22.7 s (USCGS).                 |       |         |                      |                 |                                  |
|                        | Chatra                                                                                                                                  | Z     | iP      | 15 25 23             |                 | Feeble, distant.                 |
| 09                     | Shillong                                                                                                                                | Z     | iP      | 16 37 43             |                 | Slight, local.                   |
| 09                     | Shillong                                                                                                                                | Z     | eP      | 16 38 09             |                 | Slight, near.                    |
| 09                     | Dehra Dun                                                                                                                               | Z     | e       | 18 22 25             |                 | Tremor.                          |
|                        | Chatra                                                                                                                                  | Z     | iP      | 18 22 59             |                 | Feeble, distant.                 |
|                        | Shillong                                                                                                                                | Z     | eP      | 18 23 55             |                 | Slight, tremor.                  |
| 09                     | Epc:- $62.4^{\circ}$ N $152.4^{\circ}$ W, Alaska.<br>h = about 57 km.<br>-H= 19 h 12 m 37.1 s (USCGS).                                  |       |         |                      |                 |                                  |
|                        | Shillong                                                                                                                                | Z     | eP      | 19 24 35             |                 | Slight, distant,<br>rarefaction. |
| 10                     | Shillong                                                                                                                                | Z     | eP      | 01 58 45             |                 | Slight.                          |
| 10                     | Shillong                                                                                                                                | Z     | eP      | 02 09 43             |                 | Slight, near,<br>compression.    |
| 10                     | Shillong                                                                                                                                | Z     | eP      | 04 50 18             |                 | Slight, local.                   |

| DATE                   | STATION                                                                                                           | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                        |
|------------------------|-------------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|-------------------------------------------------|
| <u>September, 1962</u> |                                                                                                                   |       |       |                      |                 |                                                 |
| 10                     | Epc:- 35.0° N 27.1° E, Dodecanese Islands.<br>h = about 33 km.<br>-H= 09 h 26 m 24.3 s (USCGS).                   |       |       |                      |                 |                                                 |
|                        | Delhi                                                                                                             | Z     | iP    | 09 44 23             |                 | Slight, compression.                            |
|                        | Dehra Dun                                                                                                         | Z     | e     | 09 44 24             |                 | Slight.                                         |
|                        |                                                                                                                   | N     | e     | 51 04                |                 |                                                 |
|                        | Shillong                                                                                                          | ZE    | eP    | 09 46 02             |                 | Slight, near,<br>compression.                   |
|                        |                                                                                                                   | Z     | i     | 46 13                |                 |                                                 |
|                        |                                                                                                                   |       | e     | 46 38                |                 |                                                 |
| 10                     | Shillong                                                                                                          | Z     | iP    | 14 47 59             |                 | Slight, distant,<br>rarefaction.                |
| 10                     | Port Blair                                                                                                        | N     | ePg   | 15 09 36             | 40              | Slight.                                         |
|                        |                                                                                                                   |       | iSg   | 09 40                |                 |                                                 |
| 10                     | Epc:- 21.1° S 179.2° W, Fiji Islands.<br>h = about 640 km.<br>-H= 15 h 43 m 59.4 s (USCGS).<br>Mag: = 6-1/2(Pas). |       |       |                      |                 |                                                 |
|                        | Shillong                                                                                                          | Z     | iP    | 15 56 31             |                 | Compression.                                    |
|                        |                                                                                                                   |       | i     | 56 38                |                 |                                                 |
|                        |                                                                                                                   |       | i     | 16 00 48             |                 |                                                 |
|                        |                                                                                                                   |       | e     | 00 58                |                 |                                                 |
|                        | Chatra                                                                                                            | Z     | i     | 16 01 07             |                 | Distant.                                        |
|                        | Delhi                                                                                                             | Z     | i     | 16 01 22             |                 | Compression.                                    |
|                        |                                                                                                                   |       | i     | 01 23                |                 |                                                 |
|                        | Dehra Dun                                                                                                         | Z     | e     | 16 01 24             | 5980            |                                                 |
|                        |                                                                                                                   | N     | e     | 08 58                |                 |                                                 |
|                        | Port Blair                                                                                                        | NE    | i     | 16 05 39             | 390             | Slight. Initial<br>ground motion North<br>East. |
|                        |                                                                                                                   |       | i     | 06 22                |                 |                                                 |
|                        | Madras                                                                                                            | E     | e     | 16 08 03             |                 | Appears surface waves.                          |
|                        |                                                                                                                   |       | e     | 09 39                |                 |                                                 |
|                        |                                                                                                                   |       | e     | 11 00                |                 |                                                 |
|                        |                                                                                                                   |       | e     | 15 28                |                 |                                                 |
|                        | Bombay                                                                                                            | NE    | e     | 16 09 14             |                 | Slight.                                         |
|                        |                                                                                                                   |       | e     | 11 14                |                 |                                                 |
|                        | Calcutta                                                                                                          | E     | i     | 16 10 19             |                 | Slight.                                         |
| 10                     | Shillong                                                                                                          | Z     | eP    | 16 23 11             |                 | Slight, tremor.                                 |
| 10                     | Shillong                                                                                                          | Z     | eP    | 17 45 17             |                 | Slight, near,<br>compression.                   |
| 10                     | Shillong                                                                                                          | Z     | eP    | 18 10 46             |                 | Slight.                                         |

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| DATE                    | STATION                                                                                                               | COMPT    | PHASE                                         | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                     |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------|-------------------------------------------------------------------------|-----------------|--------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                       |          |                                               |                                                                         |                 |                                                              |
| 10                      | Shillong                                                                                                              | Z        | eP                                            | 20 28 18                                                                |                 | Slight, tremor.                                              |
| 10                      | Shillong                                                                                                              | Z        | eP                                            | 20 42 36                                                                |                 | Slight, distant,<br>compression.                             |
| 10                      | Dehra Dun                                                                                                             | Z        | e                                             | 20 59 34                                                                |                 | Tremor.                                                      |
| 10                      | Delhi                                                                                                                 | Z        | iP<br>i                                       | 20 59 59<br>21 00 33                                                    |                 | Slight, compression.                                         |
| 10                      | Dehra Dun                                                                                                             | Z        | e                                             | 21 44 19                                                                |                 | Tremor.                                                      |
|                         | Delhi                                                                                                                 | Z        | eP                                            | 21 44 41                                                                |                 | Slight, compression.                                         |
| 10                      | Shillong                                                                                                              | Z        | eP                                            | 22 06 57                                                                |                 | Slight.                                                      |
| 10                      | Epc:- 30.5° N 94.6° E, Sikang Province, China.<br>h = about 33 km.<br>-H= 22 h 47 m 07.6 s (USCGS).                   |          |                                               |                                                                         |                 |                                                              |
|                         | Tocklai                                                                                                               | E        | iP<br>iS<br>iSSS                              | 22 48 23<br>50 01<br>50 12                                              | 930             | Slight, near.                                                |
|                         | Shillong                                                                                                              | ZNE<br>E | iP<br>eS<br>iSSS                              | 22 48 27<br>49 51<br>50 01                                              | 810             | Slight. Initial ground<br>motion North East,<br>compression. |
| 11                      | Epc:- 39.9° N 43.9° E, Eastern Turkey. Moderate damage at Igdir.<br>h = about 33 km.<br>-H= 00 h 17 m 37.2 s (USCGS). |          |                                               |                                                                         |                 |                                                              |
|                         | Shillong                                                                                                              | Z        | eP                                            | 00 25 29                                                                |                 | Slight, near,<br>rarefaction.                                |
| 11                      | Dehra Dun                                                                                                             | Z        | e                                             | 00 39 03                                                                |                 | Tremor.                                                      |
| 11                      | Poona                                                                                                                 | Z        | eP<br>PP<br>Pg<br>PPP<br>S<br>S<br>iSg<br>SSS | 00 47 23<br>47 31<br>47 36<br>47 38<br>48 07<br>48 09<br>48 17<br>48 25 | 350             | Slight.                                                      |
|                         | Bombay                                                                                                                | Z        | e<br>e                                        | 00 47 53<br>48 40                                                       |                 | Slight, near.                                                |
|                         | Delhi                                                                                                                 | Z        | iP<br>iS                                      | 00 48 00<br>49 13                                                       | 700             | Slight, compression.                                         |
|                         | Madras                                                                                                                | E        | e<br>e<br>e<br>e                              | 00 50 55<br>51 04<br>51 14<br>51 24                                     |                 | Slight, near.                                                |
| 11                      | Chatra                                                                                                                | Z        | iP                                            | 04 00 02                                                                |                 | Slight.                                                      |

| DATE                    | STATION                                                                                            | COMPT | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                                                             |
|-------------------------|----------------------------------------------------------------------------------------------------|-------|--------------|----------------------------|-----------------|----------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                    |       |              |                            |                 |                                                                      |
| 11                      | Shillong                                                                                           | Z     | iP<br>i<br>i | 07 39 05<br>39 13<br>39 30 |                 | Slight, distant and rarefaction.                                     |
|                         | Chatra                                                                                             | Z     | iP           | 07 39 31                   |                 | Slight, distant.                                                     |
| 11                      | Delhi                                                                                              | Z     | iP           | 07 49 28                   |                 | Slight, rarefaction.                                                 |
| 11                      | Delhi                                                                                              | Z     | iP           | 11 20 19                   |                 | Slight, rarefaction.                                                 |
|                         | Dehra Dun                                                                                          | N     | e<br>e       | 11 20 53<br>24 51          |                 | Feeble.                                                              |
|                         | Shillong                                                                                           | Z     | eP           | 11 22 14                   |                 | Slight, distant, compression.                                        |
| 11                      | Calcutta                                                                                           | E     | e            | 11 34 10                   |                 | Slight.                                                              |
| 11                      | Shillong                                                                                           | Z     | iP           | 13 08 29                   |                 | Slight, distant, compression.                                        |
| 11                      | Shillong                                                                                           | Z     | eP           | 13 39 45                   |                 | Slight.                                                              |
| 11                      | Shillong                                                                                           | Z     | iP           | 14 29 43                   |                 | Slight, near, rarefaction.                                           |
| 11                      | Shillong                                                                                           | Z     | e            | 15 42 48                   |                 | Slight, tremor.                                                      |
| 11                      | Shillong                                                                                           | Z     | eP           | 16 19 33                   |                 | Slight, near.                                                        |
| 11                      | Shillong                                                                                           | Z     | iP<br>e      | 16 56 40<br>56 53          |                 | Slight, near, rarefaction.                                           |
| 11                      | Epc:- 26.9° N 142.7° E, Bonin Islands region.<br>h = about 33 km.<br>-H= 17 h 51 m 11.1 s (USCGS). |       |              |                            |                 |                                                                      |
|                         | Shillong                                                                                           | Z     | eP           | 17 59 29                   |                 | Slight, distant, rarefaction.                                        |
|                         | Poona                                                                                              | Z     | iP           | 18 01 41                   |                 | Slight, distant, rarefaction.                                        |
| 11                      | Shillong                                                                                           | Z     | eP           | 18 06 00                   |                 | Tremor.                                                              |
| 11                      | Shillong                                                                                           | ZE    | iP           | 19 21 24                   |                 | Slight, near, rarefaction. Initial ground motion towards North West. |
| 11                      | Shillong                                                                                           | Z     | eP           | 21 47 38                   |                 | Slight, near, compression.                                           |
| 11                      | Shillong                                                                                           | ZE    | eP           | 22 02 01                   |                 | Slight, distant. Initial ground motion South, East, rarefaction.     |
| 11                      | Epc:- 23.8° N 121.3° E, Formosa.<br>h = about 33 km.<br>-H= 21 h 56 m 22.4 s (USCGS).              |       |              |                            |                 |                                                                      |

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| DATE                   | STATION                                                                                                              | COMPT         | PHASE                         | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                                                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------|----------------------------------------------|-----------------|---------------------------------------------------------------|
| <u>September, 1962</u> |                                                                                                                      |               |                               |                                              |                 |                                                               |
| 11                     | Delhi                                                                                                                | Z             | iP                            | 22 03 52                                     |                 | Slight, rarefaction.                                          |
|                        | Shillong                                                                                                             | Z             | iP                            | 22 46 33                                     |                 | Slight, near, compression.                                    |
| 11                     | Shillong                                                                                                             | ZNE           | iP                            | 23 24 02                                     |                 | Slight, near. Initial ground motion North, West, compression. |
| 11                     | Epc:- 40.9° N 75.6° E, Kiraghiz S.S.R.- Sinkiang, China border.<br>h = about 95 km.<br>-H= 23 h 40 m 49.6 s (USCGS). |               |                               |                                              |                 |                                                               |
|                        | Delhi                                                                                                                | Z             | iP                            | 23 43 42                                     |                 | Slight, compression.                                          |
|                        | Dehra Dun                                                                                                            | Z             | e                             | 23 45 04                                     |                 | Slight.                                                       |
|                        | Shillong                                                                                                             | Z             | eP                            | 23 45 23                                     |                 | Slight, distant.                                              |
| 12                     | Shillong                                                                                                             | Z             | iP                            | 00 07 41                                     |                 | Slight, near, rarefaction.                                    |
| 12                     | Shillong                                                                                                             | Z             | eP                            | 00 44 15                                     |                 | Slight.                                                       |
| 12                     | Shillong                                                                                                             | Z             | eP                            | 01 49 11                                     |                 | Slight, near, rarefaction.                                    |
| 12                     | Shillong                                                                                                             | ZE<br>E       | eP<br>eS<br>iSS<br>iSSS<br>eM | 06 22 42<br>24 05<br>24 14<br>24 25<br>24 27 | 810             | Slight. Initial ground motion North, compression.             |
|                        | Chatra                                                                                                               | Z             | iP                            | 06 23 07                                     |                 | Slight, distant.                                              |
| 12                     | Bokaro                                                                                                               | Z             | iP                            | 07 00 27                                     |                 | Slight, local.                                                |
| 12                     | Delhi                                                                                                                | Z             | iP<br>iS                      | 08 08 53<br>10 34                            | 980             | Slight, rarefaction.                                          |
| 12                     | Shillong                                                                                                             | Z             | e                             | 11 13 35                                     |                 | Slight.                                                       |
| 12                     | Delhi                                                                                                                | Z             | iP<br>i                       | 12 47 44<br>47 48                            |                 | Slight, compression.                                          |
| 12                     | Delhi                                                                                                                | ZE<br>Z<br>ZE | iPg<br>iP<br>iSg              | 13 47 40<br>47 42<br>47 46                   | 60              | Slight, East, compression.                                    |
| 12                     | Dehra Dun                                                                                                            | Z             | e                             | 13 48 04                                     |                 | Slight.                                                       |
| 12                     | Shillong                                                                                                             | Z             | iP                            | 14 32 00                                     |                 | Slight, near, rarefaction.                                    |
|                        | Chatra                                                                                                               | Z             | iP                            | 14 32 06                                     |                 | Feeble, distant.                                              |

| DATE                    | STATION                                                                                                                                            | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                                    |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|-----------------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                                                    |       |       |                      |                 |                                                                             |
| 12                      | Epc:- 4.4° S 145.4° E, Near North coast of New Guinea.<br>Felt : Bogia and Manan Island.<br>h = about 32 km.<br>-H= 18 h 18 m 42.9 s (USCGS).      |       |       |                      |                 |                                                                             |
|                         | Shillong                                                                                                                                           | ZE    | iP    | 18 28 48             |                 | Slight, distant.<br>Initial ground motion towards North, East, compression. |
|                         | Chatra                                                                                                                                             | Z     | iP    | 18 29 10             |                 | Feeble, distant.                                                            |
|                         | Delhi                                                                                                                                              | Z     | iP    | 18 30 11             |                 | Slight, compression.                                                        |
| 12                      | Epc:- 36.5° N 69.2° E, Hindukush.<br>h = about 50 km.<br>-H= 20 h 57 m 00.4 s (USCGS).<br>Mag: = 6- $\frac{1}{2}$ -6 $\frac{3}{4}$ (Pas), 6 (Pal). |       |       |                      |                 |                                                                             |
| 12                      | Epc:- 36° N 69.3° E (Shillong)<br>-H= 20 h 57 m 00 s .                                                                                             |       |       |                      |                 |                                                                             |
|                         | Dehra Dun                                                                                                                                          | Z     | eP    | 20 59 18             | 1020            |                                                                             |
|                         |                                                                                                                                                    | N     | PPP   | 59 34                |                 |                                                                             |
|                         |                                                                                                                                                    |       | eS    | 01 03                |                 |                                                                             |
|                         |                                                                                                                                                    |       | SS    | 01 15                |                 |                                                                             |
|                         |                                                                                                                                                    |       | LR    | 01 21                |                 |                                                                             |
|                         |                                                                                                                                                    |       | SSS   | 01 29                |                 |                                                                             |
|                         |                                                                                                                                                    |       | M     | 02 07                |                 |                                                                             |
|                         | Delhi                                                                                                                                              | ZNE   | iP    | 20 59 25             | 1070            | Initial ground motion South, East, compression.                             |
|                         |                                                                                                                                                    |       | PP    | 59 32                |                 |                                                                             |
|                         |                                                                                                                                                    |       | PPP   | 59 39                |                 |                                                                             |
|                         |                                                                                                                                                    |       | i     | 21 00 15             |                 |                                                                             |
|                         |                                                                                                                                                    |       | iS    | 01 15                |                 |                                                                             |
|                         |                                                                                                                                                    | NE    | SSS   | 01 38                |                 |                                                                             |
|                         |                                                                                                                                                    | E     | m M   | 02 42                |                 | Amp. = 3.8 m.m.                                                             |
|                         |                                                                                                                                                    | Z     | M     | - -                  |                 |                                                                             |
|                         | Sehore                                                                                                                                             | N     | iP    | 21 00 26             | 1580            |                                                                             |
|                         |                                                                                                                                                    | NS    | PP    | 00 36                |                 |                                                                             |
|                         |                                                                                                                                                    |       | PPP   | 00 41                |                 |                                                                             |
|                         |                                                                                                                                                    |       | iS    | 03 05                |                 |                                                                             |
|                         |                                                                                                                                                    | N     | SS    | 03 20                |                 |                                                                             |
|                         |                                                                                                                                                    |       | SSS   | 03 33                |                 |                                                                             |
|                         |                                                                                                                                                    | NS    | M     | 04 47                |                 |                                                                             |
|                         | Chatra                                                                                                                                             | ZNE   | iP    | 21 01 02             | 1930            |                                                                             |
|                         |                                                                                                                                                    | NE    | PP    | 01 11                |                 |                                                                             |
|                         |                                                                                                                                                    |       | PPP   | 01 21                |                 |                                                                             |
|                         |                                                                                                                                                    |       | iS    | 04 15                |                 |                                                                             |
|                         |                                                                                                                                                    |       | SS    | 04 32                |                 |                                                                             |
|                         |                                                                                                                                                    |       | SSS   | 04 50                |                 |                                                                             |
|                         |                                                                                                                                                    |       | M     | 05 49                |                 |                                                                             |
|                         |                                                                                                                                                    |       | PcS   | 09 26                |                 |                                                                             |
|                         |                                                                                                                                                    |       | ScS   | 12 59                |                 |                                                                             |



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| DATE                    | STATION       | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                                                      |
|-------------------------|---------------|-------|-------|----------------------|-----------------|-----------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |               |       |       |                      |                 |                                                                                               |
| 12                      | Bombay        | ZNE   | iP    | 21 01 03             | 2010            | Compression.<br><br>Period = 9 secs.<br>$\mu = 40$ .<br>Period = 13 secs.<br>$\mu = 49$ .     |
|                         |               |       | PP    | 01 16                |                 |                                                                                               |
|                         |               |       | PPP   | 01 25                |                 |                                                                                               |
|                         |               |       | iS    | 04 23                |                 |                                                                                               |
|                         |               |       | SSS   | 04 54                |                 |                                                                                               |
|                         |               | Z     | Lr    | 05 21                |                 |                                                                                               |
|                         |               | NE    | LR    | 05 45                |                 |                                                                                               |
|                         |               | ZNE   | i     | 06 29                |                 |                                                                                               |
|                         |               | E     | M     | 07 20                |                 |                                                                                               |
|                         |               | N     | M     | 08 48                |                 |                                                                                               |
|                         | Poona         | ZNE   | iP    | 21 00 59             | 2220            | Initial ground movement South East compression.<br><br>Period = 13.5 secs.<br>$\mu = 67.94$ . |
|                         |               |       | PP    | 01 19                |                 |                                                                                               |
|                         |               |       | e     | 01 40                |                 |                                                                                               |
|                         |               |       | iS    | 04 38                |                 |                                                                                               |
|                         |               |       | SS    | 05 06                |                 |                                                                                               |
|                         |               |       | SSS   | 05 23                |                 |                                                                                               |
|                         |               |       | Lr    | 05 48                |                 |                                                                                               |
|                         |               | N     | Mn    | 07/08                |                 |                                                                                               |
|                         | Bokaro        | NE    | iP    | 21 01 19             | 2010            | Initial ground motion towards East, South.                                                    |
|                         |               | E     | PP    | 01 33                |                 |                                                                                               |
|                         |               | NE    | PPP   | 01 42                |                 |                                                                                               |
|                         |               |       | iS    | 04 41                |                 |                                                                                               |
|                         |               | E     | ScP   | 09 20                |                 |                                                                                               |
|                         | Hyderabad     | N     | iP    | 21 01 38             | 2310            | Initial ground motion towards South East.<br><br>Period = 10 secs.<br>$\mu = 30$ .            |
|                         |               |       | PP    | 01 51                |                 |                                                                                               |
|                         |               |       | iS    | 05 26                |                 |                                                                                               |
|                         |               |       | e     | 05 41                |                 |                                                                                               |
|                         |               |       | Lr    | 06 26                |                 |                                                                                               |
|                         |               |       | M     | 08 11                |                 |                                                                                               |
|                         | Shillong      | ZNE   | iP    | 21 01 55             | 2413            | Initial ground motion towards North East and compression.                                     |
|                         |               | E     | iS    | 05 51                |                 |                                                                                               |
|                         |               |       | iPP   | 02 19                |                 |                                                                                               |
|                         |               |       | eSS   | 06 15                |                 |                                                                                               |
|                         |               |       | eSSS  | 06 37                |                 |                                                                                               |
|                         |               |       | Lr    | 08 02                |                 |                                                                                               |
|                         | Visakhapatnam | NE    | iP    | 21 01 58             | 2500            | Initial ground movement towards North-West.                                                   |
|                         |               |       | iPP   | 02 26                |                 |                                                                                               |
|                         |               |       | iPPP  | 02 35                |                 |                                                                                               |
|                         |               |       | iS    | 06 01                |                 |                                                                                               |
|                         |               |       | iSSS  | 07 02                |                 |                                                                                               |
|                         | Tocklai       | E     | iP    | 21 02 11             |                 |                                                                                               |
|                         |               |       | i     | 02 36                |                 |                                                                                               |
|                         | Madras        | E     | eP    | 21 02 25             | 3010            |                                                                                               |
|                         |               |       | PP    | 03 00                |                 |                                                                                               |
|                         |               |       | PPP   | 03 18                |                 |                                                                                               |
|                         |               |       | PcS   | 05 51                |                 |                                                                                               |
|                         |               |       | e     | 06 46                |                 |                                                                                               |

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| DATE                    | STATION                                                                                  | COMPT                  | PHASE                                  | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                                             |
|-------------------------|------------------------------------------------------------------------------------------|------------------------|----------------------------------------|----------------------------------------------------------------|-----------------|------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                          |                        |                                        |                                                                |                 |                                                      |
| 12                      | Madras                                                                                   | E                      | iS<br>Lq<br>SS<br>Lr<br>i<br>i<br>M    | 21 07 03<br>07 56<br>08 12<br>09 20<br>10 22<br>10 59<br>11 29 |                 |                                                      |
|                         | Kodaikanal                                                                               | E                      | eP<br>iS                               | 21 02 41<br>07 32                                              | 3220            |                                                      |
|                         | Port Blair                                                                               | NE<br>E<br><br>NE<br>E | iP<br>PP<br>PPP<br>iS<br>Lq<br>SS<br>M | 21 03 30<br>04 48<br>05 00<br>08 44<br>10 32<br>10 36<br>21 55 | 3600            | Moderate, first ground movement towards South, East. |
| 12                      | Delhi                                                                                    | Z                      | iP<br>iS                               | 23 53 41<br>55 32                                              | 1080            | Slight, rarefaction.                                 |
| 13                      | Shillong                                                                                 | Z                      | eP                                     | 01 42 56                                                       | S               | Slight, local, rarefaction.                          |
| 13                      | Shillong                                                                                 | Z                      | iP                                     | 02 20 46                                                       |                 | Slight, near, rarefaction.                           |
| 13                      | Chatra                                                                                   | Z                      | iP                                     | 06 54 52                                                       |                 | Slight, distant.                                     |
|                         | Shillong                                                                                 | Z                      | eP                                     | 06 54 57                                                       |                 | Slight, distant, rarefaction.                        |
| 13                      | Shillong                                                                                 | Z                      | eP                                     | 07 11 47                                                       |                 | Slight.                                              |
| 13                      | Epc:- 47.7°N, 157.0°E, Kurile Islands,<br>- H = 08h. 07m. 49.2s. h about 31 km. (USCGS). |                        |                                        |                                                                |                 |                                                      |
|                         | Shillong                                                                                 | Z                      | eP                                     | 08 17 21                                                       |                 | Slight, distant, compression.                        |
|                         | Delhi                                                                                    | Z                      | iP                                     | 08 18 13                                                       |                 | Slight, rarefaction.                                 |
| 13                      | Port Blair                                                                               | N                      | iP<br>iS                               | 10 28 53<br>29 11                                              | 150             | Slight.                                              |
| 13                      | Shillong                                                                                 | Z                      | eP                                     | 10 31 47                                                       |                 | Slight, near, compression.                           |
| 13                      | Dehra Dun                                                                                | Z<br>N                 | e<br>e<br>e                            | 12 48 21<br>49 04<br>50 05                                     |                 | Slight.                                              |
|                         | Delhi                                                                                    | Z                      | iP<br>iS                               | 12 48 26<br>50 14                                              | 1060            | Slight, compression.                                 |

| DATE                    | STATION                                                                                                        | COMPT   | PHASE             | G. M. T.<br>h. m. s.                | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|----------------------------------------------------------------------------------------------------------------|---------|-------------------|-------------------------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                                                |         |                   |                                     |                 |                                  |
| 13                      | Chatra                                                                                                         | Z       | iP                | 12 50 04                            | 1970            | Slight, distant.                 |
|                         | Shillong                                                                                                       | Z       | eP<br>i           | 12 50 53<br>53 20                   |                 | Slight, near,<br>compression.    |
| 13                      | Poona                                                                                                          | Z       | eP                | 12 54 03                            |                 | Slight, distant.                 |
| 13                      | Shillong                                                                                                       | Z       | eP                | 12 54 57                            |                 | Slight, distant,<br>compression. |
| 13                      | Shillong                                                                                                       | Z       | e                 | 17 19 39                            |                 | Slight.                          |
| 13                      | Shillong                                                                                                       | Z       | e                 | 18 00 52                            |                 | Slight.                          |
| 13                      | Shillong                                                                                                       | Z       | c                 | 19 30 22                            |                 | Slight.                          |
| 13                      | Shillong                                                                                                       | Z       | eP                | 21 20 26                            |                 | Slight.                          |
| 14                      | Shillong                                                                                                       | Z       | eP                | 00 42 48                            |                 | Slight, distant,<br>compression. |
| 14                      | Shillong                                                                                                       | NE      | eP                | 03 05 49                            |                 | Slight, near.                    |
| 14                      | Chatra                                                                                                         | Z<br>ZN | iP<br>eS          | 03 06 51<br>07 10                   |                 | Feeble, near.                    |
| 14                      | Bokaro                                                                                                         | E       | iP                | 03 08 04                            |                 | Slight, near.                    |
| 14                      | Delhi                                                                                                          | Z       | iP                | 03 08 45                            |                 | Slight, compression.             |
| 14                      | Delhi                                                                                                          | Z       | iP                | 03 39 45                            |                 | Slight, compression.             |
| 14                      | Delhi                                                                                                          | Z       | iP                | 06 34 11                            |                 | Slight, rarefaction.             |
| 14                      | Bokaro                                                                                                         | E       | iP                | 07 29 59                            |                 | Slight, local.                   |
| 14                      | Bokaro                                                                                                         | E       | iP                | 08 17 25                            |                 | Slight, local.                   |
| 14                      | Dehra Dun                                                                                                      | Z       | e                 | 11 45 20                            |                 | Slight.                          |
| 14                      | Delhi                                                                                                          | Z       | iP                | 11 45 35                            |                 | Slight, compression.             |
| 14                      | Delhi                                                                                                          | Z       | iP                | 11 47 09                            |                 | Slight, compression.             |
| 14                      | Dehra Dun                                                                                                      | Z       | e                 | 13 18 50                            |                 | Tremor.                          |
| 14                      | Epc: - $27\frac{1}{2}^{\circ}$ N $93\frac{1}{2}^{\circ}$ E, in Assam region.<br>-H= 14 h 41 m 21 s (New Delhi) |         |                   |                                     |                 |                                  |
| 14                      | Tocklai                                                                                                        | E       | iPg               | 14 41 45                            | 135             | Slight, near.                    |
| 14                      | Shillong                                                                                                       | E       | e                 | 14 41 59                            |                 | Slight, near.                    |
| 14                      | Chatra                                                                                                         | Z       | iP<br>i<br>i<br>i | 14 42 47<br>44 00<br>44 12<br>44 17 |                 | Feeble, distant.                 |

| DATE                    | STATION   | COMPT             | PHASE                              | G. M. T.                                              | $\Delta$ | REMARKS.                                                               |
|-------------------------|-----------|-------------------|------------------------------------|-------------------------------------------------------|----------|------------------------------------------------------------------------|
|                         |           |                   |                                    | h. m. s.                                              | km.      |                                                                        |
| <u>September, 1962.</u> |           |                   |                                    |                                                       |          |                                                                        |
| 14                      | Shillong  | E                 | eP                                 | 17 15 05                                              |          | Slight, near, rarefaction.                                             |
| 14                      | Tocklai   | E                 | iPg<br>iSg                         | 17 15 10<br>15 42                                     | 270      | Slight, near.                                                          |
|                         | Chatra    | Z                 | eP<br>S                            | 17 15 49<br>16 57                                     | 640      | Slight.                                                                |
| 14                      | Delhi     | Z                 | iP                                 | 20 45 19                                              |          | Slight, rarefaction.                                                   |
| 15                      | Dehra Dun | Z<br>N            | iP<br>PPP<br>iS<br>SS<br>SSS<br>M  | 00 00 59<br>04 34<br>09 15<br>13 15<br>15 30<br>23 34 | 6740     | Slight.                                                                |
| 15                      | Dehra Dun | Z                 | e                                  | 04 26 44                                              |          | Slight.                                                                |
| 15                      | Delhi     | Z                 | iP                                 | 04 26 55                                              |          | Slight, rarefaction.                                                   |
| 15                      | Shillong  | Z                 | eP                                 | 04 30 18                                              |          | Slight, distant, compression.                                          |
| 15                      | Delhi     | Z                 | iPg<br>i<br>i<br>iSg               | 05 36 21<br>36 23<br>36 26<br>36 27                   | 60       | Slight, rarefaction.                                                   |
| 15                      | Delhi     | NE<br>Z<br>N<br>Z | e<br>e<br>Lr<br>e<br>M             | 08 21 07<br>21 30<br>23 43<br>25 04<br>- -            |          | Russian Nuclear Explosion.<br><br>Period = 15 secs.<br>Amp. = 4.3 m.m. |
| 15                      | Dehra Dun | Z<br>N            | iP<br>PP<br>PPP<br>eS<br>SS<br>SSS | 12 35 41<br>35 50<br>35 56<br>36 15<br>36 27<br>36 39 | 300      | Slight, phases not clear.                                              |
| 15                      | Delhi     | Z<br>ZNE          | iP<br>iS                           | 12 35 52<br>36 48                                     | 520      | Slight, Mag. 5.5.                                                      |
| 15                      | Bokaro    | E                 | e<br>e<br>i<br>i                   | 12 37 58<br>38 26<br>41 12<br>41 47                   |          | Slight, distant.                                                       |
| 15                      | Poona     | Z                 | eP<br>iS<br>SS<br>SSS<br>M         | 12 38 15<br>40 32<br>40 51<br>41 02<br>42 02          | 1350     | Slight.                                                                |

| DATE                    | STATION                                                                                                                                  | COMPT                                                         | PHASE                                                                    | G. M. T.<br>h. m. s.                                                                                             | $\Delta$<br>km. | REMARKS.                                                                                                                                 |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                                          |                                                               |                                                                          |                                                                                                                  |                 |                                                                                                                                          |
| 15                      | Chatra                                                                                                                                   | Z                                                             | eP<br>e                                                                  | 12 37 55<br>38 23                                                                                                |                 |                                                                                                                                          |
| 15                      | Shillong                                                                                                                                 | Z                                                             | iP                                                                       | 12 39 28                                                                                                         |                 | Slight, near,<br>compression.                                                                                                            |
| 15                      | Bombay                                                                                                                                   | Z                                                             | eP<br>e<br>e<br>eS<br>i                                                  | 12 40 19<br>40 43<br>40 51<br>41 49<br>42 10                                                                     | 870             | Slight.                                                                                                                                  |
| 15                      | Visakhapatnam                                                                                                                            | E<br>N<br>E<br>N                                              | iP<br>eP<br>iS<br>eS                                                     | 12 41 44<br>43 16                                                                                                | 890             | Slight, near.<br>Initial ground<br>motion towards East.                                                                                  |
| 15                      | Madras                                                                                                                                   | E                                                             | eS/Lq<br>e<br>M                                                          | 12 43 04<br>45 02<br>45 16                                                                                       |                 | Slight.                                                                                                                                  |
| 15                      | Shillong                                                                                                                                 | Z                                                             | eP                                                                       | 19 45 00                                                                                                         |                 | Tremor.                                                                                                                                  |
| 15                      | Shillong                                                                                                                                 | Z                                                             | eP<br>e                                                                  | 20 34 33<br>35 04                                                                                                |                 | Slight, near,<br>compression.                                                                                                            |
| 15                      | Epc:- 48.5° N 156.8° E , Kurile Islands.<br>h = about 33 km.<br>-H= 22 h 50 m 46.3 s (USCGS).<br>Mag: = 6- $\frac{1}{2}$ (Pas), 6 (Pal). |                                                               |                                                                          |                                                                                                                  |                 |                                                                                                                                          |
|                         | Calcutta                                                                                                                                 | E                                                             | iP<br>iS                                                                 | 23 00 50<br>08 57                                                                                                | 6560            | Slight.                                                                                                                                  |
|                         | Bokaro                                                                                                                                   | E<br>NE<br>E                                                  | iP<br>PcP<br>S<br>PPS                                                    | 23 00 53<br>01 32<br>09 11<br>09 34                                                                              | 6780            | Initial ground move-<br>ment towards East.                                                                                               |
|                         | Delhi                                                                                                                                    | ZNE<br>NE<br>Z<br>ZNE<br>NE<br>Z<br>ZNE<br>E<br>ZE<br>NE<br>E | iP<br>i<br>i<br>PcP<br>e<br>S<br>PS<br>PPS<br>SS<br>SSS<br>Lq<br>Lr<br>M | 23 01 08<br>01 21<br>01 37<br>01 48<br>09 13<br>09 28<br>09 50<br>10 12<br>13 59<br>16 16<br>16 55<br>19 52<br>- | 6810            | Initial ground motion<br>North East.<br>Rarefaction.<br><br><br><br><br><br><br><br><br><br><br><br>Period = 17 secs.<br>$\mu$ = 45 m.m. |
|                         | Shillong                                                                                                                                 | ZNE<br>E                                                      | iP<br>iPP<br>eS<br>ePPS                                                  | 23 01 15<br>03 22<br>08 56<br>09 16                                                                              | 6110            | Initial ground moti-<br>on towards South<br>East, rarefaction.                                                                           |



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| DATE                    | STATION       | COMPT                    | PHASE                                | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                                                                                           |
|-------------------------|---------------|--------------------------|--------------------------------------|----------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |               |                          |                                      |                                                                |                 |                                                                                                    |
| 15                      | Port Blair    | NE<br>E                  | eP<br>iS                             | 23 01 19<br>10 05                                              | 7310            | Slight.                                                                                            |
|                         | Visakhapatnam | NE                       | iP<br>iS                             | 23 01 35<br>10 25                                              | 7390            | Initial ground movement towards South-East.                                                        |
|                         | Hyderabad     | E                        | eP<br>iS<br>SS<br>Lr<br>M            | 23 01 55<br>11 02<br>14 56<br>24 26<br>29 14                   | 7600            | Period = 18 secs.<br>$\mu = 6$                                                                     |
|                         | Madras        | E                        | eP<br>PP<br>eS                       | 23 02 00<br>04 42<br>11 26                                     | 8090            |                                                                                                    |
|                         | Poona         | ZN<br>ZNE<br>N           | iP<br>PcP<br>iS<br>Mn                | 23 02 09<br>02 28<br>11 30<br>35 36                            | 8010            | Moderate, rarefaction.<br>Initial ground movement South.<br>Period = 16.5 secs.<br>$\mu = 11.13$ . |
|                         | Bombay        | ZNE<br>N<br>NE<br>N<br>E | eP<br>PcP<br>e<br>iS<br>SS<br>M<br>M | 23 02 10<br>02 29<br>03 40<br>11 34<br>16 06<br>31 21<br>31 21 | 8060            | Moderate.<br>Period = 19 secs.<br>$\mu = 11$<br>Period = 18 secs.<br>$\mu = 6$ .                   |
| 15                      | Shillong      | Z                        | eP                                   | 23 28 44                                                       |                 | Slight, local.                                                                                     |
|                         | Delhi         | Z                        | eP                                   | 23 30 15                                                       |                 | Slight, rarefaction, distant.                                                                      |
| 16                      | Delhi         | Z                        | iP<br>i                              | 02 27 54<br>28 02                                              |                 | Slight, rarefaction.                                                                               |
| 16                      | Delhi         | Z                        | iP<br>i<br>i<br>i                    | 03 05 45<br>06 13<br>06 25<br>06 47                            |                 | Slight, compression.                                                                               |
| 16                      | Shillong      | Z                        | ePg<br>eSg                           | 04 15 10<br>15 18                                              | 70              | Slight, local.                                                                                     |
| 16                      | Shillong      | Z                        | ePg<br>eSg                           | 04 46 36<br>47 01                                              | 210             | Slight, local.                                                                                     |
| 16                      | Bokaro        | E                        | iP                                   | 08 44 54                                                       |                 | Slight.                                                                                            |
| 16                      | Chatra        | Z                        | iP<br>i<br>i                         | 09 51 06<br>51 16<br>53 57                                     |                 | Slight, distant, compression.                                                                      |

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| DATE                    | STATION                                                                                          | COMPT   | PHASE                                        | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------|---------|----------------------------------------------|-------------------------------------------------------------------------|-----------------|-------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                  |         |                                              |                                                                         |                 |                                                             |
| 16                      | Bokaro                                                                                           | E       | iP<br>i                                      | 09 52 39<br>52 57                                                       |                 | Slight, local.                                              |
| 16                      | Shillong                                                                                         | Z       | iP                                           | 10 50 18                                                                |                 | Slight, distant,<br>rarefaction.                            |
| 16                      | Shillong                                                                                         | Z       | ePg                                          | 16 14 08                                                                |                 | Slight, local.                                              |
| 16                      | Shillong                                                                                         | Z       | ePg<br>eSg                                   | 18 36 27 50<br>36 33                                                    |                 | Slight, local.                                              |
| 16                      | Epc:- 16.7° N 94.2° E, Near coast of Burma.<br>h = about 33 km.<br>-H= 19 h P6 , 29.2 s (USCGS). |         |                                              |                                                                         |                 |                                                             |
|                         | Epc:- 17° N 94° E (west coast of Burma)<br>-H= 19 h 06 m 28 s (Shillong).                        |         |                                              |                                                                         |                 |                                                             |
|                         | Port Blair                                                                                       | E       | eP<br>PP<br>iS<br>SSS                        | 19 07 49<br>08 02<br>09 00<br>09 25                                     | 640             | Slight.                                                     |
|                         | Calcutta                                                                                         | E       | eP<br>iS<br>M                                | 19 08 23<br>09 48<br>11 51                                              | 830             | Slight.                                                     |
|                         | Shillong                                                                                         | ZNE     | iP<br>iS                                     | 19 08 39<br>10 30                                                       | 780             | Slight, compression.                                        |
|                         | Visakhapatnam                                                                                    | E<br>NE | eP<br>iS                                     | 19 08 55<br>10 42                                                       | 1045            | Slight, near.                                               |
|                         | Tocklai                                                                                          | E       | iP<br>iS                                     | 19 08 58<br>10 47                                                       | 1045            | Slight, near.                                               |
|                         | Bokaro                                                                                           | E       | iP<br>iS<br>SS<br>PcP                        | 19 09 03<br>10 50<br>11 01<br>11 06                                     | 1040            | Slight.                                                     |
|                         | Chatra                                                                                           | Z<br>E  | eP<br>eS                                     | 19 09 12<br>11 19                                                       | 1240            | Slight, other phases<br>not clear.                          |
|                         | Madras                                                                                           | E       | eP<br>PP<br>PPP<br>Lq<br>iS<br>SS<br>Lr<br>M | 19 09 41<br>09 51<br>10 00<br>12 01<br>12 10<br>12 24<br>12 41<br>13 42 | 1470            | Slight.                                                     |
|                         | Delhi                                                                                            | ZNE     | eP<br>eS                                     | 19 10 55<br>14 32                                                       | 2190            | Slight, compression.<br>First ground motion<br>North, West. |

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| DATE                    | STATION                                                                                                 | COMPT | PHASE | G. M. T. |    |    | △    | REMARKS.                         |
|-------------------------|---------------------------------------------------------------------------------------------------------|-------|-------|----------|----|----|------|----------------------------------|
|                         |                                                                                                         |       |       | h.       | m. | s. | km.  |                                  |
| <u>September, 1962.</u> |                                                                                                         |       |       |          |    |    |      |                                  |
| 16                      | Poona                                                                                                   | Z     | eP    | 19       | 11 | 01 | 2120 | Slight.                          |
|                         |                                                                                                         |       | PP    |          | 11 | 19 |      |                                  |
|                         |                                                                                                         | ZN    | iS    |          | 14 | 31 |      |                                  |
|                         |                                                                                                         | Z     | Lq    |          | 14 | 38 |      |                                  |
|                         |                                                                                                         | ZN    | SS    |          | 14 | 46 |      |                                  |
|                         |                                                                                                         |       | SSS   |          | 14 | 59 |      |                                  |
|                         |                                                                                                         |       | Lr    |          | 15 | 27 |      |                                  |
|                         |                                                                                                         |       | M     |          | 16 | 53 |      |                                  |
|                         | Dehra Dun                                                                                               | Z     | eP    | 19       | 11 | 03 | 2260 | Slight.                          |
|                         |                                                                                                         | N     | eS    |          | 14 | 48 |      |                                  |
|                         | Bombay                                                                                                  | E     | eP    | 19       | 11 | 05 | 2290 | Slight.                          |
|                         |                                                                                                         | NE    | eS    |          | 14 | 51 |      |                                  |
|                         |                                                                                                         | E     | e     |          | 15 | 29 |      |                                  |
| 16                      | Epc:- 22.8° N 123.5° E, Near east coast of Formosa.<br>h = about 33 km.<br>-H= 22h 45 m 10.8 s (USCGS). |       |       |          |    |    |      |                                  |
|                         | Shillong                                                                                                | Z     | iP    | 22       | 51 | 09 |      | Slight, distant,<br>rarefaction. |
|                         | Delhi                                                                                                   | Z     | eP    | 22       | 52 | 58 |      | Slight, compression.             |
| 16                      | Shillong                                                                                                | Z     | ePg   | 23       | 40 | 10 | 220  | Local, Slight.                   |
|                         |                                                                                                         |       | eSg   |          | 40 | 36 |      |                                  |
| 16                      | Shillong                                                                                                | Z     | ePg   | 23       | 52 | 31 | 310  | Slight, local.                   |
|                         |                                                                                                         |       | eSg   |          | 53 | 06 |      |                                  |
| 17                      | Shillong                                                                                                | Z     | eP    | 01       | 47 | 29 |      | Slight, distant.                 |
| 17                      | Chatra                                                                                                  | Z     | eP    | 07       | 16 | 46 | 180  | Feeble.                          |
|                         |                                                                                                         |       | eS    |          | 17 | 08 |      |                                  |
| 17                      | Port Blair                                                                                              | E     | ePg   | 07       | 17 | 12 | 140  | Slight.                          |
|                         |                                                                                                         |       | eSg   |          | 17 | 27 |      |                                  |
| 17                      | Delhi                                                                                                   | Z     | eP    | 08       | 05 | 30 | 880  | Slight, compression.             |
|                         |                                                                                                         |       | iS    |          | 07 | 01 |      |                                  |
| 17                      | Dehra Dun                                                                                               | Z     | e     | 08       | 06 | 25 |      | Slight.                          |
| 17                      | Delhi                                                                                                   | Z     | iPg   | 09       | 28 | 32 | 70   | Slight, compression.             |
|                         |                                                                                                         |       | iSg   |          | 28 | 40 |      |                                  |
| 17                      | Chatra                                                                                                  | Z     | iP    | 09       | 29 | 56 |      | Slight, distant,<br>rarefaction. |
|                         |                                                                                                         |       | i     |          | 31 | 16 |      |                                  |
| 17                      | Shillong                                                                                                | Z     | ePg   | 09       | 30 | 02 | 290  | Slight, near.                    |
|                         |                                                                                                         |       | eSg   |          | 30 | 34 |      |                                  |
| 17                      | Dehra Dun                                                                                               | Z     | e     | 10       | 13 | 43 |      | Slight.                          |
|                         |                                                                                                         |       | e     |          | 15 | 15 |      |                                  |
| 17                      | Delhi                                                                                                   | Z     | iPg   | 10       | 13 | 53 | 1050 | Slight, rarefaction.             |
|                         |                                                                                                         |       | iS    |          | 15 | 40 |      |                                  |



| DATE                    | STATION                                                                                                                                            | COMPT                        | PHASE                                  | G. M. T.<br>h. m. s.                                              | $\Delta$<br>km. | REMARKS.                                                                                      |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------|-------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                                                    |                              |                                        |                                                                   |                 |                                                                                               |
| 17                      | Shillong                                                                                                                                           | Z                            | eP                                     | 10 16 09                                                          |                 | Slight, near.                                                                                 |
| 17                      | Shillong                                                                                                                                           | Z                            | e                                      | 10 16 16                                                          |                 |                                                                                               |
| 17                      | Dehra Dun                                                                                                                                          | Z                            | e                                      | 15 36 31                                                          |                 | Slight.                                                                                       |
| 17                      | Epc:- 23.5° N 121.7° E, Off east coast of Formosa.<br>h = about 33 km.<br>-H= 16 h 31 m 17.9 s (USCGS).                                            |                              |                                        |                                                                   |                 |                                                                                               |
|                         | Shillong                                                                                                                                           | Z                            | eP                                     | 16 37 59                                                          |                 |                                                                                               |
| 17                      | Epc:- 21.0° S 179.1° W, Fiji Islands. h = about 601 km.<br>-H= 17 h 55 m 45.4 s (USCGS).                                                           |                              |                                        |                                                                   |                 |                                                                                               |
|                         | Shillong                                                                                                                                           | Z                            | iP                                     | 18 09 18                                                          |                 | Slight, distant,<br>rarefaction.                                                              |
| 17                      | Delhi                                                                                                                                              | Z                            | iP                                     | 18 13 09                                                          |                 | Tremor, rarefaction.                                                                          |
| 17                      | Dehra Dun                                                                                                                                          | Z                            | e                                      | 19 34 04                                                          |                 | Tremor.                                                                                       |
| 17                      | Shillong                                                                                                                                           | Z                            | iP                                     | 22 56 20                                                          |                 | Slight, near,<br>rarefaction.                                                                 |
| 18                      | Shillong                                                                                                                                           | Z                            | iP<br>e                                | 00 19 15<br>19 43                                                 |                 | Slight, near,<br>rarefaction.                                                                 |
| 18                      | Epc:- 7.5° N 82.3° W, South Panama Province.<br>h = about 33 km.<br>-H= 00 h 29 m 05.2 s (USCGS).<br>Mag:- 7 (Pas), 7 (Berk), 6-1/2 - 6-3/4 (Pal). |                              |                                        |                                                                   |                 |                                                                                               |
|                         | Dehra Dun                                                                                                                                          | Z                            | ePKP<br>i                              | 00 48 25<br>52 14                                                 |                 |                                                                                               |
|                         | Delhi                                                                                                                                              | Z<br>NE<br>ZNE<br>Z          | iPKP<br>ePKP<br>ePP<br>M               | 00 48 37<br>48 37<br>51 35<br>- -                                 |                 | Period = 240 secs.                                                                            |
|                         | Poona                                                                                                                                              | Z<br>ZN<br>N                 | iPKP<br>PKP2<br>e<br>Mn                | 00 48 42<br>49 04<br>01 11 51<br>56/57                            |                 | Compression.<br><br>Period = 22.2 secs.<br>$\mu = 19.34$ .                                    |
|                         | Bombay                                                                                                                                             | ZNE<br>NE<br>E<br><br>N<br>E | ePKP<br>ePP<br>e<br>PPS<br>e<br>M<br>M | 00 48 43<br>51 57<br>01 01 33<br>04 02<br>11 09<br>51 07<br>55 30 |                 | Moderate, distant.<br><br>Period = 23 secs.<br>$\mu = 10$ .<br>Period = 21 secs.<br>$\mu = 6$ |
|                         | Bokaro                                                                                                                                             | E                            | iPP<br>i                               | 00 48 56<br>50 28                                                 |                 | Slight, distant.                                                                              |

| DATE                    | STATION                                                                                                        | COMPT | PHASE                            | G. M. T.                                                 | $\Delta$ | REMARKS.                         |
|-------------------------|----------------------------------------------------------------------------------------------------------------|-------|----------------------------------|----------------------------------------------------------|----------|----------------------------------|
|                         |                                                                                                                |       |                                  | h. m. s.                                                 | km.      |                                  |
| <u>September, 1962.</u> |                                                                                                                |       |                                  |                                                          |          |                                  |
| 18                      | Shillong                                                                                                       | ZNE   | ePKP<br>i                        | 00 49 43<br>50 39                                        |          | Slight.                          |
|                         | Madras                                                                                                         | E     | ePKP<br>e<br>e<br>ePPP<br>e<br>e | 00 50 45<br>54 11<br>56 23<br>58 48<br>01 02 34<br>12 27 |          | Distant.                         |
| 18                      | Calcutta                                                                                                       | E     | e                                | 01 14 17                                                 |          | Slight.                          |
| 18                      | Shillong                                                                                                       | Z     | iP                               | 04 57 27                                                 |          | Slight, distant,<br>compression. |
| 18                      | Shillong                                                                                                       | ZN    | iP                               | 05 15 25                                                 |          | Slight, distant,<br>compression. |
|                         | Dehra Dun                                                                                                      | Z     | e<br>i<br>i                      | 05 25 23<br>26 04<br>28 17                               |          | Slight.                          |
|                         | Delhi                                                                                                          | Z     | iP<br>iS                         | 05 25 29<br>27 09                                        | 970      | Slight, compression.             |
| 18                      | Chatra                                                                                                         | Z     | eP                               | 05 27 13                                                 |          | Slight, distant.                 |
| 18                      | Poona                                                                                                          | Z     | eP                               | 05 32 38                                                 |          | Slight, distant.                 |
| 18                      | Epc:- $2.3^{\circ}$ N $126.9^{\circ}$ E, Molucca Passage.<br>h = about 33 km.<br>-H= 06 h 10 m 26.3 s (USCGS). |       |                                  |                                                          |          |                                  |
|                         | Chatra                                                                                                         | Z     | iP                               | 06 18 40                                                 |          | Slight, distant,<br>rarefaction. |
|                         | Delhi                                                                                                          | Z     | iP                               | 06 19 46                                                 |          | Slight, rarefaction.             |
|                         | Poona                                                                                                          | Z     | iP<br>i                          | 06 19 52<br>19 58                                        |          | Slight, distant,<br>compression. |
|                         | Dehra Dun                                                                                                      | N     | e<br>e                           | 06 20 08<br>27 15                                        |          | Feeble.                          |
| 18                      | Epc:- $26.4^{\circ}$ N, $96.6^{\circ}$ E, Northern Burma,<br>- H = 12h. 19m. 44.3s. h about 76 km. (USCGS).    |       |                                  |                                                          |          |                                  |
|                         | Tocklai                                                                                                        | E     | eP                               | 12 20 23                                                 |          | Slight, near.                    |
| 18                      | Shillong                                                                                                       | ZNE   | iP<br>iS                         | 12 20 48<br>21 18                                        | 270      | Slight, rarefaction.             |
|                         | Chatra                                                                                                         | Z     | iP                               | 12 21 45                                                 |          | Slight, distant,<br>compression. |
|                         | Delhi                                                                                                          | Z     | eP<br>i                          | 12 23 40<br>26 34                                        |          | Slight.                          |

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| DATE                    | STATION                                                                                    | COMPT     | PHASE                | G. M. T.<br>h. m. s.                | $\Delta$<br>km. | REMARKS.                                             |
|-------------------------|--------------------------------------------------------------------------------------------|-----------|----------------------|-------------------------------------|-----------------|------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                            |           |                      |                                     |                 |                                                      |
| 18                      | Shillong                                                                                   | Z         | iP                   | 18 24 34                            |                 | Slight, distant,<br>compression.                     |
| 18                      | Shillong                                                                                   | Z         | ePg<br>iSg           | 23 01 26<br>01 40                   | 120             | Slight, local.                                       |
| 18                      | Shillong                                                                                   | Z         | eP                   | 23 23 10                            |                 | Slight, local.                                       |
| 19                      | Epc:- 42.0° N 132.9° E, Sea of Japan.<br>h = about 43 km.<br>-H= 00 h 06 m 58.7 s (USCGS). |           |                      |                                     |                 |                                                      |
|                         | Shillong                                                                                   | Z         | iP                   | 00 13 45                            |                 | Slight, distant,<br>rarefaction.                     |
| 19                      | Delhi                                                                                      | Z         | iP                   | 00 14 47                            |                 | Tremor, rarefaction.                                 |
| 19                      | Chatra                                                                                     | Z         | e                    | 00 28 59                            |                 | Slight, distant.                                     |
| 19                      | Shillong                                                                                   | Z         | ePg<br>iSg           | 00 45 10<br>45 43                   | 110             | Slight, local.                                       |
| 19                      | Shillong                                                                                   | Z         | iP                   | 03 01 54                            |                 | Slight, distant,<br>compression.                     |
| 19                      | Delhi                                                                                      | Z         | iP                   | 04 54 40                            |                 | Slight, compression.                                 |
| 19                      | Dehra Dun                                                                                  | Z         | e                    | 04 54 44                            |                 | Feeble.                                              |
| 19                      | Chatra                                                                                     | Z         | eP<br>e              | 04 56 43<br>59 28                   |                 | Slight, distant.                                     |
| 19                      | Sehore                                                                                     | N         | eP<br>PP<br>Lq<br>iS | 05 09 36<br>09 44<br>11 03<br>11 11 | 920             | Slight, Other phases<br>not clear.                   |
| 19                      | Shillong                                                                                   | Z         | iP                   | 05 15 30                            |                 | Slight, distant,<br>compression.                     |
| 19                      | Shillong                                                                                   | Z         | iP<br>iS             | 05 48 15<br>48 38                   | 190             | Slight, local,<br>rarefaction.                       |
| 19                      | Chatra                                                                                     | Z         | eP                   | 05 49 00                            |                 | Slight, distant.                                     |
| 19                      | Chatra                                                                                     | Z         | iP                   | 05 50 35                            |                 | Slight, distant.                                     |
| 19                      | Shillong                                                                                   | Z         | iPg<br>iSg           | 05 58 47<br>59 04                   | 130             | Slight, local,<br>compression.                       |
| 19                      | Epc:- 29.9° N 50.4° E, Western Iran.<br>h = about 66 km.<br>-H= 07 h 28 m 43.2 s (USCGS).  |           |                      |                                     |                 |                                                      |
| 19                      | Delhi                                                                                      | ZE<br>ZNE | iP<br>eS             | 07 33 48<br>38 00                   | 2620            | Slight, compression.<br>First ground motion<br>West. |

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| DATE                    | STATION                                                                                                           | COMPT  | PHASE       | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------|--------|-------------|----------------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                                                   |        |             |                            |                 |                                  |
| 19                      | Dehra Dun                                                                                                         | Z<br>N | e<br>i      | 07 33 54<br>38 18          |                 | Feeble.                          |
| 19                      | Shillong                                                                                                          | Z      | iP          | 07 35 47                   |                 | Slight, distant,<br>compression. |
| 19                      | Epc:- 11.5° N 141.0° E, Mariana Islands region.<br>h = about 61 km.<br>-H= 07 h 48 m 35.2 s (USCGS).              |        |             |                            |                 |                                  |
|                         | Shillong                                                                                                          | Z      | iP<br>e     | 07 57 15<br>57 31          |                 | Slight, distant,<br>compression. |
|                         | Dehra Dun                                                                                                         | Z      | e           | 07 58 45                   |                 | Slight.                          |
|                         | Delhi                                                                                                             | Z      | iP          | 07 58 47                   |                 | Slight, compression.             |
|                         | Poona                                                                                                             | Z      | iP          | 07 59 11                   |                 | Slight, distant,<br>rarefaction. |
| 19                      | Epc:- 73.8° N 53.8° E, Novaya Zemlya.<br>h = about 0 km.<br>-H= 11 h 00 m 56.4 s (USCGS).<br>Mag:- 5-5-1/4 (Pal). |        |             |                            |                 |                                  |
| 19                      | Bombay                                                                                                            | N      | e<br>e<br>e | 11 11 28<br>13 12<br>14 31 |                 | Slight.                          |
| 19                      | Shillong                                                                                                          | Z      | iP          | 16 31 13                   |                 | Slight, distant,<br>rarefaction. |
| 19                      | Epc:- 9.9° S 120.5° E, Soemba Islands.<br>h = about 34 km.<br>-H= 18 h 06 m 44.4 s (USCGS).                       |        |             |                            |                 |                                  |
|                         | Shillong                                                                                                          | Z      | iP          | 18 14 58                   |                 | Slight, distant,<br>rarefaction. |
|                         | Chatra                                                                                                            | Z      | e           | 18 15 29                   |                 | Slight, distant.                 |
| 19                      | Shillong                                                                                                          | Z      | e           | 19 48 15                   |                 | Slight, distant.                 |
| 19                      | Delhi                                                                                                             | Z      | iP          | 23 46 23                   |                 | Slight, compression.             |
| 20                      | Shillong                                                                                                          | Z      | iPg<br>eSg  | 05 02 42<br>02 52          | 90              | Slight, local,<br>compression.   |
| 20                      | Shillong                                                                                                          | Z      | ePg<br>e    | 05 58 12<br>58 28          |                 | Slight, local.                   |
| 20                      | Bokaro                                                                                                            | NE     | iP          | 08 59 52                   |                 | Slight.                          |
| 20                      | Shillong                                                                                                          | Z      | iP          | 14 32 15                   |                 | Tremor, distant,<br>rarefaction. |
| 20                      | Shillong                                                                                                          | Z      | eP<br>eS    | 17 29 33<br>30 24          | 478             | Slight, near.                    |

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| DATE                    | STATION                                                                                                      | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                               |
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| <u>September, 1962.</u> |                                                                                                              |       |       |                      |                 |                                                                        |
| 20                      | Shillong                                                                                                     | Z     | eP    | 18 09 36             |                 | Slight, distant.                                                       |
| 20                      | Delhi                                                                                                        | ZE    | iP    | 18 11 14             |                 | Slight, compression.                                                   |
| 21                      | Shillong                                                                                                     | Z     | iP    | 01 03 40             |                 | Slight, distant,<br>rarefaction.                                       |
| 21                      | Delhi                                                                                                        | Z     | iP    | 01 44 46             | 1170            | Slight, rarefaction.                                                   |
|                         |                                                                                                              |       | PP    | 44 59                |                 |                                                                        |
|                         |                                                                                                              |       | PPP   | 45 16                |                 |                                                                        |
|                         |                                                                                                              |       | iS    | 46 43                |                 |                                                                        |
|                         |                                                                                                              | E     | i     | 46 48                |                 |                                                                        |
|                         |                                                                                                              | NE    | i     | 46 52                |                 |                                                                        |
| 21                      | Dehra Dun                                                                                                    | Z     | e     | 01 48 02             |                 | Slight.                                                                |
| 21                      | Poona                                                                                                        | Z     | eP    | 01 49 47             |                 | Slight, distant.                                                       |
| 21                      | Bokaro                                                                                                       | NE    | iP    | 07 53 30             |                 | Slight.                                                                |
| 21                      | Shillong                                                                                                     | Z     | iP    | 09 49 04             | 230             | Slight, compression.                                                   |
|                         |                                                                                                              |       | eS    | 49 31                |                 |                                                                        |
| 21                      | Delhi                                                                                                        | Z     | iP    | 11 59 30             | 900             | Slight, rarefaction.                                                   |
|                         |                                                                                                              |       | iS    | 12 01 03             |                 |                                                                        |
| 21                      | Shillong                                                                                                     | Z     | ePg   | 15 33 19             | 100             | Slight.                                                                |
|                         |                                                                                                              |       | iSg   | 33 30                |                 |                                                                        |
| 21                      | Dehra Dun                                                                                                    | Z     | e     | 16 30 30             |                 | Tremor.                                                                |
| 21                      | Delhi                                                                                                        | Z     | iP    | 16 30 37             | 980             | Slight, rarefaction.                                                   |
|                         |                                                                                                              |       | iS    | 32 18                |                 |                                                                        |
| 21                      | Dehra Dun                                                                                                    | Z     | e     | 16 59 32             |                 | Tremor.                                                                |
| 21                      | Shillong                                                                                                     | Z     | iPg   | 22 19 46             | 110             | Slight, rarefaction,<br>local.                                         |
|                         |                                                                                                              |       | iSg   | 20 01                |                 |                                                                        |
| 21                      | Chatra                                                                                                       | Z     | eP    | 22 58 18             |                 | Slight, distant.                                                       |
| 21                      | Shillong                                                                                                     | Z     | eP    | 22 58 21             |                 | Slight, distant.                                                       |
| 22                      | Chatra                                                                                                       | Z     | eP    | 00 36 28             | 180             | Slight.                                                                |
| 22                      | Shillong                                                                                                     | Z     | eP    | 03 31 39             |                 | Slight, distant.                                                       |
| 22                      | Epc:- $26^{\circ}$ S $97^{\circ}$ E (Shillong)<br>-H= 06 h 51 m 30 s                                         |       |       |                      |                 |                                                                        |
| 22                      | Epc:- $26.5^{\circ}$ N $97.0^{\circ}$ E, Northern Burma<br>h = about 33 km.<br>-H= 06 h 51 m 32.3 s (USCAS). |       |       |                      |                 |                                                                        |
|                         | Calcutta                                                                                                     | E     | iP    | 06 53 37             | 930             | Moderate. First move-<br>ment East.<br>Period = 7 secs.<br>$\mu = 73.$ |
|                         |                                                                                                              |       | iS    | 55 14                |                 |                                                                        |
|                         |                                                                                                              |       | M     | 56 17                |                 |                                                                        |

| DATE                    | STATION       | COMPT                                                           | PHASE   | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                                                                |
|-------------------------|---------------|-----------------------------------------------------------------|---------|----------------------|-----------------|---------------------------------------------------------------------------------------------------------|
| <u>September, 1962.</u> |               |                                                                 |         |                      |                 |                                                                                                         |
| 22                      | Chakra        | ENE                                                             | P       | 06 53 38             | 930             | Slight.                                                                                                 |
|                         |               |                                                                 | PPP     | 53 50                |                 |                                                                                                         |
|                         |               |                                                                 | S       | 55 14                |                 |                                                                                                         |
|                         |               |                                                                 | SS      | 55 27                |                 |                                                                                                         |
|                         |               |                                                                 | SSS     | 55 37                |                 |                                                                                                         |
| M                       | 56 12         |                                                                 |         |                      |                 |                                                                                                         |
|                         | Bekaro        | NE                                                              | iP      | 06 54 01             | 1160            | Slight.                                                                                                 |
|                         |               |                                                                 | PPP     | 54 17                |                 |                                                                                                         |
|                         |               |                                                                 | Lq      | 55 51                |                 |                                                                                                         |
|                         |               |                                                                 | S       | 55 59                |                 |                                                                                                         |
|                         |               |                                                                 | SSS     | 56 24                |                 |                                                                                                         |
|                         |               |                                                                 | M       | 57 11                |                 |                                                                                                         |
|                         |               |                                                                 | Mn      | 58 17                |                 |                                                                                                         |
| 22                      | Visakhapatnam | NE                                                              | iP      | 06 55 05             | 1880            | Moderate. First<br>ground movement<br>North, East.                                                      |
|                         |               |                                                                 | iPP     | 55 15                |                 |                                                                                                         |
|                         |               |                                                                 | iPPP    | 55 22                |                 |                                                                                                         |
|                         |               |                                                                 | iS      | 58 13                |                 |                                                                                                         |
|                         |               |                                                                 | iSS     | 58 36                |                 |                                                                                                         |
|                         |               |                                                                 | iSSS    | 58 50                |                 |                                                                                                         |
|                         | Port Blair    | N<br>E                                                          | iP      | 06 55 09             | 1770            | Slight, first<br>ground movement<br>South.<br><br>Period = 12.0 secs.<br>$\mu = 27.$                    |
|                         |               |                                                                 | PPP     | 55 31                |                 |                                                                                                         |
|                         |               |                                                                 | i       | 55 41                |                 |                                                                                                         |
|                         |               |                                                                 | iS/Lq   | 58 06                |                 |                                                                                                         |
|                         |               |                                                                 | SS      | 58 29                |                 |                                                                                                         |
|                         |               |                                                                 | M       | 07 00 57             |                 |                                                                                                         |
|                         |               |                                                                 | Mn      | 08 -                 |                 |                                                                                                         |
|                         | Dehra Dun     | Z<br>N                                                          | iP      | 06 55 26             | 1780            | Moderate.                                                                                               |
|                         |               |                                                                 | PPP     | 55 54                |                 |                                                                                                         |
|                         |               |                                                                 | iS      | 58 24                |                 |                                                                                                         |
|                         |               |                                                                 | SS      | 58 41                |                 |                                                                                                         |
|                         |               |                                                                 | SSS     | 58 58                |                 |                                                                                                         |
|                         |               |                                                                 | M       | 07 00 33             |                 |                                                                                                         |
|                         | Delhi         | ZE<br>NE<br>E<br>Z<br>ZE<br>ZNE<br><br>ZE<br>E<br>ZN<br>NE<br>Z | iP      | 06 55 31             | 1800            | Moderate, rarefaction.<br>First ground motion<br>South, East.<br><br>Period = 9.0 secs.<br>$\mu = 69.0$ |
|                         |               |                                                                 | eP      | 55 31                |                 |                                                                                                         |
|                         |               |                                                                 | i       | 55 36                |                 |                                                                                                         |
|                         |               |                                                                 | PP      | 55 44                |                 |                                                                                                         |
|                         |               |                                                                 | PPP     | 56 00                |                 |                                                                                                         |
|                         |               |                                                                 | Lq/iS   | 58 31                |                 |                                                                                                         |
|                         |               |                                                                 | SS      | 58 59                |                 |                                                                                                         |
|                         |               |                                                                 | SSS, Lr | 59 17                |                 |                                                                                                         |
|                         |               |                                                                 | i       | 59 48                |                 |                                                                                                         |
|                         |               |                                                                 | PcP     | 07 00 12             |                 |                                                                                                         |
|                         |               |                                                                 | i       | 00 48                |                 |                                                                                                         |
|                         |               |                                                                 | M       | - - -                |                 |                                                                                                         |
|                         |               |                                                                 |         |                      |                 |                                                                                                         |
|                         |               |                                                                 |         |                      |                 |                                                                                                         |
|                         |               |                                                                 |         |                      |                 |                                                                                                         |
|                         | Sohore        | E<br>N<br>N                                                     | eP      | 06 55 45             | 2000            | Slight.                                                                                                 |
|                         |               |                                                                 | PP      | 55 57                |                 |                                                                                                         |
|                         |               |                                                                 | PPP     | 56 08                |                 |                                                                                                         |
|                         |               |                                                                 | eS      | 59 04                |                 |                                                                                                         |
|                         |               |                                                                 | SS      | 59 25                |                 |                                                                                                         |
|                         |               |                                                                 | SSS     | 59 42                |                 |                                                                                                         |
|                         |               |                                                                 | Lr      | 59 19                |                 |                                                                                                         |
|                         |               |                                                                 | PcP     | 00 07                |                 |                                                                                                         |
|                         |               |                                                                 | M       | 01 20                |                 |                                                                                                         |
|                         |               |                                                                 |         |                      |                 |                                                                                                         |
|                         |               |                                                                 |         |                      |                 |                                                                                                         |

| DATE | STATION | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS. |
|------|---------|-------|-------|----------------------|-----------------|----------|
|------|---------|-------|-------|----------------------|-----------------|----------|

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|            |                                   |                               |          |                             |                                                                       |                                                                                 |
|------------|-----------------------------------|-------------------------------|----------|-----------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------|
| 22         | Hyderabad                         | N                             | iP       | 06 55 51                    | 2180                                                                  | Moderate.Intensity<br>Southward.<br>Period = 10 secs.<br>u = 4.                 |
|            |                                   |                               | eS       | 59 27                       |                                                                       |                                                                                 |
|            |                                   |                               | M        | 07 02 42                    |                                                                       |                                                                                 |
| Madras     | E                                 | iP                            | 06 56 10 | 2320                        | Moderate.Initial<br>ground motion<br>towards East.                    |                                                                                 |
|            |                                   | PP                            | 56 31    |                             |                                                                       |                                                                                 |
|            |                                   | PPP                           | 56 45    |                             |                                                                       |                                                                                 |
|            |                                   | iS                            | 59 59    |                             |                                                                       |                                                                                 |
|            |                                   | Lq                            | 07 00 06 |                             |                                                                       |                                                                                 |
|            |                                   | PcP                           | 00 20    |                             |                                                                       |                                                                                 |
|            |                                   | SS                            | 00 35    |                             |                                                                       |                                                                                 |
|            |                                   | SSS                           | 00 44    |                             |                                                                       |                                                                                 |
|            |                                   | Lr                            | 01 12    |                             |                                                                       |                                                                                 |
|            |                                   | M                             | 02 54    |                             |                                                                       |                                                                                 |
| Poona      | ZNE                               | iP                            | 06 56 32 | 2530                        | Moderate,rarefaction.<br>Initial ground move-<br>ment North and East. |                                                                                 |
|            |                                   | PP                            | 57 01    |                             |                                                                       |                                                                                 |
|            |                                   | PPP                           | 57 15    |                             |                                                                       |                                                                                 |
|            |                                   | iS                            | 07 00 38 |                             |                                                                       |                                                                                 |
|            | ZE                                | Lq                            | 01 07    |                             |                                                                       |                                                                                 |
|            |                                   | N                             | SS       |                             |                                                                       | 01 31                                                                           |
|            | ZE                                | SSS                           | 01 50    |                             |                                                                       |                                                                                 |
|            |                                   | Lr                            | 02 10    |                             |                                                                       |                                                                                 |
|            | ZNE                               | M                             | 04 02    |                             |                                                                       |                                                                                 |
|            | Bombay                            | NE                            | iP       |                             |                                                                       | 06 56 41                                                                        |
| E          |                                   |                               | PP       | 57 15                       |                                                                       |                                                                                 |
| E          |                                   | PPP                           | 57 30    |                             |                                                                       |                                                                                 |
|            |                                   | iS                            | 07 00 54 |                             |                                                                       |                                                                                 |
|            |                                   | Lq                            | 01 32    |                             |                                                                       |                                                                                 |
| E          |                                   | SSS                           | 02 05    |                             |                                                                       |                                                                                 |
|            |                                   | Lr                            | 02 35    |                             |                                                                       |                                                                                 |
| N          |                                   | M                             | 05 08    | Period = 9 secs.<br>u = 27. |                                                                       |                                                                                 |
| E          |                                   | M                             | 08 44    | Period = 8 secs.<br>u = 20. |                                                                       |                                                                                 |
| Kodaikanal |                                   | E                             | eP       | 06 56 51                    | 2710                                                                  | Slight,distant.<br>Initial ground move-<br>ment of the S phase<br>towards West. |
|            | PPP                               |                               | 57 39    |                             |                                                                       |                                                                                 |
|            | iS                                |                               | 07 01 09 |                             |                                                                       |                                                                                 |
|            | Lq                                |                               | 01 45    |                             |                                                                       |                                                                                 |
|            | Lr                                |                               | 02 57    |                             |                                                                       |                                                                                 |
| Shillong   | ZNE                               | iP                            | 07 52 42 | 570                         | Rarefaction,moderate.<br>Initial ground move-<br>ment towards North.  |                                                                                 |
|            |                                   | iPP                           | 52 47    |                             |                                                                       |                                                                                 |
|            |                                   | iPPP                          | 52 56    |                             |                                                                       |                                                                                 |
|            |                                   | iS                            | 53 42    |                             |                                                                       |                                                                                 |
|            |                                   | iSS                           | 53 53    |                             |                                                                       |                                                                                 |
|            |                                   | iSSS                          | 54 05    |                             |                                                                       |                                                                                 |
| 22         | Epc:- 36.4° N 69.0° E, Hindukush. |                               |          |                             |                                                                       |                                                                                 |
|            | h = about 33 km.                  |                               |          |                             |                                                                       |                                                                                 |
|            |                                   | -H= 08 h 06 m 28.2 s (USCGS). |          |                             |                                                                       |                                                                                 |
| Dehra Dun  | Z                                 | eP                            | 08 08 47 |                             | Feeble.                                                               |                                                                                 |
|            | N                                 | eS                            | 10 33    |                             |                                                                       |                                                                                 |

| DATE                    | STATION  | COMPT   | PHASE      | G. M. T.<br>h. m. s. | △<br>km. | REMARKS.                        |
|-------------------------|----------|---------|------------|----------------------|----------|---------------------------------|
| <u>September, 1962.</u> |          |         |            |                      |          |                                 |
| 22                      | Delhi    | Z       | iP<br>iS   | 08 08 56<br>10 47    | 1080     | Slight, compression.            |
|                         | Chatra   | Z       | eP         | 08 10 38             |          | Slight, distant.                |
|                         | Poona    | Z<br>ZE | eP<br>i    | 08 10 54<br>16 26    |          | Slight, distant.                |
|                         | Bokaro   | NE      | eP         | 08 11 10             |          | Slight, other phases not clear. |
|                         | Shillong | ZNE     | iP<br>e    | 08 11 24<br>11 44    |          | Slight, distant, compression.   |
| 22                      | Madras   | E       | e<br>e     | 08 16 52<br>20 00    |          | Slight.                         |
| 22                      | Shillong | Z       | eP         | 08 44 54             |          | Slight, distant.                |
| 22                      | Shillong | Z       | iP<br>eS   | 08 54 50<br>56 26    | 930      | Slight, rarefaction, near.      |
| 22                      | Chatra   | Z       | eP         | 08 55 48             |          | Slight, distant.                |
| 22                      | Shillong | Z       | iP<br>iS   | 10 20 35<br>21 17    | 380      | Slight, rarefaction.            |
| 22                      | Shillong | ZE      | iP<br>eS   | 12 36 47<br>37 42    | 510      | Slight, rarefaction.            |
| 22                      | Chatra   | Z       | eP         | 12 37 45             |          | Slight, distant.                |
| 22                      | Shillong | Z       | eP         | 15 24 28             |          | Slight, distant.                |
| 22                      | Shillong | Z       | iP         | 16 10 46             |          | Slight, distant, rarefaction.   |
| 22                      | Shillong | Z       | iP<br>e    | 16 46 35<br>47 16    |          | Slight, distant, rarefaction.   |
| 22                      | Shillong | Z       | eP         | 18 47 34             |          | Slight, local.                  |
| 22                      | Shillong | Z       | ePg<br>eSg | 19 13 30<br>13 47    | 130      | Slight, compression, local.     |
| 22                      | Chatra   | Z       | eP         | 19 14 18             |          | Slight, distant.                |
| 22                      | Shillong | Z       | e          | 19 19 50             |          | Slight, distant.                |
| 22                      | Shillong | Z       | e          | 19 52 03             |          | Slight, distant.                |
| 23                      | Chatra   | Z       | iP         | 03 34 07             |          | Slight, compression.            |
| 23                      | Shillong | Z       | eP         | 05 07 56             |          | Slight, distant.                |
| 23                      | Calcutta | N       | ePg<br>eSg | 07 31 41<br>31 47    | 50       | Slight.                         |



| DATE                    | STATION                                                                                                      | COMPT | PHASE      | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
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| <u>September, 1962.</u> |                                                                                                              |       |            |                      |                 |                                  |
| 23                      | Shillong                                                                                                     | Z     | eP         | 07 32 10             |                 | Slight, distant.                 |
| 23                      | Chatra                                                                                                       | Z     | eP         | 07 32 25             |                 | Slight, distant.                 |
| 23                      | Shillong                                                                                                     | Z     | eP<br>iS   | 11 11 00<br>11 27    | 850             | Slight, local.                   |
| 23                      | Shillong                                                                                                     | Z     | ePg<br>iSg | 12 05 45<br>06 05    | 170             | Slight, local.                   |
| 23                      | Shillong                                                                                                     | "     | iPg        | 12 20 07             |                 | Slight, near,<br>compression.    |
| 23                      | Chatra                                                                                                       | Z     | eP         | 12 35 59             |                 | Slight, near.                    |
|                         | Shillong                                                                                                     | Z     | iP         | 16 02 47             |                 | Slight, distant,<br>rarefaction. |
|                         | Chatra                                                                                                       | Z     | eP         | 16 02 55             |                 | Slight, distant.                 |
|                         | Delhi                                                                                                        | Z     | eP<br>i    | 16 03 04<br>03 20    |                 | Slight, compression.             |
| 23                      | Shillong                                                                                                     | Z     | ePg<br>iSg | 21 00 39<br>00 57    | 140             | Slight.                          |
| 24                      | Epc:- 44.3° N 80.6° E, Kazkh S.S.R.<br>h = about 33 km.<br>-H= 03 h 26 m 38.8 s (USCGS).                     |       |            |                      |                 |                                  |
|                         | Dehra Dun                                                                                                    | Z     | e          | 03 29 58             |                 | Tremor.                          |
|                         | Delhi                                                                                                        | Z     | eP<br>i    | 03 30 22<br>33 21    |                 | Slight.                          |
|                         | Chatra                                                                                                       | Z     | e          | 03 30 55             |                 | Slight, distant.                 |
| 24                      | Shillong                                                                                                     | Z     | ePg<br>eSg | 03 19 52<br>20 03    | 100             | Slight, local.                   |
| 24                      | Shillong                                                                                                     | Z     | iP         | 03 31 16             |                 | Slight, distant,<br>rarefaction. |
| 24                      | Chatra                                                                                                       | Z     | e          | 05 04 27             |                 | Slight, distant.                 |
| 24                      | Epc:- 9.2° N 126.6° E, Off east coast of Mindanao, P.I.<br>h = about 33 km.<br>-H= 05 h 28 m 26.5 s (USCGS). |       |            |                      |                 |                                  |
| 24                      | Shillong                                                                                                     | Z     | iP         | 05 35 31             |                 | Slight, distant,<br>rarefaction. |
| 24                      | Dehra Dun                                                                                                    | Z     | e          | 05 37 17             |                 | Slight.                          |
| 24                      | Delhi                                                                                                        | Z     | iP         | 05 37 19             |                 | Slight, compression.             |
| 24                      | Shillong                                                                                                     | Z     | eP         | 06 14 12             |                 | Slight, distant.                 |

| DATE                    | STATION                                                                                                             | COMPT            | PHASE                    | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                                                    |
|-------------------------|---------------------------------------------------------------------------------------------------------------------|------------------|--------------------------|----------------------------------------------|-----------------|-------------------------------------------------------------|
| <u>September, 1962.</u> |                                                                                                                     |                  |                          |                                              |                 |                                                             |
| 24                      | Shillong                                                                                                            | Z                | eP<br>eS                 | 07 05 24<br>05 53                            | 260             | Slight, local.                                              |
| 24                      | Dehra Dun                                                                                                           | Z                | e                        | 12 10 20                                     |                 | Slight.                                                     |
| 24                      | Delhi                                                                                                               | Z                | iP<br>i<br>iS<br>S<br>Sg | 12 10 45<br>11 14<br>11 16<br>11 21<br>11 23 | 280             | Slight, rarefaction.                                        |
| 24                      | Delhi                                                                                                               | Z                | iP                       | 14 16 14                                     |                 | Slight, compression.                                        |
| 24                      | Dehra Dun                                                                                                           | Z                | e<br>e                   | 14 17 04<br>18 17                            |                 | Slight.                                                     |
| 24                      | Shillong                                                                                                            | Z                | iP                       | 14 42 19                                     |                 | Slight, distant, rarefaction.                               |
| 24                      | Calcutta                                                                                                            | E                | e                        | 14 44 17                                     |                 | Slight.                                                     |
| 24                      | Shillong                                                                                                            | Z                | iP<br>e                  | 14 46 49<br>53 27                            |                 | Slight, distant, compression.                               |
| 24                      | Epc:- 42.8° N 145.3° E, Near east coast of Hokkaido, Japan.<br>h = about 33 km.<br>-H= 14 h 38 m 21.7 s (USCGS).    |                  |                          |                                              |                 |                                                             |
|                         | Chatra                                                                                                              | Z                | eP                       | 14 47 13                                     |                 | Slight.                                                     |
|                         | Bokaro                                                                                                              | E                | eP                       | 14 47 35                                     |                 | Slight, distant.                                            |
|                         | Dehra Dun                                                                                                           | Z                | e                        | 14 47 47<br>55 21                            | 5980            | Slight.                                                     |
|                         | Delhi                                                                                                               | ZNE<br>NE<br>ZNE | iP<br>i<br>iS<br>i       | 14 47 58<br>48 11<br>55 41<br>55 57          | 6140            | Slight. First ground motion South, West, compression.       |
|                         | Madras                                                                                                              | E                | eP<br>eS                 | 14 48 51<br>57 50                            | 7550            | Slight.                                                     |
|                         | Poona                                                                                                               | ZE               | iP                       | 14 48 55                                     |                 | Slight, distant, compression. Initial ground movement East. |
| 24                      | Epc:- 42.9° N 145.3° E, Near coast of eastern Hokkaido, Japan.<br>h = about 33 km.<br>-H= 14 h 45 m 37.3 s (USCGS). |                  |                          |                                              |                 |                                                             |
| 24                      | Delhi                                                                                                               | Z                | eP                       | 14 55 12                                     |                 | Slight.                                                     |
| 24                      | Epc:- 36.4° N 70.9° E, Hindukush.<br>h = about 216 km.<br>-H= 15 h 15 m 04.3 s (USCGS).                             |                  |                          |                                              |                 |                                                             |

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| DATE                    | STATION                                                                                     | COMPT | PHASE     | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|---------------------------------------------------------------------------------------------|-------|-----------|----------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                             |       |           |                      |                 |                                  |
| 24                      | Delhi                                                                                       | Z     | iP<br>iS  | 15 17 15<br>18 55    | 970             | Slight, compression.             |
|                         | Chatra                                                                                      | Z     | eP<br>eS  | 15 18 48<br>21 49    |                 | Slight, distant.                 |
| 24                      | Chatra                                                                                      | Z     | e         | 16 52 30             |                 | Slight, distant.                 |
| 24                      | Chatra                                                                                      | Z     | eP<br>eSg | 17 02 35<br>02 54    | 150             | Slight.                          |
| 24                      | Shillong                                                                                    | Z     | iP<br>eS  | 17 50 09<br>50 42    | 300             | Slight, rarefaction.             |
| 24                      | Epc:- 0.2° N 124.0° E, Celebas region.<br>h= about 155 km.<br>-H= 22 h 01 m 11.5 s (USCGS). |       |           |                      |                 |                                  |
|                         | Shillong                                                                                    | Z     | eP        | 22 08 32             |                 | Slight, distant.                 |
| 25                      | Delhi                                                                                       | Z     | eP        | 00 40 57             |                 | Slight.                          |
|                         | Dehra Dun                                                                                   | Z     | e         | 00 41 00             |                 | Slight.                          |
| 25                      | Shillong                                                                                    | Z     | eP        | 01 21 44             |                 | Slight, distant.                 |
| 25                      | Chatra                                                                                      | Z     | iP<br>Sg  | 06 30 33<br>30 54    | 170             | Slight, rarefaction.             |
| 25                      | Chatra                                                                                      | Z     | iP        | 06 44 43             | 170             | Slight.                          |
| 25                      | Shillong                                                                                    | Z     | eP        | 08 35 37             |                 | Slight, distant.                 |
| 25                      | Delhi                                                                                       | Z     | iP        | 10 31 39             |                 | Slight, rarefaction.             |
| 25                      | Shillong                                                                                    | Z     | iP        | 14 58 14             |                 | Slight, distant,<br>rarefaction. |
| 25                      | Shillong                                                                                    | Z     | iP        | 18 35 26             |                 | Slight, distant,<br>rarefaction. |
| 25                      | Delhi                                                                                       | Z     | iP        | 18 37 00             |                 | Tremor, rarefaction.             |
| 25                      | Dehra Dun                                                                                   | Z     | e         | 20 19 58             |                 | Slight.                          |
| 25                      | Calcutta                                                                                    | E     | e         | 21 05 35             |                 | Slight.                          |
| 25                      | Chatra                                                                                      | Z     | eP        | 23 08 02             |                 | Slight, near.                    |
| 25                      | Shillong                                                                                    | Z     | eP        | 23 08 45             |                 | Slight, distant.                 |
| 26                      | Delhi                                                                                       | Z     | iP        | 01 45 07             |                 | Tremor, compression.             |
| 26                      | Delhi                                                                                       | Z     | iP        | 03 03 38             |                 | Slight, rarefaction.             |
| 26                      | Shillong                                                                                    | Z     | iP        | 03 33 41             |                 | Slight, distant,<br>rarefaction. |

| DATE                    | STATION                                                                                                              | COMPT    | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|----------------------------------------------------------------------------------------------------------------------|----------|--------------|----------------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                                                      |          |              |                            |                 |                                  |
| 26                      | Delhi                                                                                                                | Z<br>ZNE | eP<br>e      | 05 25 32<br>28 41          |                 | Slight, compression.             |
| 26                      | Dehra Dun                                                                                                            | Z        | e            | 05 25 35                   |                 | Tremor.                          |
| 26                      | Shillong                                                                                                             | Z        | iP           | 07 15 55                   |                 | Slight, distant,<br>compression. |
| 26                      | Bokaro                                                                                                               | NE       | iP           | 08 41 02                   |                 | Slight, near.                    |
| 26                      | Shillong                                                                                                             | ZE       | iP<br>eS     | 10 48 49<br>49 20          | 290             | Slight, compression.             |
| 26                      | Chatra                                                                                                               | Z        | eP           | 10 49 48                   |                 | Slight, distant.                 |
| 26                      | Delhi                                                                                                                | Z        | eP           | 10 51 43                   |                 | Slight.                          |
| 26                      | Calcutta                                                                                                             | E        | e            | 10 54 22                   |                 | Slight.                          |
| 26                      | Shillong                                                                                                             | Z        | iP           | 12 33 02                   |                 | Distant, compression.            |
| 26                      | Shillong                                                                                                             | ZE       | iP<br>eS     | 13 42 49<br>43 36          | 430             | Compression.                     |
| 26                      | Chatra                                                                                                               | Z        | e            | 13 43 52                   |                 | Slight, distant.                 |
| 26                      | Calcutta                                                                                                             | E        | e            | 13 47 15                   |                 | Slight.                          |
| 26                      | Shillong                                                                                                             | Z        | iP           | 18 18 20                   |                 | Slight, distant,<br>compression. |
| 27                      | Delhi                                                                                                                | Z        | iP           | 07 23 30                   |                 | Slight, rarefaction              |
| 27                      | Bokaro                                                                                                               | NE       | iP           | 07 48 48                   |                 | Slight, near.                    |
| 27                      | Epc:- 74.3° N 52.4° E, Novaya Zemlya.<br>h = about 0 km.<br>-H= 08 h 03 m 16.4 s (USCGS).<br>Mag:= 5-1/4-5-1/2 (Pal) |          |              |                            |                 |                                  |
| 27                      | Poona                                                                                                                | Z        | iP           | 08 10 01                   |                 | Slight, distant,<br>compression. |
| 27                      | Delhi                                                                                                                | Z        | iP<br>i      | 08 10 07<br>10 11          |                 | Slight, compression.             |
| 27                      | Hyderabad                                                                                                            | N        | M            | 08 39 15                   |                 | Period = 12 secs.<br>$\mu = 4.$  |
| 27                      | Chatra                                                                                                               | Z        | eP           | 09 26 57                   |                 | Slight.                          |
| 27                      | Delhi                                                                                                                | Z        | iP           | 09 27 42                   |                 | Slight.                          |
| 27                      | Epc:- 4.6° S 104.4° E (Southern Sumatra),<br>h = about 144 km.<br>-H= 12 h 56 m 18.6 s (USCGS).                      |          |              |                            |                 |                                  |
|                         | Shillong                                                                                                             | Z        | iP<br>i<br>e | 13 02 35<br>07 48<br>08 51 |                 | Slight, distant,<br>rarefaction. |

| DATE                    | STATION                                                                            | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                           |
|-------------------------|------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|------------------------------------|
| <u>September, 1962.</u> |                                                                                    |       |       |                      |                 |                                    |
| 27                      | Chatra                                                                             | Z     | eP    | 13 03 03             |                 | Slight, distant,<br>rarefaction.   |
|                         | Poona                                                                              | ZE    | iP    | 13 03 24             | 4050            | Slight, rarefaction.               |
|                         |                                                                                    |       | i     | 04 59                |                 | Initial ground mo-<br>tion East.   |
|                         |                                                                                    |       | iS(?) | 09 05                |                 |                                    |
|                         |                                                                                    |       | i     | 13 18                |                 |                                    |
|                         | Bombay                                                                             | ZE    | eP    | 13 03 32             |                 | Slight, rarefaction.               |
|                         |                                                                                    | ZNE   | e     | 05 10                |                 |                                    |
|                         |                                                                                    | E     | e     | 05 47                |                 |                                    |
|                         |                                                                                    | NE    | e     | 09 21                |                 |                                    |
| 27                      | Delhi                                                                              | Z     | iP    | 13 03 57             |                 | Slight, rarefaction.               |
| 27                      | Chatra                                                                             | Z     | iP    | 13 09 03             |                 | Slight, distant,<br>rarefaction.   |
| 27                      | Delhi                                                                              | ZNE   | iP    | 13 10 04             | 2180            | Slight, rarefaction.               |
|                         |                                                                                    | NE    | iS    | 13 40                |                 | First ground motion<br>North West. |
| 27                      | Calcutta                                                                           | E     | e     | 13 12 45             |                 | Slight.                            |
| 27                      | Shillong                                                                           | Z     | iP    | 13 12 48             |                 | Slight, distant,<br>compression.   |
| 27                      | Chatra                                                                             | Z     | e     | 13 14 26             |                 | Slight, distant.                   |
| 27                      | Shillong                                                                           | Z     | eP    | 14 43 25             |                 | Slight, distant.                   |
| 27                      | Chatra                                                                             | Z     | e     | 14 58 15             |                 | Slight, distant.                   |
| 27                      | Shillong                                                                           | ZNE   | iP    | 15 50 45             | 270             | Slight, compression.               |
|                         |                                                                                    |       | iS    | 51 15                |                 |                                    |
| 27                      | Epc:- 24° N 94° E (Manipur-Burma Border).<br>-H= 15 h 50 m 04 s G.M.T. (New Delhi) |       |       |                      |                 |                                    |
|                         | Chatra                                                                             | Z     | iP    | 15 51 46             |                 | Slight, near.                      |
|                         |                                                                                    |       | i     | 52 58                |                 |                                    |
|                         | Bokaro                                                                             | E     | eP    | 15 52 02             |                 | Slight, distant.                   |
|                         | Delhi                                                                              | Z     | iP    | 15 53 44             |                 |                                    |
|                         |                                                                                    |       | i     | 53 49                |                 |                                    |
|                         |                                                                                    |       | iS    | 56 29                |                 |                                    |
| 27                      | Shillong                                                                           | Z     | eP    | 18 37 24             |                 | Slight, distant.                   |
| 28                      | Shillong                                                                           | Z     | eP    | 04 10 20             | 620             | Slight.                            |
|                         |                                                                                    |       | iS    | 11 26                |                 |                                    |
| 28                      | Delhi                                                                              | Z     | iP    | 05 46 34             |                 | Tremor, compression.               |
| 28                      | Delhi                                                                              | Z     | iP    | 06 20 47             |                 | Slight, compression.               |
| 28                      | Tocklai                                                                            | E     | eP    | 11 17 36             |                 |                                    |
|                         |                                                                                    |       | i     | 18 14                |                 |                                    |

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| DATE                    | STATION       | COMPT                | PHASE                       | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                                                             |
|-------------------------|---------------|----------------------|-----------------------------|----------------------------------------------|-----------------|----------------------------------------------------------------------|
| <u>September, 1962.</u> |               |                      |                             |                                              |                 |                                                                      |
| 28                      | Shillong      | ZNE                  | iP<br>i                     | 11 17 54<br>20 22                            |                 | Slight, distant,<br>compression.                                     |
|                         | Chatra        | ZNE                  | eP<br>e<br>SS<br>SSS        | 11 18 30<br>20 32<br>20 45<br>21 00          |                 | Slight.                                                              |
|                         | Bokaro        | NE                   | eP<br>i<br>i                | 11 18 58<br>21 03<br>22 52                   |                 | Slight, distant<br>Phases not clear.                                 |
|                         | Delhi         | Z                    | eP                          | 11 20 18                                     |                 | Slight, compression.                                                 |
|                         | Poona         | Z                    | e                           | 11 21 32                                     |                 | Slight, distant.                                                     |
|                         | Bombay        | ZE<br>NE             | e<br>e<br>e<br>e            | 11 21 46<br>26 08<br>27 36<br>29 02          |                 | Slight.                                                              |
|                         | Calcutta      | E                    | i                           | 11 21 52                                     |                 | Slight.                                                              |
|                         | Dehra Dun     | N                    | e                           | 11 22 44                                     |                 | Tremor.                                                              |
|                         | Poona         | ZNE<br>Z<br>ZNE<br>Z | iP<br>PP<br>iS<br>SS<br>SSS | 12 15 19<br>15 27<br>15 41<br>15 54<br>16 04 | 180             | Slight, rarefaction.<br>Initial ground move-<br>ment South and West. |
| 28                      | Bombay        | ZNE                  | iP<br>iS                    | 12 15 27<br>15 55                            | 250             | Slight, rarefaction.                                                 |
| 28                      | Delhi         | Z                    | iP<br>iS                    | 12 17 44<br>21 09                            | 2070            | Slight, compression.                                                 |
| 28                      | Sehore        | N                    | eP<br>iS<br>SS              | 12 17 56<br>18 37<br>18 47                   | 380             | Slight.                                                              |
| 28                      | Madras        | E                    | e<br>e<br>M                 | 12 18 06<br>18 38<br>18 48                   |                 | Slight, initial<br>phases not recorded.                              |
| 28                      | Dehra Dun     | Z                    | e<br>e<br>e                 | 12 18 16<br>21 19<br>22 06                   |                 | Feeble.                                                              |
| 28                      | Chatra        | Z                    | eP                          | 12 18 38                                     |                 | Slight, distant.                                                     |
| 28                      | Visakhapatnam | NE                   | iPg<br>iP<br>iSg            | 12 19 38<br>19 40<br>19 43                   | 50              | Slight. First ground<br>movement North-East.                         |
| 28                      | Bokaro        | NE<br>E              | eP<br>iS                    | 12 20 35<br>21 48                            | 700             | Slight.                                                              |

| DATE                    | STATION                                                                                                                                                                        | COMPT | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |  |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------|----------------------------|-----------------|----------------------------------|--|
| <u>September, 1962.</u> |                                                                                                                                                                                |       |              |                            |                 |                                  |  |
| 28                      | Shillong                                                                                                                                                                       | Z     | eP           | 13 21 46                   |                 | Slight, distant.                 |  |
| 28                      | Poona                                                                                                                                                                          | Z     | eP           | 14 30 53                   |                 | Slight.                          |  |
| 28                      | Dehra Dun                                                                                                                                                                      | Z     | e            | 16 19 03                   |                 | Slight.                          |  |
| 28                      | Delhi                                                                                                                                                                          | Z     | iP           | 16 19 14                   |                 | Slight, rarefaction.             |  |
| 28                      | Chatra                                                                                                                                                                         | Z     | eP           | 16 20 52                   |                 | Slight, distant.                 |  |
| 28                      | Shillong                                                                                                                                                                       | Z     | iP           | 16 21 41                   |                 | Slight, distant,<br>compression. |  |
| 28                      | Shillong                                                                                                                                                                       | Z     | eP           | 17 55 40                   |                 | Slight, distant.                 |  |
| 28                      | Shillong                                                                                                                                                                       | Z     | iP           | 19 15 17                   |                 | Slight, distant,<br>compression. |  |
| 28                      | Delhi                                                                                                                                                                          | Z     | eP<br>e<br>e | 18 15 18<br>17 58<br>18 03 |                 | Slight, rarefaction.             |  |
| 28                      | Dehra Dun                                                                                                                                                                      | Z     | e            | 19 15 19                   |                 | Slight.                          |  |
| 28                      | Poona                                                                                                                                                                          | Z     | eP<br>i      | 19 15 24<br>18 58          |                 | Slight, distant.                 |  |
| 28                      | Chatra                                                                                                                                                                         | Z     | iP           | 19 50 30                   |                 | Slight, distant,<br>compression. |  |
| 28                      | Delhi                                                                                                                                                                          | Z     | iP           | 22 34 41                   |                 | Slight, compression.             |  |
| 29                      | Delhi                                                                                                                                                                          | Z     | iP<br>i      | 05 41 36<br>41 42          |                 | Slight, rarefaction.             |  |
| 29                      | Epc:- 28.2° N 57.4° E, Southern Iran.<br>h = about 50 km.<br>-H= 06 h 53 m 56.1 s (USCGS).                                                                                     |       |              |                            |                 |                                  |  |
| 29                      | Delhi                                                                                                                                                                          | Z     | eP           | 06 57 58                   |                 | Slight, compression.             |  |
| 29                      | Poona                                                                                                                                                                          | Z     | eP           | 06 58 03                   |                 | Slight.                          |  |
| 29                      | Bokaro                                                                                                                                                                         | NE    | iP           | 08 04 45                   |                 | Slight, local.                   |  |
| 29                      | Delhi                                                                                                                                                                          | Z     | eP           | 09 56 06                   |                 | Slight, rarefaction.             |  |
| 29                      | Epc:- 27.0° S 63.6° W, Santiago Del Estro Province, Argentina.<br>h = about 575 km.<br>-H= 15 h 17 m 47.7 s (USCGS).<br>Mag: = 6- $\frac{1}{2}$ (Pas), 6- $\frac{1}{4}$ (Pal). |       |              |                            |                 |                                  |  |
|                         | Calcutta                                                                                                                                                                       | E     | e            | 15 35 26                   |                 |                                  |  |
|                         | Poona                                                                                                                                                                          | Z     | e            | 15 36 04                   |                 |                                  |  |
|                         |                                                                                                                                                                                |       | e            | 36 12                      |                 |                                  |  |
|                         |                                                                                                                                                                                |       | i            | 38 14                      |                 |                                  |  |
|                         |                                                                                                                                                                                |       | i            | 38 51                      |                 |                                  |  |
|                         |                                                                                                                                                                                |       | ZNE          | i                          | 39 51           |                                  |  |
|                         |                                                                                                                                                                                |       | Z            | i                          | 42 59           |                                  |  |
|                         |                                                                                                                                                                                |       | e            | 47 29                      |                 |                                  |  |

| DATE                    | STATION                          | COMPT | PHASE | G. M. T. | $\Delta$ | REMARKS.              |
|-------------------------|----------------------------------|-------|-------|----------|----------|-----------------------|
|                         |                                  |       |       | h. m. s. | km.      |                       |
| <u>September, 1962.</u> |                                  |       |       |          |          |                       |
| 29                      | Bombay                           | ZE    | e     | 15 36 11 |          | Slight.               |
|                         |                                  | NE    | e     | 36 38    |          |                       |
|                         |                                  | ZE    | e     | 38 52    |          |                       |
|                         |                                  | NE    | e     | 40 14    |          |                       |
|                         |                                  | E     | e     | 41 42    |          |                       |
|                         |                                  | ZE    | e     | 42 55    |          |                       |
|                         | Madras                           | E     | e     | 15 36 17 |          |                       |
|                         |                                  |       | e     | 54 58    |          |                       |
|                         | Sehore                           | N     | i     | 15 36 19 |          |                       |
|                         |                                  |       | i     | 36 28    |          |                       |
|                         | Delhi                            | ZE    | ePKP  | 15 36 21 |          | Rarefaction.          |
|                         |                                  | N     | e     |          |          |                       |
|                         | Dehra Dun                        | Z     | e     | 15 36 25 |          | Slight.               |
|                         |                                  |       | e     | 36 41    |          |                       |
|                         | Visakhapatnam                    | E     | e     | 15 36 30 |          | First ground move-    |
|                         |                                  |       | e     | 36 38    |          | ment towards West.    |
|                         |                                  |       | e     | 36 46    |          |                       |
|                         |                                  |       | e     | 38 42    |          |                       |
|                         |                                  |       | e     | 38 57    |          |                       |
|                         |                                  |       | e     | 39 08    |          |                       |
| 29                      | Bokaro                           | E     | iP    | 15 36 35 |          | Distant.              |
|                         |                                  |       | i     | 42 41    |          |                       |
|                         |                                  |       | i     | 43 29    |          |                       |
|                         | Chatra                           | Z     | e     | 15 36 36 |          | Distant, rarefaction. |
|                         | Shillong                         | ZE    | ePKP  | 15 36 39 | 198      | Rarefaction.          |
| 29                      | Chatra                           | Z     | eP    | 15 52 19 |          | Slight.               |
|                         |                                  |       | iS    | 52 41    |          |                       |
| 29                      | Epc:- 28.4° N 77.14° E in Delhi. |       |       |          |          |                       |
|                         | -H= 17 h 27 m 38 s (New Delhi)   |       |       |          |          |                       |
|                         | Delhi                            | Z     | iP    | 17 27 24 |          | Tremor, rarefaction.  |
|                         | Delhi                            | ZNE   | iPg   | 17 27 43 | 20       | First ground motion   |
|                         |                                  | NE    | iSg   | 27 45    |          | South-West. Rarefa-   |
|                         |                                  |       |       |          |          | ction. Locally felt.  |
|                         | Dehra Dun                        | Z     | eP    | 17 28 14 | 230      | Slight.               |
|                         |                                  |       | PPP   | 28 20    |          |                       |
|                         |                                  |       | Lq    | 28 36    |          |                       |
|                         |                                  |       | iS    | 28 41    |          |                       |
|                         |                                  |       | SS    | 28 47    |          |                       |
|                         |                                  |       | SSS   | 28 53    |          |                       |
|                         | Chatra                           | Z     | eP    | 17 30 03 |          | Slight.               |
|                         | Sehore                           | E     | e     | 17 30 19 |          | Slight, shock not     |
|                         |                                  |       | i     | 30 22    |          | well recorded.        |



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| DATE                    | STATION                                                                                       | COMPT   | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|-------------------------|-----------------------------------------------------------------------------------------------|---------|----------|----------------------|-----------------|----------------------------------|
| <u>September, 1962.</u> |                                                                                               |         |          |                      |                 |                                  |
| 29                      | Shillong                                                                                      | Z       | eP       | 17 30 49             |                 | Slight, distant.                 |
|                         | Bokaro                                                                                        | E       | iS<br>M  | 17 31 29<br>32 37    | 650             | Slight.                          |
|                         | Poona                                                                                         | Z       | e        | 17 32 35             |                 | Slight, distant.                 |
|                         | Bombay                                                                                        | ZE<br>E | e<br>e   | 17 33 08<br>33 24    |                 | Slight.                          |
| 29                      | Delhi                                                                                         | Z       | iP       | 18 03 41             |                 | Tremor, rarefaction.             |
| 29                      | Shillong                                                                                      | Z       | eP<br>e  | 18 31 26<br>32 37    | 680             | Slight, near.                    |
| 29                      | Delhi                                                                                         | Z       | eP       | 19 28 10             |                 | Slight, rarefaction.             |
| 29                      | Dehra Dun                                                                                     | Z       | e        | 19 28 11             |                 | Slight.                          |
| 29                      | Chatra                                                                                        | Z       | i        | 21 11 17             |                 | Slight, near.                    |
| 30                      | Delhi                                                                                         | Z       | eP       | 01 20 47             |                 | Slight.                          |
| 30                      | Chatra                                                                                        | Z       | eP       | 01 37 50             |                 | Slight, near.                    |
| 30                      | Dehra Dun                                                                                     | Z       | e<br>i   | 06 07 08<br>08 43    |                 | Feeble.                          |
| 30                      | Delhi                                                                                         | Z       | iP<br>iS | 06 07 22<br>09 03    | 980             | Slight, compression.             |
| 30                      | Shillong                                                                                      | Z       | iP       | 06 07 31             |                 | Slight, distant,<br>rarefaction. |
| 30                      | Epc:- 13.5° N 146.2° E, Mariana Islands.<br>h = about 94 Lm.<br>-H= 06 h 44 m 00.4 s (USCGS). |         |          |                      |                 |                                  |
|                         | Shillong                                                                                      | Z       | iP       | 06 53 04             |                 | Slight, distant.<br>compression. |
|                         | Dehra Dun                                                                                     | Z       | e        | 06 54 32             |                 |                                  |
|                         | Delhi                                                                                         | Z       | iP       | 06 54 34             |                 | Slight, compression.             |
|                         | Poona                                                                                         | Z       | iP       | 06 55 00             |                 | Slight, distant,<br>compression. |
| 30                      | Shillong                                                                                      | Z       | eP<br>e  | 08 00 45<br>01 47    | 590             | Slight.                          |
| 30                      | Delhi                                                                                         | Z       | iP       | 08 02 04             |                 | Slight, rarefaction.             |
| 30                      | Shillong                                                                                      | Z       | iP       | 10 58 59             |                 | Slight, distant,<br>compression. |
| 30                      | Dehra Dun                                                                                     | Z       | e        | 10 59 16             |                 | Slight.                          |

| DATE                    | STATION                                                                | COMPT                        | PHASE                                                  | G. M. T.<br>h. m. s.                                                             | $\Delta$<br>km. | REMARKS.                      |
|-------------------------|------------------------------------------------------------------------|------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------|-----------------|-------------------------------|
| <u>September, 1962.</u> |                                                                        |                              |                                                        |                                                                                  |                 |                               |
| 30                      | Poona                                                                  | Z                            | iP                                                     | 11 00 23                                                                         |                 | Slight, distant, compression. |
| 30                      | Shillong                                                               | Z                            | ePg<br>iSg                                             | 13 04 31<br>04 48                                                                | 130             | Slight, local.                |
| 30                      | Delhi                                                                  | Z                            | iPg<br>iSg                                             | 13 43 09<br>43 11                                                                | 20              | Tremor, compression.          |
| 30                      | Delhi                                                                  | Z                            | eP                                                     | 19 05 23                                                                         |                 | Slight, compression.          |
| 30                      | Delhi                                                                  | Z                            | eP                                                     | 20 59 36                                                                         |                 | Slight, rarefaction.          |
| 30                      | Epc:- 18.6° N 120.9° E, Near North coast of Luzon, Philippine Islands. |                              |                                                        |                                                                                  |                 |                               |
|                         | Felt : Vigan, Aparri and Looag. h = about 51 km.                       |                              |                                                        |                                                                                  |                 |                               |
|                         | -H= 21 h 57 m 24.8 s (USCGS).                                          |                              |                                                        |                                                                                  |                 |                               |
|                         | Shillong                                                               | ZNE                          | iP<br>iS                                               | 22 03 10<br>07 46                                                                | 3000            | Slight, rarefaction.          |
|                         | Calcutta                                                               | E                            | e                                                      | 22 04 41                                                                         |                 | Slight.                       |
|                         | Delhi                                                                  | ZE                           | eP                                                     | 22 05 03                                                                         |                 | Slight, rarefaction.          |
| 30                      | Dehra Dun                                                              | Z<br>N                       | e(P)<br>e(S)                                           | 22 05 03<br>11 07                                                                | 4410            | Feeble.                       |
|                         | Madras                                                                 | E                            | e<br>e<br>e                                            | 22 05 07<br>06 47<br>10 52                                                       |                 |                               |
|                         | Bombay                                                                 | ZE<br>E<br>E<br>E<br>NE<br>E | eP<br>PP<br>PcP<br>PPP<br>eS<br>PS<br>PPS<br>SS<br>ScS | 22 05 52<br>07 29<br>07 42<br>08 07<br>12 15<br>12 25<br>12 34<br>15 28<br>15 46 | 4720            | Slight.                       |
|                         | Shillong                                                               | Z                            | eP<br>eS                                               | 23 34 06<br>35 01                                                                | 620             | Slight.                       |

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Earthquake Reports (Non-Instrumental).

The following is the list of earthquakes that were reported by voluntary observers from different stations during the month of September, 1962 A.D.

| Station  | Date in GMT | Time in G.M.T. | Duration of shocks in secs. | Number of shocks. | Intensity in R.F. scale. | RKS . |
|----------|-------------|----------------|-----------------------------|-------------------|--------------------------|-------|
| Shillong | 18          | 12 23          | 2                           | 1                 | III                      |       |

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MICROSEISMIC TABULATION

| Date                    | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date                    | Hour GMT. | K   | Mean amplitude in m.m. | Mean period in sec. |
|-------------------------|----------|-----|------------------------|---------------------|-------------------------|-----------|-----|------------------------|---------------------|
| Station: Visakhapatnam. |          |     |                        |                     | <u>September, 1962.</u> |           |     |                        |                     |
| 01                      | 00       | 1   | 2.0                    | 4.7                 | 12                      | 00        | 0,0 | -                      | -                   |
|                         | 06       | 2   | 0.5                    | 5.2                 |                         | 06        | 2   | 0.5                    | 3.9                 |
|                         | 12       | 2   | 0.5                    | 4.7                 |                         | 12        | 2   | 0.4                    | 4.0                 |
|                         | 18       | 2   | 0.6                    | 4.6                 |                         | 18        | 2   | 0.5                    | 4.3                 |
| 02                      | 00       | 0,0 | -                      | -                   | 13                      | 00        | 2   | 0.5                    | 4.0                 |
|                         | 06       | 2   | 0.6                    | 5.3                 |                         | 06        | 2   | 0.5                    | 4.3                 |
|                         | 12       | 2   | 0.5                    | 4.6                 |                         | 12        | 2   | 0.5                    | 4.3                 |
|                         | 18       | 2   | 0.4                    | 4.4                 |                         | 18        | 2   | 0.5                    | 4.1                 |
| 03                      | 00       | 2   | 0.4                    | 4.4                 | 14                      | 00        | 0,0 | -                      | -                   |
|                         | 06       | 2   | 0.5                    | 4.5                 |                         | 06        | 2   | 0.5                    | 4.1                 |
|                         | 12       | 2   | 0.4                    | 3.7                 |                         | 12        | 2   | 0.4                    | 3.9                 |
|                         | 18       | 2   | 0.4                    | 4.4                 |                         | 18        | 2   | 0.4                    | 3.7                 |
| 04                      | 00       | 0,0 | -                      | -                   | 15                      | 00        | 0,0 | -                      | -                   |
|                         | 06       | 2   | 0.5                    | 3.7                 |                         | 06        | 2   | 0.4                    | 3.4                 |
|                         | 12       | 2   | 0.4                    | 4.5                 |                         | 12        | 2   | 0.4                    | 3.2                 |
|                         | 18       | 2   | 0.5                    | 4.2                 |                         | 18        | 2   | 0.5                    | 3.2                 |
| 05                      | 00       | 2   | 0.4                    | 3.8                 | 16                      | 00        | 0,0 | -                      | -                   |
|                         | 06       | 2   | 0.5                    | 4.2                 |                         | 06        | 2   | 0.5                    | 3.8                 |
|                         | 12       | 2   | 0.5                    | 3.5                 |                         | 12        | 2   | 0.5                    | 3.3                 |
|                         | 18       | 2   | 0.5                    | 3.8                 |                         | 18        | 1   | 1.1                    | 2.7                 |
| 06                      | 00       | 2   | 0.5                    | 3.4                 | 17                      | 00        | 1   | 1.4                    | 2.7                 |
|                         | 06       | 2   | 0.4                    | 4.2                 |                         | 06        | 2   | 1.7                    | 2.9                 |
|                         | 12       | 2   | 0.5                    | 4.0                 |                         | 12        | 2   | 1.6                    | 3.0                 |
|                         | 18       | 2   | 0.5                    | 4.4                 |                         | 18        | 3   | 1.4                    | 3.7                 |
| 07                      | 00       | 2   | 0.4                    | 4.1                 | 18                      | 00        | 3   | 1.1                    | 3.8                 |
|                         | 06       | 2   | 0.6                    | 4.4                 |                         | 06        | 3   | 1.1                    | 2.8                 |
|                         | 12       | 2   | 0.6                    | 4.3                 |                         | 12        | 3   | 1.1                    | 3.0                 |
|                         | 18       | 3   | 0.6                    | 4.0                 |                         | 18        | 3   | 1.1                    | 3.5                 |
| 08                      | 00       | 3   | 0.8                    | 3.9                 | 19                      | 00        | 3   | 1.0                    | 3.1                 |
|                         | 06       | 3   | 1.1                    | 3.1                 |                         | 06        | 2   | 0.9                    | 3.1                 |
|                         | 12       | 3   | 1.0                    | 3.4                 |                         | 12        | 2   | 0.9                    | 3.9                 |
|                         | 18       | 1   | 1.5                    | 3.1                 |                         | 18        | 2   | 0.7                    | 3.8                 |
| 09                      | 00       | 1   | 1.6                    | 3.3                 | 20                      | 00        | 2   | 0.7                    | 3.4                 |
|                         | 06       | 1   | 1.9                    | 3.4                 |                         | 06        | 2   | 0.8                    | 3.1                 |
|                         | 12       | 1   | 2.0                    | 3.4                 |                         | 12        | 2   | 0.7                    | 3.3                 |
|                         | 18       | 1   | 1.4                    | 3.4                 |                         | 18        | 2   | 0.6                    | 3.0                 |
| 10                      | 00       | 1   | 0.9                    | 3.3                 | 21                      | 00        | 2   | 0.7                    | 3.4                 |
|                         | 06       | 1   | 0.9                    | 3.3                 |                         | 06        | 2   | 0.7                    | 3.2                 |
|                         | 12       | 1   | 0.7                    | 3.3                 |                         | 12        | 2   | 0.6                    | 3.3                 |
|                         | 18       | 2   | 0.7                    | 3.3                 |                         | 18        | 2   | 0.5                    | 3.1                 |
| 11                      | 00       | 2   | 0.5                    | 3.4                 | 22                      | 00        | 2   | 0.3                    | 3.4                 |
|                         | 06       | 2   | 0.6                    | 3.4                 |                         | 06        | 2   | 0.6                    | 3.5                 |
|                         | 12       | 2   | 0.5                    | 3.4                 |                         | 12        | 2   | 0.4                    | 3.5                 |
|                         | 18       | 2   | 0.5                    | 3.5                 |                         | 18        | 2   | 0.4                    | 3.7                 |

| Date                           | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date             | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. |
|--------------------------------|----------|-----|------------------------|---------------------|------------------|----------|-----|------------------------|---------------------|
| Station: Visakhapatnam(Contd.) |          |     |                        |                     | September, 1962. |          |     |                        |                     |
| 23                             | 00       | 2   | 0.3                    | 3.0                 | 04               | 00       | 2   | 0.5                    | 4.8                 |
|                                | 06       | 2   | 0.4                    | 3.0                 |                  | 06       | 2   | 0.3                    | 7.4                 |
|                                | 12       | 2   | 0.3                    | 3.3                 |                  | 12       | 2   | 0.3                    | 5.8                 |
|                                | 18       | 2   | 0.3                    | 3.0                 |                  | 18       | 2   | 0.3                    | 6.7                 |
| 24                             | 00       | 2   | 0.3                    | 2.7                 | 05               | 00       | 2   | 0.3                    | 6.7                 |
|                                | 06       | 2   | 0.3                    | 2.9                 |                  | 06       | 2   | 0.5                    | 5.1                 |
|                                | 12       | 2   | 0.3                    | 3.0                 |                  | 12       | 2   | 0.5                    | 7.0                 |
|                                | 18       | 2   | 0.3                    | 3.0                 |                  | 18       | 2   | 0.6                    | 4.7                 |
| 25                             | 00       | 2   | 0.3                    | 3.0                 | 06               | 00       | 2   | 0.7                    | 4.6                 |
|                                | 06       | 2   | 0.3                    | 3.2                 |                  | 06       | 2   | 0.3                    | 4.4                 |
|                                | 12       | 2   | 0.3                    | 3.2                 |                  | 12       | 2   | 0.3                    | 5.0                 |
|                                | 18       | 2   | 0.3                    | 3.0                 |                  | 18       | 2   | 0.3                    | 5.3                 |
| 26                             | 00       | 2   | 0.3                    | 2.9                 | 07               | 00       | 2   | 0.3                    | 4.4                 |
|                                | 06       | 2   | 0.3                    | 2.9                 |                  | 06       | 2   | 0.6                    | 4.4                 |
|                                | 12       | 2   | 0.3                    | 2.7                 |                  | 12       | 2   | 0.6                    | 5.2                 |
|                                | 18       | 2   | 0.4                    | 3.1                 |                  | 18       | 2   | 0.6                    | 5.0                 |
| 27                             | 00       | 2   | 0.3                    | 3.1                 | 08               | 00       | ... | -                      | -                   |
|                                | 06       | 2   | 0.4                    | 4.1                 |                  | 06       | 2   | 0.7                    | 4.6                 |
|                                | 12       | 0,0 | -                      | -                   |                  | 12       | 2   | 0.6                    | 4.4                 |
|                                | 18       | 2   | 0.3                    | 3.2                 |                  | 18       | 2   | 0.7                    | 4.4                 |
| 28                             | 00       | 0,0 | -                      | -                   | 09               | 00       | 2   | 0.6                    | 4.0                 |
|                                | 06       | 2   | 0.2                    | 3.0                 |                  | 06       | 2   | 0.5                    | 5.0                 |
|                                | 12       | 0,0 | -                      | -                   |                  | 12       | 2   | 0.4                    | 4.0                 |
|                                | 18       | 2   | 0.2                    | 3.2                 |                  | 18       | 2   | 0.5                    | 5.2                 |
| 29                             | 00       | 0,0 | -                      | -                   | 10               | 00       | 2   | 0.4                    | 4.2                 |
|                                | 06       | 2   | 0.3                    | 3.5                 |                  | 06       | 2   | 0.4                    | 4.8                 |
|                                | 12       | 0,0 | -                      | -                   |                  | 12       | 2   | 0.4                    | 5.4                 |
|                                | 18       | 2   | 0.3                    | 4.1                 |                  | 18       | 2   | 0.4                    | 5.3                 |
| 30                             | 00       | 0,0 | -                      | -                   | 11               | 00       | 2   | 0.4                    | 5.0                 |
|                                | 06       | -   | -                      | -                   |                  | 06       | 2   | 0.4                    | 5.0                 |
|                                | 12       | 0,0 | -                      | -                   |                  | 12       | 2   | 0.4                    | 5.3                 |
|                                | 18       | 2   | 0.3                    | 3.9                 |                  | 18       | 2   | 0.4                    | 4.8                 |
| Station : Shillong.            |          |     |                        |                     | 12               | 00       | 2   | 0.4                    | 4.4                 |
| 01                             | 00       | 2   | 0.5                    | 5.0                 |                  | 06       | 2   | 0.4                    | 5.1                 |
|                                | 06       | 2   | 0.5                    | 5.0                 |                  | 12       | 2   | 0.4                    | 4.7                 |
|                                | 12       | 2   | 0.5                    | 5.0                 |                  | 18       | 2   | 0.4                    | 5.5                 |
|                                | 18       | 2   | 0.5                    | 4.8                 | 13               | 00       | 2   | 0.4                    | 6.6                 |
| 02                             | 00       | 2   | 0.4                    | 4.7                 |                  | 06       | 2   | 0.4                    | 8.0                 |
|                                | 06       | ... | -                      | -                   |                  | 12       | 2   | 0.4                    | 6.7                 |
|                                | 12       | 2   | 0.6                    | 5.0                 |                  | 18       | 2   | 0.4                    | 6.2                 |
|                                | 18       | 2   | 0.6                    | 5.4                 | 14               | 00       | 0.. | -                      | -                   |
| 03                             | 00       | 2   | 0.6                    | 5.2                 |                  | 06       | 0.. | 0.4                    | 6.3                 |
|                                | 06       | 2   | 0.5                    | 5.2                 |                  | 12       | 2   | 0.4                    | 5.5                 |
|                                | 12       | 2   | 0.5                    | 5.0                 |                  | 18       | 0.. | -                      | -                   |
|                                | 18       | 2   | 0.5                    | 4.9                 |                  |          |     |                        |                     |

| Date                       | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date              | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. |
|----------------------------|----------|-----|------------------------|---------------------|-------------------|----------|-----|------------------------|---------------------|
| Station : Shillong(Contd.) |          |     |                        |                     | September, 1962.  |          |     |                        |                     |
| 15                         | 00       | 0.. | -                      | -                   | 26                | 00       | 2   | 0.5                    | 6.0                 |
|                            | 06       | 0.. | -                      | -                   |                   | 06       | 2   | 0.4                    | 7.0                 |
|                            | 12       | 2   | 0.4                    | 4.8                 |                   | 12       | 2   | 0.6                    | 5.1                 |
|                            | 18       | 0.. | -                      | -                   |                   | 18       | 2   | 0.4                    | 4.5                 |
| 16                         | 00       | 0.. | -                      | -                   | 27                | 00       | 2   | 0.5                    | 4.0                 |
|                            | 06       | 2   | 0.5                    | 4.0                 |                   | 06       | 2   | 0.3                    | 6.0                 |
|                            | 12       | 2   | 0.6                    | 4.4                 |                   | 12       | 2   | 0.5                    | 4.4                 |
|                            | 18       | 2   | 0.6                    | 4.5                 |                   | 18       | 2   | 0.4                    | 4.8                 |
| 17                         | 00       | 2   | 0.4                    | 4.0                 | 28                | 00       | 2   | 0.3                    | 3.5                 |
|                            | 06       | 2   | 0.7                    | 5.0                 |                   | 06       | 2   | 0.4                    | 3.5                 |
|                            | 12       | 2   | 0.5                    | 4.8                 |                   | 12       | 2   | 0.4                    | 4.0                 |
|                            | 18       | 2   | 0.4                    | 5.0                 |                   | 18       | 2   | 0.5                    | 4.8                 |
| 18                         | 00       | 2   | 0.4                    | 7.0                 | 29                | 00       | 2   | 0.5                    | 3.8                 |
|                            | 06       | ... | -                      | -                   |                   | 06       | 2   | 0.5                    | 5.7                 |
|                            | 12       | ... | -                      | -                   |                   | 12       | 2   | 0.4                    | 5.5                 |
|                            | 18       | ... | -                      | -                   |                   | 18       | 2   | 0.3                    | 4.2                 |
| 19                         | 00       | ... | -                      | -                   | 30                | 00       | 2   | 0.4                    | 5.0                 |
|                            | 06       | 2   | 0.3                    | 7.0                 |                   | 06       | 2   | 0.3                    | 5.5                 |
|                            | 12       | 2   | 0.3                    | 6.0                 |                   | 12       | 2   | 0.4                    | 4.2                 |
|                            | 18       | 2   | 0.3                    | 6.0                 |                   | 18       | 2   | 0.4                    | 5.2                 |
| 20                         | 00       | 2   | 0.7                    | 5.0                 | Station : Bokaro. |          |     |                        |                     |
|                            | 06       | 2   | 0.6                    | 4.6                 | 01                | 00       | 3   | 0.5                    | 4.0                 |
|                            | 12       | 2   | 0.7                    | 4.3                 |                   | 06       | 0,0 | -                      | -                   |
|                            | 18       | 2   | 0.6                    | 4.0                 |                   | 12       | 0,0 | -                      | -                   |
| 21                         | 00       | 2   | 0.6                    | 4.5                 |                   | 18       | 0,0 | -                      | -                   |
|                            | 06       | 2   | 1.0                    | 4.5                 | 02                | 00       | 3   | 0.5                    | 4.0                 |
|                            | 12       | 2   | 0.5                    | 3.3                 |                   | 06       | 3   | 0.7                    | 4.7                 |
|                            | 18       | 2   | 0.8                    | 4.4                 |                   | 12       | 3   | 0.5                    | 4.5                 |
| 22                         | 00       | 2   | 0.6                    | 4.2                 |                   | 18       | 3   | 0.6                    | 5.0                 |
|                            | 06       | 2   | 0.4                    | 5.0                 | 03                | 00       | 3   | 0.6                    | 5.0                 |
|                            | 12       | 2   | 0.4                    | 4.0                 |                   | 06       | 3   | 0.3                    | 4.0                 |
|                            | 18       | 2   | 0.3                    | 4.5                 |                   | 12       | 3   | 0.4                    | 4.0                 |
| 23                         | 00       | 2   | 0.4                    | 4.2                 |                   | 18       | 3   | 0.4                    | 4.5                 |
|                            | 06       | 2   | 0.5                    | 6.5                 | 04                | 00       | 3   | 0.2                    | 3.5                 |
|                            | 12       | 2   | 0.4                    | 4.0                 |                   | 06       | 3   | 0.4                    | 4.4                 |
|                            | 18       | 2   | 0.3                    | 4.0                 |                   | 12       | 3   | 0.4                    | 4.8                 |
| 24                         | 00       | 2   | 0.4                    | 4.9                 |                   | 18       | 3   | 0.4                    | 4.2                 |
|                            | 06       | 2   | 0.5                    | 5.0                 | 05                | 00       | 3   | 0.4                    | 4.0                 |
|                            | 12       | 2   | 0.3                    | 5.0                 |                   | 06       | 3   | 0.4                    | 4.0                 |
|                            | 18       | 2   | 0.4                    | 6.5                 |                   | 12       | 3   | 0.4                    | 3.8                 |
| 25                         | 00       | 2   | 0.3                    | 5.5                 |                   | 18       | 3   | 0.4                    | 4.0                 |
|                            | 06       | 2   | 0.5                    | 5.4                 | 06                | 00       | 3   | 0.4                    | 4.0                 |
|                            | 12       | 2   | 0.4                    | 4.0                 |                   | 06       | 3   | 0.4                    | 3.9                 |
|                            | 18       | 2   | 0.5                    | 4.0                 |                   | 12       | 3   | 0.4                    | 4.2                 |
|                            |          |     |                        |                     |                   | 18       | 3   | 0.4                    | 4.0                 |

| Date                     | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date                    | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|--------------------------|----------|-----|------------------------|---------------------|-------------------------|----------|---|------------------------|---------------------|
| Station : Bokaro(Contd.) |          |     |                        |                     | <u>September, 1962.</u> |          |   |                        |                     |
| 07                       | 00       | 3   | 0.4                    | 4.0                 | 18                      | 00       | 3 | 0.5                    | 4.2                 |
|                          | 06       | 3   | 0.4                    | 3.0                 |                         | 06       | 3 | 0.4                    | 4.0                 |
|                          | 12       | 3   | 0.4                    | 3.2                 |                         | 12       | 3 | 0.4                    | 3.8                 |
|                          | 18       | 3   | 0.4                    | 3.4                 |                         | 18       | 3 | 0.4                    | 3.8                 |
| 08                       | 00       | 3   | 0.5                    | 4.0                 | 19                      | 00       | 3 | 0.4                    | 3.8                 |
|                          | 06       | 3   | 0.5                    | 4.2                 |                         | 06       | 3 | 0.4                    | 3.2                 |
|                          | 12       | 3   | 0.5                    | 4.0                 |                         | 12       | 3 | 0.4                    | 4.0                 |
|                          | 18       | 3   | 0.5                    | 3.5                 |                         | 18       | 3 | 0.4                    | 3.2                 |
| 09                       | 00       | 3   | 0.6                    | 3.2                 | 20                      | 00       | 3 | 0.4                    | 3.0                 |
|                          | 06       | 3   | 0.6                    | 3.2                 |                         | 06       | 3 | 0.4                    | 3.0                 |
|                          | 12       | 3   | 0.6                    | 3.4                 |                         | 12       | 3 | 0.4                    | 3.0                 |
|                          | 18       | 3   | 0.6                    | 3.2                 |                         | 18       | 3 | 0.6                    | 3.5                 |
| 10                       | 00       | 3   | 0.5                    | 3.0                 | 21                      | 00       | 3 | 0.6                    | 4.0                 |
|                          | 06       | 3   | 0.4                    | 3.0                 |                         | 06       | 3 | 0.7                    | 4.0                 |
|                          | 12       | 3   | 0.4                    | 3.0                 |                         | 12       | 3 | 0.5                    | 4.0                 |
|                          | 18       | 3   | 0.4                    | 3.0                 |                         | 18       | 3 | 0.4                    | 4.0                 |
| 11                       | 00       | 3   | 0.5                    | 3.0                 | 22                      | 00       | 3 | 0.4                    | 3.8                 |
|                          | 06       | 3   | 0.4                    | 3.0                 |                         | 06       | 3 | 0.4                    | 3.6                 |
|                          | 12       | 3   | 0.4                    | 3.0                 |                         | 12       | 3 | 0.4                    | 3.2                 |
|                          | 18       | 3   | 0.4                    | 3.0                 |                         | 18       | 3 | 0.4                    | 3.2                 |
| 12                       | 00       | 3   | 0.4                    | 4.2                 | 23                      | 00       | 3 | 0.4                    | 3.2                 |
|                          | 06       | 3   | 0.4                    | 4.0                 |                         | 06       | 3 | 0.4                    | 3.5                 |
|                          | 12       | 3   | 0.4                    | 4.0                 |                         | 12       | 3 | 0.4                    | 3.2                 |
|                          | 18       | 3   | 0.4                    | 4.2                 |                         | 18       | 3 | 0.4                    | 3.6                 |
| 13                       | 00       | 3   | 0.4                    | 3.2                 | 24                      | 00       | 3 | 0.4                    | 4.0                 |
|                          | 06       |     |                        |                     |                         | 06       | 3 | 0.3                    | 4.0                 |
|                          | 12       |     |                        |                     |                         | 12       | 3 | 0.3                    | 4.0                 |
|                          | 18       |     |                        |                     |                         | 18       | 3 | 0.3                    | 4.0                 |
| 14                       | 00       |     |                        |                     | 25                      | 00       | 3 | 0.3                    | 4.0                 |
|                          | 06       | 3   | 0.4                    | 4.0                 |                         | 06       | 3 | 0.2                    | 3.0                 |
|                          | 12       | 3   | 0.4                    | 4.4                 |                         | 12       | 3 | 0.2                    | 3.8                 |
|                          | 18       | 3   | 0.4                    | 4.2                 |                         | 18       | 3 | 0.2                    | 4.0                 |
| 15                       | 00       | 3   | 0.4                    | 4.8                 | 26                      | 00       | 3 | 0.1                    | 3.4                 |
|                          | 06       | 3   | 0.3                    | 4.0                 |                         | 06       | 3 | 0.2                    | 3.8                 |
|                          | 12       | 3   | 0.3                    | 4.2                 |                         | 12       | 3 | 0.2                    | 4.0                 |
|                          | 18       | 3   | 0.3                    | 4.0                 |                         | 18       | 3 | 0.2                    | 4.3                 |
| 16                       | 00       | ... | -                      | -                   | 27                      | 00       | 3 | 0.2                    | 3.8                 |
|                          | 06       | 3   | 0.5                    | 4.2                 |                         | 06       | 3 | 0.2                    | 4.0                 |
|                          | 12       | 3   | 0.3                    | 3.8                 |                         | 12       | 3 | 0.2                    | 4.1                 |
|                          | 18       | 3   | 0.3                    | 3.6                 |                         | 18       | 3 | 0.2                    | 3.9                 |
| 17                       | 00       | 3   | 0.3                    | 3.2                 | 28                      | 00       | 3 | 0.2                    | 4.0                 |
|                          | 06       | 3   | 0.5                    | 4.2                 |                         | 06       | 3 | 0.2                    | 4.0                 |
|                          | 12       | 3   | 0.4                    | 4.0                 |                         | 12       | 3 | 0.2                    | 4.0                 |
|                          | 18       | 3   | 0.5                    | 4.4                 |                         | 18       | 3 | 0.1                    | 3.6                 |

| Date                             | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date                    | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|----------------------------------|----------|-----|------------------------|---------------------|-------------------------|----------|---|------------------------|---------------------|
| <b>Station : Bokaro (Contd.)</b> |          |     |                        |                     | <b>September, 1962.</b> |          |   |                        |                     |
| 29                               | 00       | 3   | 0.2                    | 4.0                 | 06                      | 00       | 3 | 0.9                    | 4.0                 |
|                                  | 06       | 3   | 0.3                    | 4.7                 |                         |          | 3 | 0.5                    | 2.9                 |
|                                  | 12       | 3   | 0.3                    | 4.4                 |                         | 03       | 3 | 0.9                    | 4.1                 |
|                                  | 18       | 3   | 0.3                    | 4.5                 |                         |          | 3 | 0.7                    | 2.7                 |
| 30                               | 00       | 1   | 0.2                    | 3.8                 |                         | 06       | 1 | 0.9                    | 2.9                 |
|                                  | 06       | ... | -                      | -                   |                         | 12       | 1 | 1.0                    | 2.9                 |
|                                  | 12       | 3   | 0.2                    | 4.1                 |                         | 18       | 1 | 0.8                    | 2.9                 |
|                                  | 18       | 3   | 0.2                    | 4.2                 |                         |          | 3 | 0.8                    | 4.1                 |
| <b>Station : Madras.</b>         |          |     |                        |                     | 07                      | 00       | 3 | 0.9                    | 4.3                 |
| 01                               | 00       | 3   | 0.7                    | 5.4                 |                         |          | 3 | 0.7                    | 3.3                 |
|                                  |          | 3   | 0.5                    | 4.4                 |                         |          | 3 | 0.4                    | 2.5                 |
|                                  | 03       | 3   | 0.7                    | 5.5                 |                         | 03       | 3 | 0.9                    | 4.3                 |
|                                  | 06       | 3   | 0.7                    | 5.2                 |                         |          | 1 | 0.8                    | 2.9                 |
|                                  | 12       | 3   | 0.7                    | 5.0                 |                         | 06       | 1 | 0.8                    | 2.9                 |
|                                  | 18       | 3   | 0.7                    | 5.2                 |                         | 12       | 1 | 0.8                    | 2.8                 |
|                                  |          | 3   | 0.3                    | 3.2                 |                         |          | 3 | 1.0                    | 4.3                 |
| 02                               | 00       | 3   | 0.5                    | 4.5                 |                         | 18       | 3 | 1.2                    | 4.5                 |
|                                  |          | 3   | 0.1                    | 1.4                 |                         |          | 1 | 0.8                    | 2.9                 |
|                                  | 03       | 3   | 0.5                    | 4.2                 | 08                      | 00       | 3 | 1.1                    | 4.4                 |
|                                  |          | 3   | 0.4                    | 2.7                 |                         |          | 1 | 0.8                    | 2.8                 |
|                                  |          | 3   | 0.1                    | 1.5                 |                         | 03       | 3 | 1.3                    | 4.4                 |
|                                  | 06       | 3   | 0.5                    | 4.2                 |                         |          | 1 | 0.8                    | 2.9                 |
|                                  |          | 3   | 0.3                    | 3.1                 |                         | 06       | 3 | 1.2                    | 4.3                 |
|                                  | 12       | 3   | 0.6                    | 4.2                 |                         |          | 1 | 0.9                    | 3.0                 |
|                                  |          | 3   | 0.4                    | 2.9                 |                         | 12       | 3 | 1.3                    | 4.3                 |
|                                  | 18       | 3   | 0.6                    | 4.5                 |                         |          | 1 | 1.3                    | 3.1                 |
|                                  |          | 3   | 0.4                    | 2.9                 |                         | 18       | 3 | 1.3                    | 4.3                 |
| 03                               | 00       | 3   | 0.7                    | 3.9                 |                         |          | 1 | 1.1                    | 3.1                 |
|                                  |          | 3   | 0.1                    | 1.3                 | 09                      | 00       | 3 | 1.3                    | 4.3                 |
|                                  | 03       | 3   | 0.6                    | 3.7                 |                         |          | 1 | 1.2                    | 3.1                 |
|                                  |          | 3   | 0.2                    | 2.0                 |                         | 03       | 3 | 1.1                    | 4.4                 |
|                                  | 06       | 3   | 0.6                    | 3.8                 |                         |          | 1 | 1.0                    | 3.0                 |
|                                  | 12       | 3   | 0.6                    | 3.7                 |                         | 06       | 3 | 1.2                    | 4.4                 |
|                                  | 18       | 3   | 0.7                    | 4.0                 |                         |          | 1 | 1.0                    | 3.0                 |
| 04                               | 00       | 3   | 0.6                    | 3.8                 |                         | 12       | 3 | 1.1                    | 4.3                 |
|                                  |          | 3   | 0.2                    | 1.4                 |                         |          | 1 | 0.9                    | 2.9                 |
|                                  | 03       | 3   | 0.6                    | 3.6                 |                         | 18       | 3 | 1.0                    | 4.4                 |
|                                  |          | 3   | 0.2                    | 1.7                 |                         |          | 1 | 0.7                    | 2.9                 |
|                                  | 06       | 3   | 0.6                    | 3.6                 | 10                      | 00       | 3 | 0.9                    | 4.3                 |
|                                  |          | 3   | 0.2                    | 1.8                 |                         |          | 3 | 0.5                    | 2.9                 |
|                                  | 12       | 3   | 0.7                    | 3.9                 |                         | 03       | 3 | 1.0                    | 4.3                 |
|                                  | 18       | 3   | 0.8                    | 3.8                 |                         |          | 3 | 0.7                    | 3.2                 |
| 05                               | 00       | 3   | 1.0                    | 3.9                 |                         | 06       | 3 | 0.9                    | 4.4                 |
|                                  |          | 1   | 0.3                    | 1.6                 |                         |          | 3 | 0.6                    | 2.9                 |
|                                  | 03       | 3   | 1.0                    | 3.9                 |                         | 12       | 3 | 0.9                    | 4.5                 |
|                                  |          | 3   | 0.3                    | 1.5                 |                         |          | 3 | 0.5                    | 3.1                 |
|                                  | 06       | 3   | 1.0                    | 4.1                 |                         | 18       | 3 | 0.8                    | 4.4                 |
|                                  |          | 3   | 0.2                    | 1.7                 |                         |          | 3 | 0.5                    | 2.9                 |
|                                  | 12       | 3   | 1.1                    | 4.3                 |                         |          |   |                        |                     |
|                                  | 18       | 3   | 1.0                    | 4.2                 |                         |          |   |                        |                     |

| Date                     | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date                    | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. |     |
|--------------------------|----------|-----|------------------------|---------------------|-------------------------|----------|-----|------------------------|---------------------|-----|
| Station : Madras(Contd.) |          |     |                        |                     | <u>September, 1962.</u> |          |     |                        |                     |     |
| 11                       | 00       | 3   | 0.7                    | 4.4                 | 17                      | 00       | 1   | 1.4                    | 4.2                 |     |
|                          |          | 3   | 0.3                    | 2.7                 |                         |          | 1   | 0.9                    | 2.9                 |     |
|                          | 03       | 3   | 0.7                    | 4.4                 |                         | 03       | 1   | 1.5                    | 4.3                 |     |
|                          |          | 3   | 0.4                    | 2.6                 |                         |          | 1   | 1.0                    | 2.9                 |     |
|                          | 06       | 3   | 0.7                    | 4.3                 |                         | 06       | 1   | 1.8                    | 4.2                 |     |
|                          |          | 3   | 0.4                    | 2.6                 |                         |          | 1   | 1.1                    | 2.9                 |     |
|                          | 12       | 3   | 0.7                    | 4.4                 |                         | 12       | 1   | 2.0                    | 4.1                 |     |
|                          |          | 3   | 0.4                    | 2.7                 |                         |          | 1   | 1.2                    | 2.9                 |     |
|                          | 18       | 3   | 0.7                    | 4.5                 |                         | 18       | 1   | 1.6                    | 4.0                 |     |
|                          |          | 3   | 0.4                    | 2.6                 |                         |          | 1   | 1.2                    | 2.9                 |     |
|                          |          | 3   | 0.1                    | 1.4                 |                         |          |     |                        |                     |     |
|                          |          |     |                        |                     | 18                      | 00       | 1   | 1.5                    | 4.2                 |     |
| 12                       | 00       | 3   | 0.7                    | 4.3                 |                         |          | 1   | 1.1                    | 2.9                 |     |
|                          |          | 3   | 0.4                    | 2.6                 |                         | 03       | 1   | 1.4                    | 4.2                 |     |
|                          | 03       | 3   | 0.8                    | 4.3                 |                         |          | 1   | 1.0                    | 3.0                 |     |
|                          |          | 3   | 0.3                    | 2.5                 |                         | 06       | 1   | 1.4                    | 4.1                 |     |
|                          | 06       | 3   | 0.7                    | 4.2                 |                         |          | 1   | 1.1                    | 3.0                 |     |
|                          | 12       | 3   | 0.7                    | 4.5                 |                         | 12       | 1   | 1.2                    | 4.1                 |     |
|                          | 18       | 3   | 0.7                    | 4.0                 |                         |          | 1   | 0.8                    | 2.9                 |     |
|                          |          |     |                        |                     | 18                      | 1        | 1.1 | 4.1                    |                     |     |
| 13                       | 00       | 3   | 0.6                    | 4.0                 |                         |          | 3   | 0.6                    | 2.8                 |     |
|                          |          | 1   | 0.2                    | 1.8                 |                         |          |     |                        |                     |     |
|                          | 03       | 3   | 0.6                    | 4.0                 | 19                      | 00       | 1   | 1.1                    | 4.1                 |     |
|                          |          | 1   | 0.3                    | 2.1                 |                         |          | 1   | 0.7                    | 2.9                 |     |
|                          | 06       | 3   | 0.8                    | 4.4                 |                         |          | 3   | 0.1                    | 1.5                 |     |
|                          |          | 1   | 0.5                    | 2.1                 |                         | 03       | 1   | 1.0                    | 4.2                 |     |
|                          | 12       | 3   | 0.7                    | 4.5                 |                         |          | 3   | 0.5                    | 2.8                 |     |
|                          |          | 3   | 0.3                    | 2.2                 |                         | 06       | 1   | 0.9                    | 4.1                 |     |
|                          | 18       | 3   | 0.6                    | 4.2                 |                         |          | 3   | 0.4                    | 2.7                 |     |
|                          |          | 3   | 0.3                    | 2.6                 |                         | 12       | ... | No record              |                     |     |
|                          |          |     |                        |                     | 18                      | 3        | 0.8 | 3.9                    |                     |     |
|                          |          |     |                        |                     |                         | 3        | 0.4 | 2.5                    |                     |     |
| 14                       | 00       | 3   | 0.7                    | 4.5                 |                         |          |     |                        |                     |     |
|                          |          | 3   | 0.3                    | 2.9                 |                         | 20       | 00  | 3                      | 0.7                 | 3.9 |
|                          | 03       | 3   | 0.7                    | 4.7                 |                         |          | 3   | 0.3                    | 2.6                 |     |
|                          |          | 3   | 0.3                    | 2.7                 |                         |          | 3   | 0.2                    | 1.9                 |     |
|                          | 06       | 3   | 0.7                    | 4.5                 |                         |          | 3   | 0.2                    | 1.9                 |     |
|                          |          | 3   | 0.3                    | 2.5                 |                         | 03       | 1   | 0.7                    | 4.0                 |     |
|                          | 12       | 3   | 0.7                    | 4.5                 |                         |          | 1   | 0.5                    | 2.6                 |     |
|                          |          | 1   | 0.4                    | 2.7                 |                         |          | 3   | 0.2                    | 1.7                 |     |
|                          | 18       | 3   | 0.7                    | 4.3                 |                         | 06       | 1   | 0.7                    | 3.9                 |     |
|                          |          | 1   | 0.4                    | 2.6                 |                         |          | 3   | 0.6                    | 2.7                 |     |
|                          |          |     |                        |                     |                         |          | 3   | 0.1                    | 1.7                 |     |
| 15                       | 00       | ... | No record.             |                     |                         | 12       | 3   | 0.6                    | 3.9                 |     |
|                          | 03       | 3   | 0.6                    | 4.3                 |                         |          | 3   | 0.5                    | 2.7                 |     |
|                          |          | 1   | 0.4                    | 2.6                 |                         |          | 3   | 0.1                    | 1.8                 |     |
|                          | 06       | 1   | 0.4                    | 2.7                 |                         |          |     |                        |                     |     |
|                          | 12       | 1   | 0.6                    | 2.8                 |                         | 18       | 1   | 0.6                    | 3.9                 |     |
|                          | 18       | 1   | 0.5                    | 2.7                 |                         |          | 3   | 0.5                    | 2.6                 |     |
|                          |          |     |                        |                     |                         |          | 3   | 0.3                    | 2.1                 |     |
| 16                       | 00       | 1   | 0.7                    | 2.8                 |                         |          |     |                        |                     |     |
|                          | 03       | 1   | 0.7                    | 3.1                 | 21                      | 00       | 1   | 0.7                    | 4.1                 |     |
|                          | 06       | 1   | 0.8                    | 3.6                 |                         |          | 3   | 0.5                    | 2.7                 |     |
|                          |          | 1   | 0.8                    | 2.9                 |                         |          | 3   | 0.1                    | 1.7                 |     |
|                          | 12       | 1   | 1.1                    | 4.0                 |                         | 03       | 1   | 0.7                    | 4.4                 |     |
|                          |          | 1   | 0.9                    | 3.0                 |                         |          | 3   | 0.4                    | 2.6                 |     |
|                          | 18       | 1   | 1.4                    | 4.2                 |                         |          | 3   | 0.1                    | 1.6                 |     |
|                          |          | 1   | 0.9                    | 3.0                 |                         | 06       | 1   | 0.7                    | 4.1                 |     |
|                          |          |     |                        |                     |                         |          | 3   | 0.3                    | 2.6                 |     |



| Date                     | Hour GMT | K  | Mean amplitude in m.m. | Mean period in sec. | Date                    | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|--------------------------|----------|----|------------------------|---------------------|-------------------------|----------|---|------------------------|---------------------|
| Station : Madras(Contd.) |          |    |                        |                     | <u>September, 1962.</u> |          |   |                        |                     |
| 22                       | 00       | 1  | 0.8                    | 4.4                 | 26                      | 12       | 3 | 0.4                    | 3.9                 |
|                          |          | 3  | 0.3                    | 2.6                 |                         |          | 3 | 0.2                    | 2.4                 |
|                          | 03       | 3  | 0.7                    | 4.3                 |                         | 18       | 3 | 0.4                    | 3.9                 |
|                          |          | 3  | 0.3                    | 2.5                 |                         |          | 3 | 0.3                    | 2.5                 |
|                          | 06       | 3  | 0.7                    | 4.3                 | 27                      | 00       | 3 | 0.4                    | 3.9                 |
|                          |          | 3  | 0.2                    | 2.5                 |                         |          | 3 | 0.2                    | 2.3                 |
|                          | 12       | 1  | 0.7                    | 4.3                 |                         | 03       | 3 | 0.4                    | 3.8                 |
|                          |          | 3  | 0.2                    | 2.1                 |                         |          | 3 | 0.2                    | 2.4                 |
|                          | 18       | 1  | 0.7                    | 4.3                 |                         | 06       | 3 | 0.4                    | 3.9                 |
|                          |          | 3  | 0.2                    | 2.0                 |                         |          | 3 | 0.2                    | 2.4                 |
| 23                       | 00       | 1  | 0.7                    | 4.3                 |                         | 12       | 3 | 0.3                    | 4.1                 |
|                          |          | 3  | 0.3                    | 2.5                 |                         | 18       | 3 | 0.3                    | 3.8                 |
|                          |          | 3  | 0.1                    | 1.9                 | 28                      | 00       | 3 | 0.3                    | 4.0                 |
|                          | 03       | 1  | 0.7                    | 4.2                 |                         |          | 3 | 0.2                    | 2.5                 |
|                          |          | 3  | 0.2                    | 2.2                 |                         | 03       | 3 | 0.4                    | 4.1                 |
|                          |          | 3  | 0.1                    | 1.4                 |                         |          | 3 | 0.2                    | 2.3                 |
|                          | 06       | 1  | 0.7                    | 4.3                 |                         | 06       | 3 | 0.5                    | 4.3                 |
|                          |          | 3  | 0.2                    | 2.5                 |                         |          | 3 | 0.2                    | 2.6                 |
|                          |          | 3  | 0.1                    | 1.6                 |                         | 12       | 3 | 0.4                    | 4.2                 |
|                          | 12       | 3  | 0.6                    | 4.2                 |                         | 18       | 3 | 0.3                    | 2.3                 |
|                          |          | 3  | 0.2                    | 2.4                 | 29                      | 00       | 3 | 0.3                    | 2.4                 |
|                          | 18       | 3  | 0.5                    | 4.1                 |                         | 03       | 3 | 0.2                    | 2.2                 |
|                          |          | 3  | 0.2                    | 2.5                 |                         | 06       | 1 | 0.1                    | 2.1                 |
| 24                       | 00       | 3  | 0.5                    | 4.1                 |                         | 12       | 1 | 0.1                    | 2.0                 |
|                          |          | 3  | 0.3                    | 2.4                 |                         | 18       | 1 | 0.2                    | 2.1                 |
|                          |          | 1  | 0.2                    | 1.5                 | 30                      | 00       | 1 | 0.2                    | 2.1                 |
|                          | 03       | 3  | 0.5                    | 4.3                 |                         | 03       | 1 | 0.3                    | 2.0                 |
|                          |          | 3  | 0.3                    | 2.6                 |                         | 06       | 1 | 0.3                    | 2.3                 |
|                          | 06       | 3  | 0.5                    | 4.3                 |                         | 12       | 1 | 0.3                    | 2.2                 |
|                          |          | 3  | 0.3                    | 2.4                 |                         | 18       | 1 | 0.4                    | 2.7                 |
|                          | 12       | 3  | 0.5                    | 4.4                 |                         |          | 1 | 0.4                    | 2.7                 |
|                          |          | 3  | 0.3                    | 2.3                 |                         |          |   |                        |                     |
|                          | 18       | 3  | 0.5                    | 4.2                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.3                    | 2.3                 |                         |          |   |                        |                     |
| 25                       | 00       | 3  | 0.4                    | 4.3                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.3                    | 2.5                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.1                    | 1.7                 |                         |          |   |                        |                     |
|                          | 03       | 3  | 0.3                    | 2.6                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.1                    | 1.6                 |                         |          |   |                        |                     |
|                          | 06       | 3  | 0.4                    | 4.3                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.3                    | 2.6                 |                         |          |   |                        |                     |
|                          | 12       | 3  | 0.4                    | 4.1                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.3                    | 2.7                 |                         |          |   |                        |                     |
|                          | 18       | 3  | 0.5                    | 3.9                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.3                    | 2.7                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.1                    | 1.3                 |                         |          |   |                        |                     |
| 26                       | 00       | 33 | 0.5                    | 4.2                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.2                    | 2.1                 |                         |          |   |                        |                     |
|                          | 03       | 3  | 0.4                    | 4.2                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.2                    | 2.2                 |                         |          |   |                        |                     |
|                          | 06       | 3  | 0.2                    | 2.2                 |                         |          |   |                        |                     |
|                          |          | 3  | 0.1                    | 1.7                 |                         |          |   |                        |                     |

| Date | Hour GMT | K | Mean amplitude in micron. | Mean period in sec. | Date | Hour GMT | K | Mean amplitude in micron. | Mean period in sec. |
|------|----------|---|---------------------------|---------------------|------|----------|---|---------------------------|---------------------|
|------|----------|---|---------------------------|---------------------|------|----------|---|---------------------------|---------------------|

Station : Port Blair.

September, 1962.

|    |    |     |     |   |    |    |     |     |   |
|----|----|-----|-----|---|----|----|-----|-----|---|
| 01 | 00 | 1   | 0.8 | 6 | 12 | 00 | ... | -   | - |
|    | 06 | 1   | 0.8 | 6 |    | 06 | 1   | 1.2 | 7 |
|    | 12 | 1   | 0.8 | 6 |    | 12 | 1   | 1.2 | 7 |
|    | 18 | 1   | 0.8 | 6 |    | 18 | 1   | 2.0 | 7 |
| 02 | 00 | 1   | 0.8 | 6 | 13 | 00 | 1   | 1.6 | 7 |
|    | 06 | ... | -   | - |    | 06 | 1   | 0.8 | 7 |
|    | 12 | ... | -   | - |    | 12 | 1   | 0.8 | 7 |
|    | 18 | 1   | 0.8 | 5 |    | 18 | 1   | 0.8 | 7 |
| 03 | 00 | 1   | 0.4 | 5 | 14 | 00 | ... | -   | - |
|    | 06 | ... | -   | - |    | 06 | ... | -   | - |
|    | 12 | 3   | 0.4 | 5 |    | 12 | 1   | 0.4 | 7 |
|    | 18 | 3   | 0.8 | 5 |    | 18 | ... | -   | - |
| 04 | 00 | 3   | 0.4 | 4 | 15 | 00 | ... | -   | - |
|    | 06 | ... | -   | - |    | 06 | 1   | 0.8 | 3 |
|    | 12 | 1   | 1.6 | 8 |    | 12 | 1   | 0.8 | 3 |
|    | 18 | 1   | 1.6 | 7 |    | 18 | 1   | 0.8 | 3 |
| 05 | 00 | 3   | 1.2 | 7 | 16 | 00 | 1   | 1.2 | 3 |
|    | 06 | 1   | 1.2 | 6 |    | 06 | 1   | 1.2 | 3 |
|    | 12 | 1   | 1.2 | 5 |    | 12 | 1   | 1.2 | 3 |
|    | 18 | 1   | 0.8 | 5 |    | 18 | 1   | 1.6 | 3 |
| 06 | 00 | 1   | 0.8 | 5 | 17 | 00 | 1   | 1.6 | 3 |
|    | 06 | 1   | 1.6 | 5 |    | 06 | 1   | 2.0 | 4 |
|    | 12 | 1   | 1.6 | 4 |    | 12 | 2   | 2.0 | 3 |
|    | 18 | 1   | 1.2 | 6 |    | 18 | 2   | 2.8 | 5 |
| 07 | 00 | 1   | 1.6 | 6 | 18 | 00 | 2   | 3.6 | 6 |
|    | 06 | ... | -   | - |    | 06 | 2   | 3.6 | 6 |
|    | 12 | 1   | 2.0 | 6 |    | 12 | 2   | 2.4 | 5 |
|    | 18 | 1   | 2.0 | 6 |    | 18 | 2   | 2.0 | 5 |
| 08 | 00 | 1   | 1.6 | 3 | 19 | 00 | 1   | 1.6 | 4 |
|    | 06 | ... | -   | - |    | 06 | 1   | 2.0 | 4 |
|    | 12 | 1   | 2.0 | 5 |    | 12 | 1   | 1.6 | 4 |
|    | 18 | 1   | 2.0 | 4 |    | 18 | 1   | 1.6 | 4 |
| 09 | 00 | 1   | 0.8 | 3 | 20 | 00 | 1   | 1.6 | 6 |
|    | 06 | 1   | 1.2 | 3 |    | 06 | 1   | 2.0 | 5 |
|    | 12 | 1   | 1.2 | 4 |    | 12 | 1   | 1.2 | 4 |
|    | 18 | 1   | 0.8 | 3 |    | 18 | 1   | 0.8 | 4 |
| 10 | 00 | 1   | 0.8 | 4 | 21 | 00 | 1   | 0.4 | 4 |
|    | 06 | ... | -   | - |    | 06 | ... | -   | - |
|    | 12 | 1   | 0.4 | 3 |    | 12 | 1   | 0.8 | 5 |
|    | 18 | 1   | 0.8 | 3 |    | 18 | 1   | 0.4 | 3 |
| 11 | 00 | ... | -   | - | 22 | 00 | 1   | 0.4 | 7 |
|    | 06 | 1   | 0.4 | 3 |    | 06 | 1   | 0.8 | 7 |
|    | 12 | 1   | 0.4 | 4 |    | 12 | 1   | 0.4 | 7 |
|    | 18 | ... | -   | - |    | 18 | 1   | 0.4 | 7 |

| Date                         | Hour GMT | K   | Mean Amplitude (Micron) | Mean Period in sec | Date                   | Hour GMT | K   | Mean Amplitude (Micron) | Mean Period in sec |
|------------------------------|----------|-----|-------------------------|--------------------|------------------------|----------|-----|-------------------------|--------------------|
| Station: Port Blair (Contd.) |          |     |                         |                    | <u>September, 1962</u> |          |     |                         |                    |
| 23                           | 00       | 1   | 0.4                     | 7                  | 27                     | 00       | 1   | 0.4                     | 7                  |
|                              | 06       | 1   | 0.4                     | 6                  |                        | 06       | 1   | 0.4                     | 3                  |
|                              | 12       | ... | -                       | -                  |                        | 12       | 1   | 0.4                     | 3                  |
|                              | 18       | 1   | 0.8                     | 3                  |                        | 18       | 1   | 0.4                     | 5                  |
| 24                           | 00       | 3   | 0.4                     | 3                  | 28                     | 00       | 1   | 0.4                     | 7                  |
|                              |          |     | 0.4                     | 7                  |                        | 06       | 1   | 0.8                     | 7                  |
|                              | 06       | 1   | 0.8                     | 7                  |                        | 12       | 1   | 0.4                     | 7                  |
|                              | 12       | 1   | 0.4                     | 7                  |                        | 18       | 1   | 0.4                     | 7                  |
|                              | 18       | 1   | 0.4                     | 7                  |                        |          |     |                         |                    |
| 25                           | 00       | 1   | 0.4                     | 7                  | 29                     | 00       | 1   | 0.4                     | 7                  |
|                              | 06       | 1   | 0.8                     | 3                  |                        | 06       | ... | -                       | -                  |
|                              | 12       | 1   | 0.4                     | 4                  |                        | 12       | ... | -                       | -                  |
|                              | 18       | 1   | 0.8                     | 8                  |                        | 18       | ... | -                       | -                  |
| 26                           | 00       | 1   | 0.4                     | 7                  | 30                     | 00       | ... | -                       | -                  |
|                              | 06       | 1   | 0.4                     | 7                  |                        | 06       | ... | -                       | -                  |
|                              | 12       | 1   | 0.4                     | 7                  |                        | 12       | ... | -                       | -                  |
|                              | 18       | 1   | 0.4                     | 7                  |                        | 18       | ... | -                       | -                  |

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| Year | Month | Day | Time (UTC) | Latitude (N) | Longitude (E) | Magnitude | Depth (km) | Station |
|------|-------|-----|------------|--------------|---------------|-----------|------------|---------|
| 1960 | 1     | 1   | 00:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 01:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 02:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 03:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 04:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 05:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 06:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 07:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 08:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 09:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 10:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 11:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 12:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 13:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 14:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 15:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 16:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 17:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 18:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 19:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 20:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 21:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 22:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |
| 1960 | 1     | 1   | 23:00      | 30.0         | 120.0         | 2.0       | 10         | STAN    |

MAR 3 1965



# SEISMOLOGICAL BULLETIN

OCT 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

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PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

| Station     | Latitude         | Longitude | Height<br>a.s.l.<br>(Metres) | Lithographic<br>foundation            | Instrument               | Compt | Period<br>in<br>secs | Static<br>Magnifica-<br>tion | Damping<br>ratio | Paper speed<br>mm/min. |
|-------------|------------------|-----------|------------------------------|---------------------------------------|--------------------------|-------|----------------------|------------------------------|------------------|------------------------|
| Agra        |                  |           |                              |                                       | Columbia                 | E     | To=15                | Tg=100                       |                  | 15                     |
|             |                  |           |                              |                                       | Long Period              | N     | Tb=15                | Tg=85                        |                  | 15                     |
|             |                  |           |                              |                                       | - do -                   | Z     | To=15                | Tg=70                        |                  | 15                     |
| Bombay      | 18.54°N, 72.40°E |           | 5                            | Deccan Trap                           | Milne-Shaw               | N     | 12                   | 350                          | 13:1             | 15                     |
|             |                  |           |                              |                                       | Milne-Shaw               | E     | 12                   | 350                          | 23:1             | 8                      |
|             |                  |           |                              |                                       | Sprengnether             | E     | To=Tg=7              | secs                         |                  | 30                     |
| Bokaro      | 23.50°N, 85.48°E |           |                              | Rock                                  | Milne-Shaw               | N     | 12                   | 250                          | 20:1             | 15                     |
|             |                  |           |                              |                                       | Milne-Shaw               | E     | 12                   | 250                          | 20:1             | 15                     |
|             |                  |           |                              |                                       | Wood-Anderson            | E     | 0.8                  | 950                          | h=0.8            | 50                     |
|             |                  |           |                              |                                       | Wood-Anderson            | N     | 0.8                  | 1000                         | h=0.8            | 50                     |
| Calcutta    | 22.32°N, 88.22°E |           | (1) 7<br>(2) 6               | Milne-Shaw<br>Omori-Ewing<br>Alluvium | Milne-Shaw               | E     | 12                   | 250                          | 20:1             | 8                      |
|             |                  |           |                              |                                       | Wood-Anderson            | N     | 2                    | 870                          | Critical         | 30                     |
|             |                  |           |                              |                                       | Omori-Ewing              | N     | 15                   | 32                           | -                | 25.4                   |
|             |                  |           |                              |                                       | Omori-Ewing              | E     | 21                   | 30                           | -                | 25.4                   |
| Chatra      | 25.50°N, 87.10°E |           | 151                          | Sand stone                            | Milne-Shaw               | E     | 12                   | 250                          | 20:1             | 15                     |
|             |                  |           |                              |                                       | Wood-Anderson            | N     | 1                    | 1000                         | 30:1             | 50                     |
|             |                  |           |                              |                                       | Benioff                  | Z     | To=0                 | Tg=0.45                      | Critical         | 60                     |
|             |                  |           |                              |                                       | Wenner-<br>Accelerograph | ZNE   | -                    | -                            | -                | -                      |
| Colombo     | 05.54°N, 79.52°E |           | 7                            | Beach Sand                            | Milne-Shaw               | E     | 12                   | 250                          | 20:1             | -                      |
| Dehra Dun   | 30.19°N, 78.02°E |           | 582                          | Gravel                                | Wood-Anderson            | N     | 0.8                  | 950                          | Critical         |                        |
|             |                  |           |                              |                                       | Wood-Anderson            | E     | 0.8                  | 850                          | Critical         | 50                     |
|             |                  |           |                              |                                       | Milne-Shaw               | N     | 12                   | 250                          | 20:1             | 8                      |
|             |                  |           |                              |                                       | Milne-Shaw               | E     | 12                   | 250                          | 20:1             | 8                      |
| Hyderabad   | 17.25°N, 78.27°E |           | 535                          | Granite                               | Milne-Shaw               | E     | 12                   | 250                          | 20:1             | 8                      |
|             |                  |           |                              |                                       | Milne-Shaw               | N     | 12                   | 250                          | 20:1             | 8                      |
| Kodaikanal  | 10.14°N, 77.28°E |           | 2245                         | Rock                                  | Milne-Shaw               | E     | 10                   | 250                          | 20:1             | 8                      |
| Madras      | 13.00°N, 80.11°E |           | 15                           | -                                     | Sprengnether             | E     | To=Tg=72             | secs                         | Critical         | 30                     |
| New Delhi   | 28.35°N, 77.12°E |           | 207                          | Massive Quartzite                     |                          |       |                      |                              |                  |                        |
| Poona       | 18.32°N, 73.51°E |           | 550                          | Deccan Trap                           | Sprengnether             | Z     | To=Tg=1.5            |                              | Critical         | 30                     |
|             |                  |           |                              |                                       | Wood-Anderson            | E     | 4                    | 1000                         |                  | 15                     |
|             |                  |           |                              |                                       | Milne-Shaw               | N     | 12                   | 280                          | 20:1             | 8                      |
| Port Blair  | 11.49°N, 92.43°E |           |                              |                                       | Wood-Anderson            | N     | 2                    | 1000                         | 20:1             | 30                     |
|             |                  |           |                              |                                       | Wood-Anderson            | E     | 0.8                  | 1000                         | 55:1             | 30                     |
|             |                  |           |                              |                                       | Milne-Shaw               | N     | 12                   | 350                          | 20:1             | 8                      |
|             |                  |           |                              |                                       | Wood-Anderson            | N     | 0.8                  | 980                          | Critical         | 30                     |
| Shillong    | 25.34°N, 91.53°E |           | 1500                         | Quartzite                             | Wood-Anderson            | N     | 0.8                  | 1000                         | h=0.8            | 30                     |
|             |                  |           |                              | Sand Stone                            | Wood-Anderson            | E     | 0.8                  | 1000                         | h=0.8            | 30                     |
|             |                  |           |                              | (Shillong<br>Quartzite)               | Milne-Shaw               | N     | 12                   | 250                          | 20:1             | 8                      |
|             |                  |           |                              |                                       | Benioff                  | Z     | To=1.0               | Tg=18                        |                  | 50                     |
|             |                  |           |                              |                                       | Sprengnether             | E     | To=Tg=5.3            |                              | Critical         | 30                     |
|             |                  |           |                              |                                       | Wenner<br>Accelerograph  | ZNE   | -                    | -                            | -                | -                      |
| Tocklai     | 28.45°N, 94.45°E |           |                              | Alluvium                              | Wood-Anderson            | E     | 0.8                  | 970                          | h=0.8            | 50                     |
| Vizianagram | 18.07°N, 83.27°E |           |                              |                                       | Wood-Anderson            | E     | 0.8                  | 1000                         | h=0.8            | 30                     |
|             |                  |           |                              |                                       | Wood-Anderson            | N     | 2                    | 1000                         | 20:1             | 30                     |

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List of Seismograph Stations with their Instruments and Constants for 1932

Station	Latitude	Longitude	Height a. s. l. (Metres)	Lithographic foundation	Instrument	Compt	Period in secs	Static Magnifi- cation	Damping ratio	Paper speed mm/min
Bombay	18. 54°N,	72. 40°E		Deccan Trap	Milne-Shaw	N	12	350	21:1	8
					Milne-Shaw	E	12	250	21:1	8
					Sprengnether	E	To= 7.3 Tg= 7.3	5000	2. 30: 1	30
					Benioff	Z	-	-	-	50 for S.P. 30 for L.P.
Bokaro	23. 50°N,	85. 48°E		Rock	Sprengnether	E	To=Tg=5.5	5200	2. 33: 1	30
					Wood-Anderson	N	0.8	930	Critical	50
					Wood-Anderson	E	0.8	830	Critical	50
					Milne-Shaw	E	12	270	20:1	15
					Milne-Shaw	N	12	250	20:1	15
Calcutta	22. 32°N,	88. 22°E (1) 7 (2) 6		Milne-Shaw Omori-Ewing Alluvium	Milne-Shaw	E	12	300	20:1	8
					Wood-Anderson	N	2	1000	Critical	30
					Omori-Ewing	E	10	30	-	25.4
					Omori-Ewing	N	15	32	-	25.4
Chatra	25. 50°N,	87. 10°E	151	Sand Stone	Milne-Shaw	N	10	250	20:1	15
					Milne-Shaw	E	10	250	20:1	15
					Wood-Anderson	N	0.8	940	Critical	30
					Wood-Anderson	E	0.8	970	Critical	30
					Benioff(S.P)	Z	To=0.72 Tg=0.45	-	Es = 23:1 Eg = Critical	60
Delhi	28. 41°N,	77. 13°E	207	Quartzite Sand Stone	Sprengnether	E	To=Tg=7.5	5000	Critical	30
					Milne-Shaw	N	12	250	20:1	8
					Wood-Anderson	N	0.8	1000	Critical	30
					Wood-Anderson	E	0.8	1000	Critical	30
					Benioff	Z	To=Tg=1.0	-	-	50
					Press Ewing	Z	To=30 Tg=100	-	-	15
					Press Ewing	N	To=30 Tg=100	-	-	15
Dehra Dun	30. 19°N,	78. 02°E	582	Gravel	Wilson Lamson	Z	To=Tg=1.5	-	-	50
					Wood-Anderson	N	0.8	1000	Critical	30
					Wood-Anderson	E	0.8	1000	Critical	30
					Milne-Shaw	N	12	250	20:1	8
					Milne-Shaw	E	12	250	20:1	8
Hyderabad	17. 26°N,	78. 27°E	535	Granite	Milne-Shaw	E	12	250	20:1	8
					Milne-Shaw	N	12	250	20:1	8
Kodakamal	10. 14°N,	77. 29°E	2345	Rock	Milne-Shaw	E	10	250	20:1	8
Madras	13. 00°N,	80. 11°E	15		Sprengnether	E	To=Tg=7.5	5000	23:1	30
Poona	18. 32°N,	73. 51°E	550	Deccan Trap	Milne-Shaw	N	12	280	20:1	8
					Wood-Anderson	E	4.0	1000	20:1	16
					Sprengnether	Z	1.5	3000	2. 1 : 1	30
Port Blair	11. 49°N,	92. 43°E			Milne-Shaw	E	12	290	20:1	8
					Wood-Anderson	N	2.0	950	Critical	30
					Wood-Anderson	E	0.8	970	Critical	30
					Benioff	Z	To= 1.9 Tg=1.6	-	-	30
Sehore	23. 10°N,	77. 08°E			Wood-Anderson	E	0.8	840	Critical	30
					Wood-Anderson	N	0.8	900	Critical	30
Shillong	25. 34°N,	91. 53°E		Quartzite Sand Stone	Milne-Shaw	N	12	250	20:1	8
					Benioff	Z	To= 1.0 Tg=1.0	-	-	50
					Wood-Anderson	E	0.8	900	Critical	30
					Wood-Anderson	N	0.8	970	Critical	30
Tocklasi	28. 45°N,	94. 45°E		Alluvium	Sprengnether	E	To=5.5 Tg=5.5	3900	2. 4: 1	30
					Wood-Anderson	E	0.8	970	h=0.8	50
Visakhapatnam	18. 07°N,	83. 27°E			Sprengnether	E	To=Tg=5.0	5000	1. 2: 1	30
					Wood-Anderson	N	To= 2.0	970	Critical	30
					Wood-Anderson	E	To= 0.8	970	Critical	30



From the ISC collection scanned by SISMOS



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
01	Dehra Dun	Z	e	00 03 51		Tremor.
01	Shillong	Z	iP	00 11 14		Slight, distant.
01	Delhi	Z	eP	00 17 33		Slight, rarefaction.
01	Dehra Dun	Z	e	01 10 43		Tremor.
01	Delhi	Z	i	03 00 25		Rarefaction.
			i	00 34		
			i	00 40		
			i	00 59		
01	Epc:- $6.5^{\circ}$ N $95.1^{\circ}$ E, Nicobar Islands region. h = about 33 km. -H= 07 h 50 m 52.8 s (USCGS).					
	Port Blair	N	eP iS	07 53 02 54 46	120	Slight.
	Visakhapatnam	E	eP eS	07 54 34 56 16	989	Slight.
	Madras	E	eP e	07 54 35 57 06		Slight.
	Shillong	Z	iP	07 55 15		Slight, distant, compression.
	Poona	Z	iP	07 56 02		Slight, distant, compression.
	Delhi	Z	iP	07 56 37		Slight, rarefaction.
	Dehra Dun	Z	iP	07 56 48		Slight.
	Poona	Z	eP i	08 00 14 01 06		Slight, distant.
	Bombay	Z	e e	08 00 49 01 42		Slight, near.
01	Delhi	Z	iP	09 08 13		Tremor, compression.
01	Epc:- $47.3^{\circ}$ N, $151.5^{\circ}$ E, Kurile Islands. h = about 127 km. -H= 09 h 53 m 32.9 s (USCGS).					
	Dehra Dun	Z	e	10 03 12		Slight.
	Delhi	Z	iP	10 03 22		Slight, rarefaction.
	Poona	ZE	iP	10 04 21		Slight, distant, compression. Initial ground movement West.
01	Shillong	Z	iP	10 06 47		Slight, distant, compression.

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$ km.	REMARKS.
				h. m. s.		
<u>October, 1962.</u>						
01	Shillong	Z	iP	10 09 36		Slight, distant, rarefaction.
01	Epc:- 28.0° N 52.7° E, -H= 12 h 13 m 45 s (Shillong).					
	Epc:- 27.9° N 54.9° E, Southern Iran. h = about 16 km. -H= 12 h 13 m 57.4 s (USCGS).					
	Bombay	ZNE NE ZNE E	iP i eS SSS	12 18 18 19 03 21 47 22 31	2110	Slight,compression.
01	Delhi	ZNE ZE ZN E N  ZNE NE ZNE ZN N Z  ZE E ZN	iP PP PPP i i  iS Lq SS SSS/PcP Lr M  i PcS/ScP i ScS	12 18 29 18 39 18 51 19 12 19 22 20 37  22 10 22 16 22 31 22 44 23 20 - -  26 25 27 15 29 01 29 49	2242	Moderate,compression. First ground motion South, East.           Period = 13 sec. Amp. = 24 m.m.
	Poona	ZNE ZE Z ZN	iP PP PPP iS Lq	12 18 31 18 52 19 04 22 17 22 24	2290	Slight,compression. Initial ground move- ment South, East.
	Dehra Dun	ZNE	iP PP PPP iS Lq PcP SS SSS Lr NE M	12 18 39 19 00 19 11 22 31 22 46 22 52 23 05 23 20 23 42 25 27	2360	Slight.First ground movement towards South East, compression.
	Sehore	N	eP eS	12 18 41 22 45	3110	Shock not well recor- ded. S-Phase doubtful.
	Madras	E	iP e PP PPP PcP	12 19 50 20 22 20 44 20 57 23 04	3190	Slight.Initial ground motion towards East.

DATE	STATION	COMPT	PHASE	G. M. T.			△	REMARKS.		
				h.	m.	s.	km.			
<u>October, 1962.</u>										
01	Madras(Contd.)	E	eS	12	24	39				
			Lq		25	52				
			SSS		26	27				
			Lr		27	17				
	Bokaro	NE	iP	12	19	54	3100	Slight. Initial ground movement towards East.		
			iS		24	37				
		E	Lq		26	05				
			Lr		27	39				
	Visakhapatnam	E	iP	12	19	55	330	Moderate. First ground movement East.		
		N	eP							
		E	iPP						21	02
			iPPP						21	16
		NE	eS		24	51				
	Chatra	ZNE	eP	12	19	59	3320	Slight.		
			eS		24	56				
	Calcutta	E	eP	12	20	15	3410	Slight.		
			eS		25	25				
			SS		27	05				
	Shillong	ZE	iP	12	20	35	3810	Slight, compression.		
		E	PP		21	55				
			PPP		22	17				
			eS		26	07				
			SS		28	27				
			Lq		28	35				
			SSS		28	59				
			M		32	51				
	Port Blair	N	iP	12	21	27			Slight.	
01	Epc:- 49.0° N 157.5° E, Off South coast of Kamchatka. h = about 80 km. -H= 12 h 49 m 55.1 s (USCGS).									
	Shillong	Z	iP	12	59	23		Slight, distant, compression.		
	Poona	Z	eP	13	01	24		Slight, distant.		
01	Epc:- 5.5° S 151.9° E, New Britain, Felt: Rabaul. h = about 43 km. -H= 15 h 07 m 22.1 s (USCGS).									
	Port Blair	NE	e	15	47	41		Slight, near.		
01	Shillong	Z	eP	15	44	23		Slight, near.		
01	Chatra	Z	i	15	48	56		Slight, distant.		
	Shillong	Z	eP	15	49	41		Slight, near.		
01	Shillong	Z	eP	19	25	03		Slight, near.		
01	Shillong	Z	iP	23	14	17		Slight, near, compression.		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
02	Shillong	Z	eP	00 21 20		Slight, near.
02	Delhi	Z	eP	01 29 12		Slight, compression.
02	Delhi	Z	iP	01 31 47		Slight, compression.
02	Shillong	Z	iP	14 03 11		Slight, distant, compression.
02	Shillong	Z	eP i	16 11 45 12 05		Slight, near.
02	Epc:- 10.4° N 126.9° E, Leyte, Philippine Islands. h = about 125 km. -H= 19 h 30 m 34.6 s (USCGS).					
02	Shillong	Z	iP	19 37 29		Slight, distant.
02	Epc:- 2.1° N 126.2° E, Molucca Passage. h = about 35 km. -H= 19 h 51 m 53.4 s (USCGS).					
02	Shillong	Z	iP	19 59 30		Slight, distant, rarefaction.
02	Shillong	Z	eP	22 39 38		Slight, distant.
02	Shillong	Z	eP i	23 47 54 48 03		Slight, near.
03	Shillong	Z	iP	00 05 26		Slight, compression.
03	Shillong	Z	iP	05 29 40		Slight, near.
03	Delhi	Z	iP	09 20 31		Tremor, compression.
03	Delhi	Z	iP	09 22 10		Slight, compression.
03	Shillong	Z	eP	09 56 04		Slight, near.
03	Epc:- 4.5° S 144.6° E, New Guinea. h = about 108 km. -H= 11 h 57 m 21.8 s (USCGS).					
03	Shillong	Z	iP	12 07 14		Slight, distant.
03	Delhi	Z	iP	12 47 15		Slight, rarefaction.
03	Shillong	Z	eP	15 21 35		Slight, distant.
03	Shillong	Z	iP	17 44 45		Slight, distant, rarefaction.
03	Shillong	Z	iP	18 30 17		Slight, distant, rarefaction.
03	Shillong	Z	iP	20 21 59		Slight, distant, rarefaction.
03	Delhi	Z	iP	20 23 27		Tremor, rarefaction.

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962</u>						
03	Shillong	Z	iP	23 39 57		Slight, distant, rarefaction.
03	Shillong	Z	eP e	23 53 47 54 00		Slight, near.
04	Shillong	Z	iP	01 44 43		Slight, near.
04	Shillong	Z	eP	04 16 55		Slight, near.
04	Epc:- $42.2^{\circ}$ N $36.1^{\circ}$ E, Black Sea. Felt : Samsun. h = about 33 km. -H= 07 h 24 m 44.3 s (USCGS).					
04	Delhi	Z	iP	07 31 43		Slight, rarefaction.
04	Delhi	Z	eP	13 35 56		Slight, rarefaction.
04	Shillong	Z	iPg iSg	14 08 24 08 39	130	Slight.
04	Shillong	Z	iP	14 44 05		Slight, distant, rarefaction.
04	Shillong	Z	iP	16 34 24		Slight, distant, compression.
04	Shillong	Z	eP	19 40 27		Slight, distant.
04	Epc:- $38.3^{\circ}$ N $22.7^{\circ}$ E, Greece, Felt : Coonith. h = about 38 km. -H= 19 h 46 m 10.1 s (USCGS).					
04	Delhi	Z	iP	19 54 30		Slight, rarefaction.
	Bombay	ZNE Z	iP i	19 54 44 54 48		
	Poona	Z	iP	19 54 50		Slight, distant, rarefaction.
	Chatra	Z	iP	19 55 37		Slight, distant, rarefaction.
	Shillong	Z	iP	19 56 04		Slight, distant, rarefaction.
	Shillong	Z	eP	20 31 54		Slight, near.
04	Epc:- $5.1^{\circ}$ S $151.9^{\circ}$ E, Bismarck Sea. h = about 33 km. -H= 20 h 34 m 38.7 s (USCGS).					
	Shillong	Z	iP	20 45 23		Slight, distant, rarefaction.
	Delhi	Z	iP	20 46 41		Slight, rarefaction.

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
04	Dehra Dun	Z	e	21 54 31		Slight.
04	Delhi	Z	eP	22 14 48		Slight, rarefaction.
04	Shillong	Z	eP	23 07 09		Slight, distant.
05	Dehra Dun	Z	e i	00 15 27 17 24		Slight.
05	Delhi	Z	eP	01 18 27		Slight, rarefaction.
05	Shillong	Z	eP	10 48 11		Slight, distant.
05	Shillong	Z	iP	13 14 41		Slight, distant, rarefaction.
05	Shillong	Z	iP	14 22 36		Slight, near, compression.
05	Delhi	Z	iP	15 28 35		Slight, compression.
05	Shillong	Z	eP	16 02 48		Slight, distant.
05	Delhi	Z	iP	17 54 25		Slight, rarefaction.
05	Bokaro	NE	eP e	19 08 01 12 46	3100	
05	Epc:- $36^{\circ}$ N $57.1^{\circ}$ E, North-East of Iran. -H= 20 h 02 m 05 s (New Delhi).					
	Delhi	Z NE Z	iP eP eS	20 06 22 06 22 09 44	2030	Slight, rarefaction.
	Dehra Dun	NE E N E NE N NE	iP PP PPP i i iS SSS Lr PcP M	20 06 26 06 43 06 50 07 59 09 30 09 49 10 07 10 19 11 11 11 25		Slight, first ground movement towards South West.
	Bombay	ZNE NE E	eP eS e	20 07 05 10 59 12 03	2380	Slight, compression.
	Poona	Z N	iP eS	20 07 12 11 18	2520	Slight, compression.
	Chatra	Z	iP	20 08 00		Slight, local, compression.
	Shillong	Z	iP	20 08 45		Slight, distant, compression.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
05	Calcutta	E	e	20 11 50		Slight.
	Madras	E	e	20 13 36		Slight.
			e	20 20		
	Hyderabad	NE	M	20 18 14		Period = 9 secs. u = 4.
05	Shillong	Z	iP	21 03 50		Slight, distant, rarefaction.
05	Delhi	Z	iP	21 04 34		Slight, compression.
05	Chatra	Z	eP	21 21 58		Slight, distant.
05	Shillong	Z	eP	21 22 24		Slight, local.
05	Shillong	Z	iP	22 08 28		Slight, distant.
05	Delhi	Z	iP	22 20 03		Slight, compression.
			i	20 04		
05	Shillong	Z	iP	22 23 17		Slight, distant, compression.
06	Delhi	Z	i	00 03 15		Tremor, rarefaction.
06	Calcutta	E	e	01 47 42		Slight.
06	Epc:- 40.8° N 29.5° W, Azores region. h = about 33 km. -H= 03 h 17 m 07.2 s (USCGS).					
06	Dehra Dun	Z	e	03 28 29		Slight.
	Delhi	Z	iP	03 29 30		Slight, rarefaction.
06	Delhi	Z	eP	03 32 40		Slight, compression.
	Delhi	Z	eP	04 07 23		Slight, compression.
06	Kodaikanal	E	M	04 24 07		Slight, distant. Initial ground move- ment towards East.
06	Epc:- 17.4° S 167.7° E, New Hebrides Islands. Felt: Port Villa. h = about 33 km. -H= 04 h 23 m 24.1 s (USCGS).					
	Shillong	Z	iP	04 35 59		Slight, compression.
	Visakhapatnam	E	e	04 36 29		
	Madras	E	eP	04 36 36	10190	Moderate.
			PP	40 14		
			PPP	42 20		
			SKS	47 04		
			SKKS	47 16		
			S/ScS	47 35		
			PS	48 42		
			SS	53 38		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
06	Calcutta	E	e	04 36 39		Slight.
	Delhi	ZE	eP eS	04 36 58 48 30	10430	Moderate, compression. Initial ground movement towards West.
	Dehra Dun	NE	eP eS	04 37 00 47 42		Slight.
	Poona	Z E NE N	e i e i	04 37 05 41 42 47 42 48 32		Slight.
	Bombay	E	eP	04 37 28		Moderate.
06	Shillong	Z	e	04 46 24		Slight, distant.
06	Shillong	Z	iP	04 47 39		Slight, distant, rarefaction.
06	Epc:- 26.2° N 126.9° E, Ryukyu Islands. h = about 122 km. -H= 05 h 38 m 40.3 s (USCGS).					
06	Shillong	Z	iP	05 44 53		Slight, near, rarefaction.
	Dehra Dun	Z	i	05 46 30		Slight, rarefaction.
	Delhi	Z	iP	05 46 36		Slight, compression.
	Poona	ZE	iP	05 47 20		Slight, compression. Initial ground movement West.
	Bombay	ZE	iP	05 47 28		Slight, compression.
06	Chatra	Z	eP	06 45 29		Slight, distant.
06	Epc:- 17.4° S 167.8° E, New Hebrides Islands. Felt : Port Vila. h = about 33 km. -H= 07 h 17 m 03.3 s (USCGS).					
06	Shillong	Z	iP	07 29 37		Slight, distant, rarefaction.
06	Epc:- 17.4° S 167.9° E, New Hebrides Islands . h = about 33 km. -H= 07 h 56 m 20.4 s (USCGS).					
06	Shillong	Z	iP	08 08 57		Slight, distant, rarefaction.
06	Epc:- 17.2° S 168.0° E, New Hebrides Islands. h = about 33 km. -H= 08 h 03 m 31.7 s (USCGS).					




DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	∠ km.	REMARKS.
<u>October, 1962.</u>						
06	Shillong	Z	iP	08 16 05		Slight, compression.
	Madras	E	e	08 19 59		Slight, phases could not be identified.
			e	27 15		
			e	27 46		
	Bombay	NE	e	08 20 43		Slight.
			e	27 57		
06	Epc:- 13.3° S 167.3° E, New Hebrides Islands. h = about 209 km. -H= 11 h 00 m 52.8 s (USCGS).					
	Shillong	Z	iP	11 12 56		Slight, distant, compression.
	Poona	Z	iP	11 14 04		Slight, distant, rarefaction.
		E	i	24 21		
06	Shillong	Z	iP	17 27 13		Slight, distant, compression.
00	Shillong	Z	iP	18 13 42		Slight, distant, rarefaction.
06	Delhi	Z	iP	18 40 15		Slight, rarefaction.
06	Shillong	Z	iP	23 37 02		Slight, distant, compression.
06	Delhi	Z	iP	23 38 46		Slight, rarefaction.
06	Shillong	Z	iP	23 42 01		Slight, distant, compression.
06	Madras	E	eP	23 44 39	10190	Slight.
			e	55 08		
			e	55 38		
			e	56 44		
06	Delhi	NE	i	23 55 38		Slight. First ground motion North East.
06	Bombay	NE	i	23 55 50		
			e	56 50		
07	Shillong	Z	eP	00 03 51		Slight, distant.
07	Delhi	Z	eP	00 05 40		Slight, rarefaction.
07	Chatra	Z	eP	00 28 56		Slight, distant.
07	Epc:- 17.7° S 167.8° E, New Hebrides Islands. h = about 33 km. -H= 00 h 46 m 55.4 s (USCGS).					
	Shillong	Z	iP	01 01 44		Slight, distant, compression.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS.
<u>October, 1962.</u>						
07	Delhi	Z	iP iS	01 13 07 14 44	950	Slight, rarefaction.
07	Delhi	Z	eP	02 53 38		Slight, rarefaction.
07	Shillong	Z	iP	05 33 35		Slight, distant, compression.
07	Shillong	Z	iP	06 15 13		Slight, distant, rarefaction.
07	Shillong	Z	eP	06 20 23		Slight, local.
07	Shillong	Z	eP e	09 38 07 38 46		Slight, local.
07	Delhi	Z	iPg iSg	10 58 11 58 16	50	Tremor, compression.
07	Chatra	Z	iP	16 19 17		Rarefaction.
07	Shillong	Z	iP	16 19 19		Slight, distant.
07	Shillong	Z	iP	16 59 57		Slight, distant, rarefaction.
07	Shillong	Z	eP	17 40 29		Slight, distant.
07	Shillong	Z	eP	19 25 49		Slight, distant.
07	Delhi	Z	iPg i iSg	21 57 44 57 47 57 50	60	Slight, compression.
08	Delhi	Z	eP i	05 21 44 23 25		Slight.
08	Delhi	Z	iP	05 26 45		Slight, rarefaction.
08	Delhi	Z	iP	07 06 46		Tremor, compression.
08	Shillong	Z	eP	07 40 30		Slight, distant.
08	Chatra	Z	eP i	07 42 01 42 46		Slight, near.
08	Delhi	Z	eP	14 34 44		Slight, rarefaction.
08	Chatra	Z	iP	14 35 49		Slight, distant, rarefaction.
08	Delhi	Z	eP	15 44 34		Slight.
08	Chatra	Z	iP	16 20 26		Slight, distant, rarefaction.
08	Chatra	Z	eP	16 48 40		Slight, near.


DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
08	Delhi	Z	iP	17 32 03		Tremor, rarefaction.
08	Epc:- 23.4° N 122.0° E, Off Formosa Island. -H= 22 h 56 m 15 s (Shillong).					
08	Epc:- 24.3° N 121.7° E, East coast of Formosa. h = about 29 km. -H= 21 h 56 m 22.2 s (USCGS). Mag: 6 (Pas), 6- $\frac{1}{4}$ (Pal).					
	Tocklai	E	eP	22 01 54		
	Shillong	ZE	iP	22 02 04	3040	
		E	iS	06 54		
	Calcutta	E	iP	22 02 38	3420	
			PP	03 45		
			iS	07 42		
			M	14 24		
	Fort Blair	E	eP	22 02 38	3430	
			PP	03 42		
			PPP	04 01		
			e	07 12		
			eS	07 42		
			PcS	08 42		
			SS	09 34		
			M	13 52		
08	Chatra	ZNE	iP	22 02 41	3430	Compression. Period = 13.5 secs. $\mu = 75$ .
			PP	03 46		
			PPP	04 02		
			PcP	05 25		
			eS	07 45		
			PcS	09 02		
			SS	09 48		
			SSS	09 54		
			ScS	12 56		
		E	M	37 25		Period = 13.5 secs. $u = 9.25$ .
08		Bokaro	NE	iP	22 02 56	3700
			S	08 18		
		E	ScP	09 07		
	Dehra Dun	ZNE	iP	22 03 00	2680	Compression. First ground movement towards North West.
			PP	04 09		
			PPP	04 25		
			iS	08 18		
		NE	Lr	09 30		
		M	11 54			
	Visakhapatnam	NE	iP	22 03 28	4080	First ground move- ment North East.  Period=10 secs. Amp. = 3.7 m.m.
			iPP	04 55		
			ePPP	05 16		
			iS	09 12		
			iSS	11 56		
			eM	17 07		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
08	Delhi	ZNE ZE	iP i i PP	22 03 55 03 58 04 36 05 34	4460	Compression. First ground motion South West.
		ZNE NE ZNE NE ZNE N	PPP i iS i SS M	05 39 06 38 10 02 11 39 12 39 - -		Period = 150 secs. Amp. = 46 m.m.
	Madras	E	iP PP PcP PPP iS SS Lq SSS Lr M	22 04 05 05 45 06 04 06 13 10 19 13 14 13 55 13 49 15 32 18 48	4570	Initial ground motion towards West.
	Hyderabad	N	eP iS PPS SSS Lr M	22 04 07 10 16 10 34 13 38 15 43 18 43	4480	Period = 15 secs. $\mu = 29$ .
08	Sehore	N	eP	22 04 07		Slight.
	Poona	ZNE NE N	iP iS -	22 04 36 11 10 -	4900	Compression. Initial ground movement South West. Period = 13.0 secs., $\mu = 22.87$ .
	Bombay	ZNE NE	eP PP e eS	22 04 45 05 20 11 15 11 33	5120	Moderate, compression.
08	Epc:- 24.1° N 121.8° E, Near east coast of Formosa. h = about 39 km. -H = 22 h 24 m 06.5 s (USCGS).					
08	Shillong	Z	iP	22 09 10		Slight, compression.
	Chatra	Z	iP	22 30 23		Slight, rarefaction.
	Dehra Dun	Z	iP	22 31 34		Slight, rarefaction.
	Delhi	Z	eP	22 31 39		Slight, rarefaction.
	Bombay	Z	e	22 32 28		
	Poona	Z	iP	22 32 32		Slight, rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	 km.	REMARKS.
<u>October, 1962.</u>						
09	Delhi	Z	eP	02 26 07		Slight, rarefaction.
09	Delhi	Z	iP	03 00 34		Slight, rarefaction.
09	Shillong	Z	eP	03 26 02		Slight, near.
09	Delhi	Z	iP	04 37 27		Tremor, rarefaction.
09	Shillong	Z	eP	06 43 35		Slight, near.
09	Shillong	Z	eP e	07 06 38 06 49		Slight, local.
09	Shillong	Z	eP	07 45 01		Slight, distant.
09	Dehra Dun	Z	iP	11 11 40		Slight, compression.
09	Delhi	Z	iP iPg iS	11 16 03 16 11 16 37	300	Slight, rarefaction.
09	Delhi	Z	iP	13 09 49		Tremor, rarefaction.
09	Shillong	Z	eP	13 25 53		Slight, distant.
09	Delhi	Z	iP	13 27 50		Slight, rarefaction.
09	Epc:- 36.4° N 71.3° E, Hindukush. Felt : Peshwar. h = about 241 km. -H= 15 h 59 m 17.5 s (USCGS).					
09	Dehra Dun	Z ZNE	iP PP iS e	16 01 13 01 18 02 48 03 03	900	Slight, compression.
	Delhi	ZNE	iP e iS	16 01 26 02 47 03 10	1050	Slight, rarefaction. First ground motion North West.
	Sehore	ZN NE	iP eS e	16 02 32 05 02 06 16	1480	
	Chatra	Z	iP eS	16 02 57 05 53	1760	Slight, rarefaction.
	Bombay	ZNE N NE	eP e eS e	16 03 08 04 07 06 19 06 25	1910	Slight, rarefaction.
	Poona	Z ZNE Z ZE	iP PP PPP iS SS Lr M	16 03 14 03 27 03 39 06 29 06 51 07 20 08 51	1970	Slight, rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
09	Shillong	Z	iP	16 03 41		Slight, rarefaction.
	Madras	E	e	16 05 33		Slight.
			e	09 22		
			e	09 47		
			e	12 00		
	Calcutta	E	i	16 07 14		Slight.
09	Delhi	Z	iP	18 36 35		Slight, rarefaction.
09	Epc:- 3.2° S 148.2° E, Bismarck Sea. h = about 33 km. -H= 20 h 14 m 38.3 s (USCGS). Mag: = 6- $\frac{1}{4}$ (Pas).					
	Port Blair	E	eP	20 24 43		
			PcP	25 52		
			PPP	27 43		
			iS	32 47		
			SS	36 26		
			M	44 45		
	Shillong	ZN	iP	20 24 54	7000	Rarefaction.
		N	iS	33 24		
			SS	37 32		
			SSS	40 02		
			Lq	40 39		
			Lr	43 28		
	Chatra	ZNE	eP	20 25 22		
		E	i	34 18		
	Visakhapatnam	E	eP	20 25 33	7630	
		E	iPcP	25 58		
			ePP	28 07		
			ePPP	29 47		
		NE	eS	34 36		
09	Calcutta	E	eP	20 25 35		
09	Madras	E	eP	20 25 50		
			e	30 00		
			eS	34 55		
	Delhi	ZE	iP	20 26 18	8340	Compression. First ground motion towards West.
			PcP	26 40		
		NE	iS	35 56		
			i	36 07		
		E	SKS, SCS	36 20		
		E	i	37 16		
		NE	SS	40 22		
		N	SSS	44 10		
		NE	Lq	46 24		
	Dehra Dun	Z	eP	20 26 19	8340	
		N	PcP	26 30		
		NE	iS	35 57		
		E	PPS	36 46		

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS.
				h. m. s.	km.	
<u>October, 1962.</u>						
09	Poona	Z	iP	20 26 26	8510	Rarefaction.
		N	iS	50 35		
	Bombay	E	eP	20 26 38		
			i	26 58		
			PP	29 28		
			PPP	31 13		
		NE	eS	36 23		
			SKS	36 40		
		E	PS	37 09		
			i	37 34		
			i	40 17		
		NE	SS	41 24		
	Hyderabad	N	eP	20 27 10	6600	Period = 14 secs. u = 4.
			iS	35 19		
			PS	35 35		
			PPS	35 50		
			SS	39 32		
			SSS	42 05		
			Lq	42 32		
			Lr	45 08		
			M	51 10		
10	Delhi	Z	iP	00 06 48	1030	Slight, rarefaction.
			iS	08 34		
10	Chatra	Z	eP	03 48 30		Distant, slight.
10	Chatra	Z	eP	04 02 40		Slight, distant.
10	Epc:- 1.6° S 66.8° E, Indian Ocean. h = about 33 km. -H= 04 h 41 m 46.9 s (USCGS).					
10	Madras	E	eP	04 46 11		Slight. Initial phases not recorded.
			e	51 47		
	Bombay	ZNE	eP	04 46 32	2500	Slight.
		NE	eS	50 35		
	Poona	Z	iP	04 46 32	2500	Slight, rarefaction.
		N	eS	50 35		
	Hyderabad	N	eP	04 46 41	2550	Slight.
			iS	50 48		
			Lr	52 42		
			M	53 44		
						Period = 15 secs. u = 6.
	Shillong	Z	eP	05 01 40		Slight.
10	Shillong	Z	eP	05 09 15		Slight, near.
			e	09 33		
10	Bombay	Z	i	07 09 18		Isolated phases.
10	Epc:- 31.2° N 131.5° E, Kyushu, Japan. h = about 33 km. -H= 07 h 50 m 18.1 s (USCGS).					

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	 km.	REMARKS.
<u>October, 1962.</u>						
10	Shillong	Z	iP	07 57 11		Slight, rarefaction.
	Delhi	Z	iP	07 57 45		Slight, compression.
10	Shillong	Z	eP	12 17 08		Slight, near.
10	Chatra	Z	eP	12 17 55		Slight, near.
			i	17 59		
			i	18 42		
10	Epc:- 8.9° S 110.4° E, Near South coast of Java. h = about 41 km. -H= 13 h 33 m 11.6 s (USCGS).					
	Epc:- 8.9° S 110.3° E, Off South coast of Java. h = about 33 km. -H= 13 h 33 m 10.3 s (USCGS).					
10	Shillong	Z	eP	13 40 32		Slight.
	Poona	ZE	iP	13 41 26		Slight, rarefaction.
	Delhi	Z	iP	13 41 55		Slight, rarefaction.
10	Delhi	Z	iP	20 33 08		Slight, compression.
10	Poona	Z	iP	21 12 57		Slight, distant, compression.
			i	13 23		
10	Shillong	Z	iP	21 13 46		Slight, distant, rarefaction.
10	Delhi	Z	iP	23 05 26		Slight, rarefaction.
11	Shillong	Z	iP	05 02 22		Slight, near.
11	Delhi	Z	iP	06 42 20		Slight, compression.
11	Delhi	Z	eP	12 47 08		Slight.
11	Bombay	E	e	15 28 27		
			e	16 09 30		
11	Epc:- 24.3° N 121.6° E, Near east coast of Formosa. h = about 32 km. -H= 16 h 02 m 33.6 s (USCGS).					
	Shillong	Z	iP	16 08 20		Slight.
	Delhi	Z	eP	16 10 05		Slight.
11	Shillong	Z	eP	18 55 19		Slight, near.
11	Delhi	Z	iPn	18 58 50	170	Slight, rarefaction.
			iSn	59 10		
11	Shillong	Z	eP	21 42 13		Slight.




DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
12	Delhi	Z	iP	00 28 08		Slight, rarefaction.
12	Port Blair	NE	ePg PP iSg	01 33 06 33 14 33 18	90	Slight.
	Madras	E	eP	01 35 34		Slight, near.
12	Shillong	Z	eP e	04 28 03 28 35		Slight, near.
12	Delhi	Z	iP	08 15 37		Slight, compression.
12	Poona	Z	eP	08 16 00		Slight, distant.
12	Epc: - 27.4° N 129.1° E, Ryukyu Islands. h = about 25 km. -H= 09 h 08 m 15.9 s (USCGS).					
12	Shillong	Z	iP	09 14 54		Slight.
	Chatra	Z	iP	09 15 08		Slight, distant.
	Delhi	Z	iP	09 16 34		Slight, rarefaction.
12	Shillong	Z	eP e	13 26 25 36 38		Slight.
12	Poona	Z	eP	17 13 15		Slight, distant.
	Delhi	Z	iP	17 13 29		Slight, rarefaction.
12	Shillong	Z	iP	21 44 17		Slight, distant, rarefaction.
12	Delhi	Z	iP	21 46 07		Slight, compression.
12	Shillong	Z	e	22 39 13		Slight.
13	Bokaro	E	iP	06 55 11		Slight, local.
13	Chatra	Z	eP eS	00 08 11 08 51	470	Slight.
13	Shillong	Z	eP e	00 08 27 09 17		Slight, near.
13	Shillong	Z	eP	08 26 07		Slight, near.
13	Delhi	Z	iP	09 30 23		Slight, compression.
13	Chatra	Z NE	eP e i	09 45 28 46 29 10 30 15	580	Slight.
13	Shillong	Z	eP	10 22 02		Slight, near.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
13	Epc:- 36.8° N 49.7° E					
		-H= 10 h 23 m 30 s	(Shillong)			
	Epc:- 35.5° N 49.8° E, North Western Iran, Felt: Tehran.					
		h = about 33 km.				
		-H= 10 h 23 m 38.2 s (USCGS).				
	Delhi	ZNE	iP	10 28 50	2700	Moderate, rarefaction. First ground motion towards North, West.  Period = 15 secs. Amp. = 26.25 m.m.
		E	PP	29 22		
			PPP	29 33		
		ZNE	iS	33 07		
			SS	33 50		
		ZN	Lr	34 43		
		NE	i	35 26		
		E	PcS, ScP	35 56		
		NE	i	36 19		
		ZE	M	- -		
	Dehra Dun	ZNE	iP	10 28 52	2890	Moderate, rarefaction. First ground move- ment towards South East.
		Z	PcP	29 03		
		NE	PP	29 33		
		E	PPP	29 48		
		ZNE	iS	33 21		
		NE	SS	34 17		
		E	SSS	34 51		
		NE	PcS	35 47		
			M	37 47		
	Bombay	ZNE	eP	10 29 13	3050	Period = 9 secs. $\mu = 2.$
		E	e	29 16		
		ZNE	eS	33 53		
		E	e	34 43		
			Lq	34 59		
			SS	35 13		
			M	44 10		
		N	M	44 16		
						Period = 9 secs. $\mu = 2.$
	Poona	ZN	iP	10 29 21	3100	Slight, rarefaction. Initial ground move- ment towards North.
		Z	PP	30 15		
			PPP	30 29		
		ZNE	iS	34 04		
		N	Lq	35 07		
	Hyderabad	N	eP	10 29 58	3510	Moderate.  Period = 9 secs. $\mu = 5.$
			iS	35 07		
			SS	37 02		
			Lr	38 44		
			M	41 08		
	Bokaro	NE	iP	10 30 15	3600	Slight.
		E	PPP	31 42		
		NE	S	35 31		
		E	SS	37 18		
			SSS	38 04		

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS.
<u>October, 1962.</u>						
13	Madras	E	eP	10 30 35	3970	Slight.
			PP	31 51		
			PPP	32 16		
			eS	36 12		
			Lq	38 22		
			e	39 12		
			Lr	40 00		
			M	43 00		
	Calcutta	E	eP	10 30 43	3970	Slight.
			eS	36 20		
			M	43 43		
	Shillong	ZE	iP	10 30 46	4100	Slight, rarefaction.
		E	PP	32 10		
			PPP	32 35		
		NE	iS	36 31		
		E	SS	39 06		
			Lq	39 17		
			SSS	39 44		
			Lr	41 04		
	Port Blair	E	i	10 38 43		
			i	41 50		
13	Epc:- 12.6° S 166° E, Santa Cruz Islands region. h = about 33 km. -H= 18 h 47 m 44.5 s (USCGS).					
	Shillong	Z	iP	19 00 02		Slight, distant, compression
	Chatra	Z	iP	19 00 25		Slight, distant, rarefaction.
	Poona	Z	iP	19 01 13		Slight, distant, rarefaction.
13	Shillong	Z	iP	20 56 43		Slight, distant, compression.
13	Shillong	Z	eP	22 38 44		Slight, local.
13	Shillong	Z	iP	23 09 22		Slight, distant, rarefaction.
13	Chatra	Z	iPg	23 59 42	120	Slight, compression.
			Sg	59 56		
14	Shillong	Z	eP	00 01 15		Slight, near.
14	Shillong	Z	eP	00 47 50		Slight, near.
14	Epc:- 1.5° N 99.0° E, Near west coast of Sumatra. h = about 100 km. -H= 01 h 38 m 38.6 s (USCGS).					

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
14	Madras	E	iP PP e eS	01 43 30 43 59 47 22 47 34	2510	Slight .Initial ground motion towards East.
	Shillong	Z	iP	01 43 50		Slight, distant, rarefaction.
	Poona	Z	iP i	01 44 42 50 46		Slight, distant, rarefaction.
	Delhi	NE	eP iS	01 45 17 50 27	3520	Slight.First ground motion towards South, East.
14	Dehra Dun	Z	e e	04 16 27 18 12		Slight.
14	Shillong	Z	eP	04 16 35		Slight, distant.
14	Delhi	Z	iP i iS	04 16 43 16 45 18 31	1060	Slight,rarefaction.
14	Chatra	Z	eP e	04 17 32 18 10		Feeble,near.
14	Bokaro	E	iP	06 39 53		Feeble,local.
14	Bokaro	E	iP	08 07 09		Feeble,local.
14	Bokaro	E	i	08 11 43		Tremor.
14	Bokaro	E	eP	08 17 01		Slight,near.
14	Epc:- 36.2° N 70.5° E, Hindukush. h = about 234 km. -H= 09 h 07 m 20.0 s (USCGS).					
14	Dehra Dun	Z	eP iS	09 09 22 11 04		Slight.
14	Delhi	Z	iP iS	09 09 32 11 13	980	Slight,compression.
14	Chatra	Z	eP	09 11 06		Slight, distant.
14	Shillong	Z	iP	09 11 48		Slight, distant, rarefaction.
14	Delhi	Z	eP	09 15 22		Slight,compression.
14	Shillong	Z	e	10 50 04		Slight.
14	Epc:- 1.0° S 127.2° E, Halmahere Island region. h = about 33 km. -H= 14 h 08 m 11.3 s (USCGS).					

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	 km.	REMARKS.
<u>October, 1962.</u>						
14	Shillong	Z	iP	14 16 06		Slight, distant, compression.
14	Epc:- 31.8° N 131.5° E, Neat South coast of Kyushu, Japan. h = about 33 km. -H= 15 h 08 m 59.5 s (USCGS).					
14	Shillong	Z	iP	15 15 49		Slight, rarefaction.
	Delhi	Z	eP	15 17 27		Slight, compression.
14	Delhi	E N Z N	e e e M	15 24 06 27 44 28 41 - -		Period = 16 secs. Amp. = 03 m.m.
14	Shillong	Z	iP i	16 18 30 19 07		Slight, near.
14	Chatra	Z	iP	16 19 30		Slight, distant, rarefaction.
14	Delhi	Z	eP	17 25 09		Slight, rarefaction.
14	Delhi	Z	iP	19 42 05		Slight, distant, compression.
14	Epc:- 39.1° N 141.1° E, (North Centre) Honshu, Japan. h = about 85 km. -H= 21 h 13 m 44.2 s (USCGS).					
	Shillong	Z	iP	21 21 36		Slight, distant, compression.
	Delhi	Z	eP i	21 22 57 23 14		Slight, rarefaction.
15	Shillong	Z	iP	05 10 43		Slight, distant, compression.
15	Chatra	Z	eP eS	06 01 17 01 53	330	Slight.
15	Shillong	Z	eP	13 51 04		Slight, near.
15	Shillong	Z	eP	19 52 33		Slight, distant.
15	Shillong	Z	iP	23 50 13		Slight, distant, rarefaction.
16	Shillong	Z	iP	03 02 12		Slight, distant, rarefaction.
16	Chatra	Z	eP iS	04 34 48 35 11	310	Slight.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
16	Epc:- 39.4° N 73.4° E, TadzhiK S.S.R. h = about 33 km. -H= 04 h 58 m 49.7 s (USCGS).					
	Dehra Dun	Z	e e	05 01 10 03 00		Slight.
	Delhi	Z	iP i iS	05 01 29 01 33 03 27	1160	Slight, rarefaction.
16	Shillong	Z	iP	05 03 30		Slight, distant, compression.
16	Shillong	Z	iP	05 34 02		Slight, distant, rarefaction.
16	Shillong	Z	iP	07 25 41		Slight, distant, rarefaction.
16	Shillong	Z	eP	07 53 22		Slight, local.
16	Bokaro	NE	iP	08 09 08		Slight, near.
16	Bokaro	NE	e	08 21 58		Slight.
16	Bokaro	NE	iP	09 00 55		Slight, local.
16	Shillong	Z	eP	11 52 17		Slight, near.
16	Epc:- 30.6° N 57.3° E, Iran. h = about 33 km. -H= 11 h 58 m 45.6 s (USCGS).					
16	Delhi	Z	iP	12 02 43		Slight, rarefaction.
	Poona	Z	eP	12 03 07		Slight, distant.
	Chatra	Z	iP	12 04 18		Slight, distant, rarefaction.
16	Shillong	Z	eP	13 50 40		Slight, near.
16	Epc:- 51.6° N 175.8° W, Near Islands, Aleutian Islands. h = about 27 km. -H= 18 h 02 m 32.9 s (USCGS). Mag : = 5- $\frac{1}{4}$ (Pal).					
16	Shillong	Z	iP	18 13 53		Compression.
	Chatra	Z	iP	18 14 06		Compression.
	Bokaro	E	iP iS	18 14 24 24 29	8900	
	Delhi	ZNE ZE E	iP i SKS	18 14 27 14 43 24 36	9130	Initial ground motion towards South, West.

DATE	STATION	COMPT	PHASE	G. M. T. h m s	$\Delta$ km	REMARKS
<u>October, 1962</u>						
16	Delhi	NE	iS,ScS	18 24 42		
Contd.		E	eSS	29 48		
	Bombay	ZNE	eP	18 15 22	9690	
		NE	eS	26 01		
		E	e	26 29		
	Poona	ZNE	iP	18 15 30		Compression, initial
		N	e	25 57		ground movement to-
						wards North, West.
16	Shillong	Z	eP	20 23 12		Slight, near
17	Shillong	Z	iP	01 06 05		Slight, local
17	Bokaro	E	e	01 08 55		Slight
17	Shillong	Z	eP	04 36 46		Slight, distant
17	Visakhapatnam	E	iPg	10 56 42	50	Slight, initial ground
		N	ePg			movement towards North,
		E	eP*	56 44		West.
			iSg	56 47		
			eSg			
17	Poona	Z	eP	10 59 13		Slight, distant
17	Shillong	Z	eP	10 59 30		Slight, distant
17	Delhi	Z	iP	11 00 18		Slight, drarefaction
17	Epc: 33.3°N, 137.7°E. South of Honshu, Japan. h about 335 km. - H = 12h 39m 12.0s (USCGS).					
17	Dehra Dun	Z	eP	12 47 37		Slight
	Delhi	Z	iP	12 47 45		Slight, rarefaction
17	Dehra Dun	Z	e	22 42 07		Slight
			i	43 09		
	Delhi	Z	iP	22 42 34		Slight, rarefaction
			i	43 12		
			i	43 32		
18	Epc: 28.4°N, 97.3°E. China-India-Burma border area. h about 77 km. - H = 02h 00m 04.5s (USCGS)					
	Delhi	Z	iP	02 04 07		Slight, rarefaction
	Bombay	Z	eP	02 05 17		Slight
		E	eS	09 42		
		ZE	e	12 44		
18	Epc: 8.9°S, 117.0°E. Sunbawa. - H = 04h 06m 00.4s., h about 33 km (USCGS).					

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
18	Shillong	Z	iP	04 13 51		Slight, distant, compression.
	Poona	Z	iP	04 14 56		Slight, distant, compression.
18	Bombay	ZE E	e e	04 15 03 22 37		Slight .
	Delhi	Z	i	04 15 16		Slight, compression.
18	Delhi	ZE	e	04 27 09		
18	Delhi	ZNE	i	04 39 07		
18	Delhi	Z	iP	06 29 17		Slight, rarefaction.
18	Epc:- 46.5° N 149.6° E , Kurile Islands. h = about 140 km. -H= 08 h 40 m 55.5 s (USCGS).					
	Shillong	Z	iP	08 49 38		Slight, compression.
	Chatra	Z	iP	08 50 01		Slight, rarefaction.
	Dehra Dun	Z	iP	08 50 24		Slight.
	Delhi	Z	iP	08 50 39		Slight, rarefaction.
	Poona	Z	iP	08 51 35		Slight, rarefaction. Initial ground movement towards East.
18	Delhi	Z	iP	11 29 51		Slight, compression.
18	Epc:- 46.5° N 149.5° E, Kurile Island. h = about 128 km. -H= 11 h 22 m 40.2 s (USCGS).					
	Shillong	Z	iP	11 31 24		Slight, compression.
	Chatra	Z	iP	11 31 48		Slight, rarefaction.
	Delhi	Z	iP i	11 32 22 32 22		Slight, rarefaction.
	Poona	ZE	iP	11 33 21		Slight, rarefaction. Initial ground movement towards East.
18	Delhi	Z	iP	20 09 32		Tremor, rarefaction.
18	Delhi	Z	iP	20 58 07		Slight, rarefaction.
18	Delhi	Z	iP	20 59 32		Slight, rarefaction.
18	Chatra	Z	iPg Sg	21 03 24 03 39	120	Slight, distant, rarefaction.



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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
18	Delhi	Z	eP	21 28 39		Slight, rarefaction.
18	Delhi	Z ZNE	iP e	21 30 37 32 37		Slight, compression.
19	Bokaro	E	e	04 21 13		Slight.
19	Poona	Z	iP	04 32 26		Slight, distant, compression.
	Delhi	Z	iP i i i	04 32 39 32 44 32 52 33 09		Slight, compression.
	Dehra Dun	Z	eP i i	04 32 41 32 47 33 19		Slight.
	Shillong	Z	iP	04 32 53		Slight, distant, compression.
	Delhi	Z	iP	04 33 15		Slight, rarefaction.
19	Bokaro	NE	e	07 38 54		Slight.
19	Shillong	Z	iP	08 20 24		Slight, distant, compression.
19	Chatra	Z	eP eS	08 21 11 22 42	880	Slight, compression.
19	Epc:- 30.6° N 97.3° E (China). h = about 29 km. -H= 09 h 17 m 12.4 s (USCGS).					
19	Bokaro	NE	iP	08 24 14		Slight, local.
	Shillong	Z E NE E	eP Lq iS SS SSS/Lr M	09 18 54 20 49 21 07 21 12 21 20 22 14	1300	Slight, distant.
	Chatra	Z ZNE	iP eS	09 19 33 21 25	1090	Slight, distant, rarefaction.
	Delhi	Z	eP	09 21 16		Slight.
	Calcutta	E	e	09 23 22		Slight.
19	Delhi	NE	e	09 26 43		
19	Epc:- 10.6° N 125.2° E, Leyte, Philippine Islands. h = about 50 km. -H= 10 h 44 m 51.9 s (USCGS).					
	Shillong	Z	iP	10 51 40		Slight, compression.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
19	Chatra	Z	iP	10 52 19		Slight, compression.
	Dehra Dun	Z	iP	10 53 28		Slight.
	Delhi	Z	eP	10 53 29		Slight, rarefaction.
19	Shillong	Z	eP	11 19 56		Slight.
19	Epc:- 30.8° N 70.8° E , West Pakistan. h = about 41 km. -H= 11 h 47 m 24.1 s (USCGS).					
	Delhi	Z NE	iP iS	11 49 00 50 42	990	Slight, rarefaction.
	Chatra	Z	eP eS	11 50 53 53 33	1580	Slight.
	Shillong	Z	eP	11 51 48		Slight.
	Poona	Z ZE	eP i	11 52 50 54 10		Slight.
19	Madras	E	e e	11 57 45 58 01		Slight.
19	Delhi	Z	iP	11 58 53		Slight, rarefaction.
19	Delhi	Z	iP	13 00 52		Tremor, compression.
19	Bombay	E	e e e	13 09 22 11 41 29 07		Slight.
19	Shillong	Z	iP	13 23 51		Slight, distant, rarefaction.
19	Shillong	Z	iP	13 55 31		Slight, distant, rarefaction.
19	Epc:- 5.7° S 130.3° E, Banda Sea. h = about 177 km. -H= 23 h 42 m 34.9 s (USCGS).					
	Shillong	Z	iP	23 51 03		Slight, distant, compression.
	Delhi	Z	iP	23 52 32		Slight, compression.
	Poona	Z	iP	23 52 50		Slight, distant, compression.
20	Delhi	ZNE	iP	00 00 35		Slight. Initial ground motion towards South , East, compression.
20	Epc:- 6.7° S 130.1° E, Banda Sea. h = about 167 km. -H= 05 h 30 m 42.2 s (USCGS).					

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
20	Shillong	Z	iP	05 39 13		Slight, distant, rarefaction.
	Chatra	Z	iP	05 39 45		Slight, distant, compression.
	Delhi	Z	iP i	06 40 41 40 47		Slight, compression.
20	Delhi	Z	iP	09 09 39		Tremor, rarefaction.
20	Delhi	Z	iP	12 09 03		Slight, rarefaction.
20	Delhi	Z	eP i	18 52 26 54 02		Slight, rarefaction.
20	Chatra	Z ZNE	iP eS	19 20 42 21 00	150	Slight, compression.
	Shillong	Z	iP	19 21 16		Slight, near.
	Bokaro	E	iP	19 22 13		Slight, distant. Initial ground move- ment towards East.
	Dehra Dun	Z	iP i	19 22 21 23 56		Slight, rarefaction.
21	Chatra	Z	eP	02 02 30		Slight, distant.
21	Epc:- 61.1° N 149.7° W, Vicinity Anchorage, Alaska, Felt: h = about 80 km. -H= 02 h 05 m 22.7 s (USCGS).					
	Shillong	Z	iP	02 17 29		Slight, distant, compression.
	Delhi	Z	iP	02 17 38		Slight.
21	Delhi	E	iP	02 27 50		
21	Bokaro	NE	i	06 55 15		Slight.
	Shillong	Z	eP	08 22 43		Slight, local.
21	Shillong	Z	eP	11 59 28		Slight, distant.
21	Epc:- 1.5° N 127.2° E, Halmahera Islands region. h = about 111 km. -H= 12 h 32 m 27.4 s (USCGS).					
	Shillong	Z	iP	12 40 07		Slight, distant, compression.
	Delhi	Z	iP	12 41 45		Slight, compression.
21	Delhi	Z	eP	14 30 06		Slight, compression.


DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
21	Shillong	Z	eP	16 31 55		Slight, compression.
21	Delhi	Z	eP	20 02 37		Slight, compression.
21	Shillong	Z	eP	22 36 49		Slight.
22	Shillong	Z	iP	04 31 05		Slight, near.
22	Shillong	Z	iP	04 44 41		Slight, distant, rarefaction.
22	Bokaro	NE	iP	07 31 02		Slight, local.
22	Bokaro	NE	iP	08 12 06		Slight, local.
22	Epc:- 49.8° N 155.8° E, Northern Kurile Islands. h = about 19 km. -H= 15 h 23 m 32.9 s (USCGS).					
	Shillong	Z	iP	15 33 02		Slight, distant, compression.
	Chatra	Z	eP	15 33 17		Slight, distant.
	Poona	ZE	iP	15 34 52		Slight, rarefaction.
	Bombay	ZNE	eP	15 34 58	8780	Slight.
		E	e	44 49		
		N	eS	44 56		
			M	16 03 -		
		E	M	09 -		
22	Chatra	Z	iP i	16 33 18 34 38		Slight, near.
	Shillong	Z	iP	16 33 38		Slight, distant, compression.
22	Tocklai	E	iP i	17 18 04 18 34		Slight, distant.
	Shillong	Z	eP	17 18 26		Slight, distant.
	Chatra	Z	iPg Sg	18 17 44 17 57	111	Slight, rarefaction.
22	Shillong	Z	eP	20 25 47		Slight, near.
	Shillong	Z	eP	21 38 44		Slight, near.
22	Epc:- 37.9° N 141.7° E, Honshu, Japan. h = about 38 km. -H= 22 h 18 m 50.3 s (USCGS).					
	Shillong	Z	iP	22 26 52		Slight, compression.
	Chatra	Z	iP	22 27 19		Slight, compression.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
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October, 1962.

23	Shillong	Z	iP	00 56 40		Slight, distant, compression.
23	Dehra Dun	Z	i	00 57 33		Slight.
23	Chatra	Z NE	iP S	11 05 17 05 58	280	Slight, rarefaction.
23	Delhi	Z	eP	13 58 26		Slight.
23	Epc:- $27^{\circ}$ N $85^{\circ}$ E . On Bihar Nepal Border (Near Motihari). -H= 15 h 04 m 40s (New Delhi).					
	Chatra	ZNE	iP eS	15 05 07 05 30	190	Slight, rarefaction. Initial ground motion towards North, East.
	Delhi	Z	eP iS	15 06 30 07 54	810	Slight, rarefaction.
23	Bokaro	NE	Sg i	15 06 33 06 38		Slight, near.
23	Delhi	Z	eP	17 51 03		Slight, rarefaction.
23	Epc:- $36.7^{\circ}$ N $71.1^{\circ}$ E, Hindukush. h = about 216 km. -H= 20 h 10 m 57.6 s (USCGS).					
	Dehra Dun	Z	iP PP PPP Lq iS SS Lr SSS Sg/M	20 13 01 13 08 13 15 14 31 14 40 14 53 14 58 15 02 15 39	956	
	Delhi	Z	iP iS	20 13 09 14 49	970	Slight, rarefaction.
	Chatra	Z	iP	20 14 43		Slight, rarefaction.
	Shillong	Z	iP	20 15 46		Slight, compression.
24	Shillong	Z	eP	07 52 23		Slight, local.
24	Dehra Dun	Z	iP	10 00 19		Slight, compression.
24	Delhi	Z E ZNE	iP i S S*	10 00 46 01 17 01 19 01 24	290	Slight, rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
24	Chatra	Z	iP eS	10 02 15 03 50	920	Slight, compression.
24	Poona	Z	eP	10 03 22		Slight, distant.
24	Shillong	Z	eP	12 27 17		Slight, distant.
24	Chatra	Z	eP	12 30 01		Slight, distant.
24	Delhi	Z	iP	19 33 32		Slight.
24	Shillong	Z	eP	21 10 18		Slight, local.
24	Shillong	Z	eP	22 46 44		Slight, local.
25	Shillong	Z	iP	03 51 22		Slight, distant, compression.
25	Shillong	Z	iP	03 57 02		Slight, distant, compression.
25	Delhi	Z	iP i	07 56 03 56 33		Slight, rarefaction.
25	Delhi	Z	iP	08 41 35		Slight, rarefaction.
25	Shillong	Z	eP	09 25 45		Slight, near.
25	Epc:- 13.0° N 126.0° E. -H= 09 h 34 m 13 s (Shillong).					
25	Epc:- 3.0° N 126.7° E, Molucca Passage. h = about 33 km. -H= 09 h 34 m 14.6 s (USCGS).					
	Port Blair	N	eP i	09 41 00 51 35		Slight.
	Shillong	Z N	iP iS	09 41 49 47 54	4420	Slight, compression.
	Calcutta	E	i i	09 42 14 47 49		Slight.
	Chatra	ZNE	eP	09 42 28		Slight, distant.
25	Bokaro	NE	eP PPP eS PPS Lq SSS M	09 42 28 44 48 48 59 49 09 52 33 52 56 58 44	4860	Slight.
	Visakhapatnam	E	iP iPP iPPP iS	09 42 32 44 16 45 00 49 09	4970	Moderate. First ground movement towards East.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	 km.	REMARKS.
<u>October, 1962.</u>						
25	Visakhapatnam (Contd.)	E	iPS	09 49 16		
			iPPS	49 24		
			iSS	52 28		
			iSSS	53 32		
Madras	E	iP	09 42 46	5190	Slight, initial ground motion towards East.	
		i	43 06			
		PP	44 36			
		PPP	45 21			
		iS	49 36			
		PS	49 43			
		PPS	49 52			
		e	50 04			
		Lq	53 47			
		M	59 50			
Dehra Dun	ZNE NE	iP	09 43 32	5912	Slight, rarefaction. First ground movement towards South, East.	
		PcP	44 40			
		iS	51 02			
		PS	51 09			
		PPS	51 19			
		ScS	53 18			
		SSS	55 33			
Delhi	Z NE ZNE  N NE E NE	iP	09 43 32	5890	Moderate, compression.	
		iP	43 34			
		iS	51 01			
		PS	51 06			
		PPS	51 17			
		ScS	53 22			
		e	55 18			
		eLr	58 02			
Poona	ZE  ZNE ZE Z	iP	09 43 36	5970	Slight, rarefaction. Initial ground movement towards East.	
		PcP	44 30			
		iS	51 10			
		PS	51 18			
		ScS	53 11			
Bombay	ZE E E NE ZE E	eP	09 43 45	5980	Slight.	
		PcP	44 34			
		PP	45 55			
		eS	51 19			
		PS	51 29			
		PPS	51 44			
Hyderabad	NE	M	09 50 08			
25	Shillong	Z	iP	14 09 38		Slight, near.
			e	09 31		
	Chatra	Z	eP eS	14 09 22 10 45	800	Slight, distant.
	Delhi	Z	eP	16 11 46		Slight.
	Poona	Z	iP	16 11 58		Slight, distant, rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS.
<u>October, 1962.</u>						
25	Shillong	Z	iP	16 12 00		Slight, distant, compression.
25	Shillong	Z	iP	-16 16 37		Slight, distant, compression.
25	Delhi	Z	e	17 08 02		
25	Delhi	Z ZNE	eP eS e	20 25 02 34 17 40 10	7870	Slight.
25	Port Blair	N	i	20 30 03		
25	Poona	N	e e	20 33 15 38 56		Slight, distant.
25	Bombay	NE N E N	e e M M	20 33 29 39 09 21 00 - 00 28		Slight.  Period = 18 secs. $\mu = 3.$
25	Shillong	Z	eP e	20 59 45 21 00 17		Slight, near.
25	Chatra	Z	e e	21 00 50 02 05		
25	Shillong	Z	iP	21 19 53		Slight, distant, rarefaction.
25	Delhi	Z	eP	21 55 17		Slight.
26	Delhi	Z	iP iS	07 30 46 32 23	930	Slight, compression.
26	Port Blair	N	e i i	07 32 56 36 25 42 36		
26	Shillong	Z	eP	07 33 03		Slight, distant, compression.
26	Chatra	Z	iPg Sg	07 41 14 41 25	90	Slight, distant, rarefaction.
26	Delhi	E N	iP eP	07 44 41 44 41		Slight. First ground motion towards North, West.
26	Bombay	NE E	e e	07 44 50 47 21		Slight.
26	Delhi	Z	iP	08 45 25		Slight, compression.
26	Delhi	Z	iP	08 57 18		Slight, rarefaction.



DATE	STATION	COMPT	PHASE	G. M.T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
26	Epc:- 33.7° N 27.9° E, Eastern Mediterranean Sea. h = about 33 km. -H= 11 h 26 m 12.4 s (USCGS).					
26	Delhi	Z	iP	11 34 04		Slight, rarefaction.
		Z	iP	11 34 07		Slight.
	Chatra	Z	eP	11 35 13		Slight, distant.
	Shillong	Z	iP	11 35 45		Slight, distant, compression.
26	Delhi	NE	eP	11 40 35		Slight, distant. First ground motion towards South, West.
26	Dhillong	Z	iP	12 04 10		Slight, distant, compression.
26	Shillong	Z	eP	12 31 33		Slight, local.
26	Delhi	N E	eP e	14 51 03 51 10		Slight, distant. Initial ground motion towards North.
26	Hyderabad	E	M	14 51 25		Period = 12 secs. $\mu = 4.$
26	Bombay	E N	e e	14 54 13 56 05		
26	Delhi	Z	iP	16 17 24		Slight, compression.
26	Chatra	Z	iP	16 17 33		Slight, distant, compression.
26	Delhi	N ZNE	eP e	16 25 46 28 37	15840	Slight. Initial ground motion towards North.
27	Shillong	Z	eP	01 31 47		Slight, local.
27	Shillong	Z	iP	01 37 47		Slight, distant, rarefaction.
27	Chatra	Z	i	01 37 55		
27	Delhi	Z	iP	01 38 34		Slight, compression.
27	Delhi	NE	e e	01 43 13 47 01		Slight. Initial ground motion towards North, East.
27	Delhi	Z	eP	06 20 56		Slight, rarefaction.
27	Delhi	Z	iP i	08 29 36 29 52		Slight, compression.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
27	Shillong	Z	iP	08 29 37		Slight, distant, rarefaction.
27	Delhi	Z	eP	09 12 37		Slight, rarefaction.
27	Delhi	Z	iP	10 29 19		Slight, rarefaction.
27	Delhi	Z	iP	10 43 14		Slight, compression.
27	Chatra	Z	eP	11 29 52		Slight, distant.
27	Epc:- 38.6° N 70.4° E, Tadzhik S.S.R. h = about 135 km. -H= 16 h 02 m 04.8 s (USCGS).					
27	Dehra Dun	Z	eP Lq iS SS Lr SSS S* Sg, M	16 04 27 06 19 06 29 06 42 06 50 06 53 07 09 07 40	1200	Slight.
	Chatra	Z	eP	16 06 08		
	Shillong	Z	eP	16 06 52		Slight, distant.
27	Delhi	ZE	e	16 11 37		
27	Shillong	Z	iP	16 31 04		Slight, distant, rarefaction.
27	Delhi	NE	eP	17 07 59		Slight.
27	Shillong	Z	iP	21 01 12		Slight, near.
27	Chatra	Z	eP	21 02 08	870	Slight.
27	Shillong	Z	iP	22 40 14		Slight, distant, rarefaction.
28	Shillong	Z	iP	03 40 40		Slight, near.
	Chatra	Z ZN	eP eS	03 41 42 42 54	690	Slight.
28	Delhi	Z	iP	03 46 20		Slight, distant, compression.
28	Shillong	Z	eP	04 09 14		Slight, distant.
28	Shillong	Z	eP	05 48 00		Slight, distant.
28	Shillong	Z	iP	06 36 33		Slight, distant, rarefaction.
28	Shillong	Z	iP	12 12 05		Slight, distant, rarefaction.

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
28	Chatra	Z	iP	12 12 47		Slight, distant, rarefaction.
28	Dehra Dun	Z	e	12 13 56		Slight.
28	Poona	ZE	iP	12 14 23		Slight, distant, rarefaction. Initial ground movement towards East.
28	Delhi	Z	iP	13 49 58		Slight, compression.
28	Epc:- $0.1^{\circ}$ N $123.6^{\circ}$ E, Northern Celebes. h = about 61 km. -H= 15 h 00 m 17.0 s (USCGS).					
	Shillong	Z	iP	15 07 46		Slight, distant, rarefaction.
	Chatra	Z	iP i	15 08 24 09 06		Slight, distant, compression.
	Delhi	Z	iP	15 09 26		Slight, compression.
28	Shillong	Z	eP	16 22 06		Slight, near.
28	Epc:- $37.2^{\circ}$ N $141.8^{\circ}$ E, Near East coast of Honshu, Japan. h = about 48 km. -H= 17 h 49 m 32.0 s (USCGS).					
	Shillong	Z	eP	17 57 41		Slight.
28	Delhi	Z	iP	18 11 04		Slight, compression.
28	Delhi	Z	iP	20 51 25		Slight, rarefaction.
28	Delhi	Z	eP	23 03 25		Slight.
28	Delhi	Z	iP	23 12 08		Slight, rarefaction.
28	Shillong	Z	iP	23 12 11		Slight, distant, compression.
29	Shillong	Z	iP	00 39 15		Slight, distant, rarefaction.
	Chatra	Z	iP	00 39 16		Slight, distant, compression.
	Poona	Z	iP	00 39 17		Slight, distant, compression.
29	Shillong	Z	eP	00 52 54		Slight, local.
29	Delhi	Z	iP	02 03 19		Slight, compression.
29	Dehra Dun	Z	eP e e	03 49 33 50 10 51 47		Slight.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS.
<u>October, 1962.</u>						
29	Delhi	Z	iP	03 49 38	860	Slight, rarefaction.
29	Shillong	Z	iP	04 04 20		Slight, distant, rarefaction.
29	Delhi	Z	iP iS	04 51 24 53 02	950	Slight, rarefaction.
29	Shillong	Z	eP	05 48 00		Slight, distant.
29	Delhi	Z	iP	06 21 20		Slight.
29	Shillong	Z	iP	06 36 33		Slight, distant, rarefaction.
29	Kodaikanal	E	iP iS e e	07 21 19 24 57 25 24 27 15	2210	Slight. Initial ground movement of the S phase towards West.
	Bombay	ZNE E E	eP eS e	07 21 42 24 32 25 35	2335	Slight.
	Poona	ZNE NE	i M	07 21 50 26 20		Slight, distant, rarefaction. Initial ground movement towards North, East.
	Madras	E	iP PPP eS e	07 22 06 22 35 25 52 27 13	2290	Moderate. Initial ground motion towards East.
	Hyderabad	E	iP PP PPP iS Lq SS Lr M	07 22 18 22 38 22 54 26 10 26 35 27 08 28 13 30 03	2350	Moderate. Initial ground movement towards East.  Period = 9 secs. u = 5.
	Visakhapatnam	E	iP	07 23 00	3100	Moderate. First ground movement towards East.
	Delhi	ZNE N Z ZNE	eP iS i M	07 23 30 28 20 30 34 30 51	3210	Period = 24 secs. Amp. 20.5 m.m.
29	Bokaro	NE	eP i e	07 23 47 28 57 32 31		Slight, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
29	Chatra	Z	iP	07 24 07		Slight, distant, rarefaction.
	Shillong	Z E	iP PP PPP iS	07 24 33 26 00 26 23 30 20	4120	Slight, rarefaction.
29	Calcutta	E	e	07 26 56		Slight.
29	Epc:- $33-\frac{1}{2}^{\circ}$ N $82-\frac{1}{2}^{\circ}$ E , in Western Tibet. -H = 12 h 07 m 35 s (New Delhi).					
29	Dehra Dun	Z ZE	eP i iS	12 08 53 09 07 09 53	570	Slight.
29	Delhi	Z	iP iS	12 09 17 10 34	730	Slight, rarefaction.
29	Chatra	Z	iP iS	12 09 42 11 19	940	Slight, rarefaction.
29	Shillong	Z	eP	12 10 22		Slight, distant.
29	Delhi	E	i i i	12 10 40 11 13 11 20		
29	Poona	Z	iP e	12 11 36 14 36	1800	Slight, compression.
29	Chatra	Z NE	iP eS	16 34 47 37 00	1300	Slight, compression.
29	Shillong	Z	eP	16 35 03		Slight, distant.
29	Calcutta	E	e	16 39 12		Slight.
29	Shillong	Z	iP	17 51 42		Slight, distant, rarefaction.
29	Shillong	Z	iP	19 00 52		Slight, near.
29	Chatra	Z	iP i	19 01 52 02 08		Slight, distant, compression.
29	Shillong	Z	eP	19 15 10		Slight, distant.
29	Shillong	Z	iP	19 33 36		Slight, near.
29	Tocklai	E	iP iS	19 33 40 34 06		Slight, near.
29	Chatra	Z	eP	19 34 29		Slight, near.
29	Shillong	Z	i	21 22 04		Slight.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
29	Shillong	Z	eP	21 33 29		Slight, local.
30	Dehra Dun	Z	eP iS SS Lr	02 23 27 25 09 25 21 25 23	990	Slight.
	Delhi	Z	iP i iS	02 23 47 23 59 25 27	970	Slight, rarefaction.
30	Delhi	Z	eP	03 54 30		Slight, rarefaction.
30	Delhi	Z	eP	15 52 19		Slight, compression.
30	Epc:- 26.6° N 93.3° E, Eastern India. h = about 33 km. -H- 16 h 13 m 25.6 s (USCGS).					
30	Tocklai	E	iPg iSg	16 13 43 13 59		
	Shillong	ZE E	iP iS	16 13 52 14 07	110	Slight, felt at Shillong.
	Chatra	Z	iP eS	16 14 48 15 50	590	Feeble, compression.
30	Bokaro	NE	eP i	16 15 07 16 23		Slight.
	Dehra Dun	Z	iP Lq iS SS SSS Lr	16 16 42 19 00 19 08 19 23 19 34 19 36	1440	Slight, compression.
	Delhi	Z	iP iS	16 16 45 19 16	1490	Slight, rarefaction.
30	Poona	Z	eP	16 21 13		Slight, distant.
30	Delhi	Z	iP	18 02 41		Slight, rarefaction.
30	Delhi	Z	iP i	19 47 44 47 51		Slight, rarefaction.
30	Delhi	Z	iP	20 07 21		Slight, compression.
31	Shillong	Z	iP	07 26 05		Slight, distant, compression.
31	Delhi	Z	eP i	11 51 52 51 59		Slight.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km.	REMARKS.
<u>October, 1962.</u>						
31	Chatra	Z	iP	11 52 07 <sup>●</sup>		Slight, distant, rarefaction.
31	Poona	Z	iP	11 52 11		Slight, distant, rarefaction.
31	Shillong	Z	iP	11 52 13		Slight, distant, compression.
31	Delhi	Z	eP	11 55 57		Slight, compression.
31	Shillong	Z	iP	13 38 15		Slight, distant, rarefaction.
31	Shillong	Z	iP	18 44 12		Slight, local.
31	Delhi	Z	eP	18 57 56		Slight.
31	Shillong	Z	eP e	20 17 30 18 25		Slight, local.
	Chatra	ZNE	eP eS	20 18 21 19 58	940	Slight.
31	Epc:- 25° N 93 $\frac{1}{2}$ ° E in Mainipur. -H= 21 h 27 m 42 s (New Delhi ) .					
	Shillong	ZE E	iPg iS	21 28 13 28 23	190	Slight, local.
31	Tocklai	E	iP iPg iS iSg	21 28 14 28 16 28 26 28 33	190	Slight.
	Calcutta	N	eS	21 30 01	570	Slight.
	Chatra	ZNE	iS eSg	21 30 14 31 07	620	Slight, compression.
	Dehra Dun	Z	iP PP PPP iS S*	21 31 05 31 17 31 25 33 50 34 58	1630	Slight, rarefaction.
	Delhi	Z	iP iS	21 31 10 33 53		Slight, compression.
31	Poona	Z	eP eS	21 32 20 35 31		Slight, distant.
31	Shillong	Z	iP	22 31 04		Slight, local.
31	Tocklai	E	iP	22 31 05		Slight, near.
31	Chatra	Z	iP e	22 32 04 33 13		Slight, distant, rarefaction.

Earthquake Report.  
(Non-Instrumental)

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The following is the list of earthquakes that were reported by voluntary observers from different stations during the month of October, 1962 A.D.

Place	Date	Time in G. M. T.	Duration of shock in secs.	Number of shocks.	Intensity in R.F. scale.	Remarks.
Shillong	17	01 09	2	1	IV	Appeared to come from West with slight rattling sound.
Luding	28	03 45	3	1	V	
Shillong	30	16 13	10	1	V	From West.
Luding	30	16 14	4	1	VI	
Luding	31	21 28	6	1	V	

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## MICROSEISMIC - 43 - TABULATION

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
Station : Madras.					<u>October, 1962.</u>				
01	00	1	0.4	2.9	09	00	3	0.1	1.6
	03	3	0.4	2.6		03	2	0.5	4.6
	06	3	0.4	2.7			3	0.1	1.4
	12	3	0.4	2.6		06	2	0.5	4.5
		3	0.3	2.2		12	2	0.4	4.4
	18	3	0.4	2.5		18	2	0.4	4.5
		3	0.3	2.5					
02	00	3	0.4	4.2	10	00	2	0.4	4.7
		3	0.3	2.4			3	0.1	1.4
		3	0.1	1.5		03	2	0.5	4.9
	03	3	0.5	4.2			3	0.1	1.5
		3	0.3	2.4		06	2	0.5	5.2
	06	3	0.3	2.4			3	0.1	1.5
	12	3	0.4	4.3		12	2	0.6	5.5
		3	0.3	2.5		18	2	0.6	5.6
	18	3	0.5	4.2					
		3	0.3	2.4	11	00	2	0.6	5.6
						03	2	0.5	5.4
03	00	3	0.5	4.5			3	0.2	2.4
		3	0.3	2.3		06	2	0.4	5.5
	03	2	0.4	4.4			3	0.2	2.7
		3	0.3	2.3			3	0.1	1.5
	06	2	0.4	4.5		12	3	0.4	4.9
		3	0.3	2.5			3	0.2	2.6
	12	2	0.4	4.4		18	3	0.4	4.9
		3	0.3	2.5			3	0.2	2.7
	18	2	0.5	4.8					
		3	0.3	2.5	12	00	3	0.4	4.8
							3	0.2	2.6
04	00	2	0.5	4.6		03	3	0.4	4.4
	03	2	0.5	4.8			3	0.3	2.6
	06	2	0.5	4.8			3	0.1	1.2
	12	2	0.5	4.9		06	3	0.4	4.5
	18	2	0.6	5.2			3	0.3	2.7
						12	3	0.3	4.2
05	00	2	0.6	5.3			3	0.2	2.5
	03	2	0.6	5.3			3	0.1	1.5
	06	2	0.5	5.1		18	3	0.2	2.8
	12	2	0.5	4.7					
	18	2	0.5	4.7	13	00	3	0.3	2.8
						03	3	0.2	2.7
06	00	2	0.5	4.7		06	1	0.3	2.7
	03	2	0.5	4.3		12	1	0.3	2.6
	06	...	Earthquake			18	1	0.3	2.7
	12	2	0.4	4.3					
	18	2	0.5	4.3	14	00	1	0.3	2.7
						03	1	0.3	2.5
07	00	2	0.5	4.4		06	...	No record.	
	03	...	No record.			12	1	0.3	2.6
	06	...	No record.			18	1	0.4	2.6
	12	...	No record.						
	18	2	0.6	4.3	15	00	1	0.5	2.7
						03	1	0.5	2.5
08	00	2	0.6	4.6		06	1	0.5	2.5
	03	2	0.5	4.5		12	1	0.6	2.7
	06	2	0.5	4.5		18	1	0.7	2.9
	12	2	0.5	4.5					
	18	2	0.5	4.5	16	00	1	0.6	2.8

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
Station : Madras(Contd.)					October, 1962.				
16	03	1	0.6	2.8	24	00	1	0.9	3.3
	06	1	0.5	2.7		03	1	1.1	3.2
	12	1	0.4	2.6			1	0.8	2.8
	18	1	0.4	2.6		06	1	1.1	3.1
							1	0.9	2.8
17	00	1	0.3	2.5		12	1	1.2	3.4
	03	1	0.3	2.4			1	1.0	2.9
	06	1	0.3	2.6		18	1	1.2	3.6
	12	1	0.2	2.4			1	1.0	2.9
	18	1	0.3	2.2					
		1	0.2	1.8	25	00	1	1.1	3.8
							1	1.0	2.9
18	00	1	0.2	2.3		03	1	1.1	3.8
		1	0.1	1.6			1	1.0	3.0
	03	...	No record.			06	1	1.0	3.7
	06	...	No record.				1	0.9	2.9
	12	3	0.3	2.5		12	1	0.9	3.8
		3	0.1	1.4			1	0.7	2.9
	18	1	0.3	2.7		18	1	0.9	3.9
		3	0.2	1.6			1	0.7	2.9
19	00	1	0.3	2.8	26	00	1	0.9	3.6
		3	0.2	1.7			1	0.7	2.7
	03	...	No record.			03	1	1.0	3.3
	06	1	0.4	2.9		06	1	0.9	2.9
		3	0.3	2.2		12	1	0.8	3.0
		3	0.1	1.3		18	1	0.7	2.8
	12	1	0.4	2.9					
		3	0.2	1.9	27	00	1	0.7	3.0
	18	1	0.4	3.0			1	0.7	3.7
		3	0.2	1.9		03	1	0.8	3.5
							1	0.7	2.8
20	00	1	0.4	2.9		06	1	0.9	3.9
		3	0.2	1.9		12	1	1.1	4.6
	03	1	0.5	2.9		18	1	1.1	4.6
	06	1	0.6	2.9					
	12	1	0.6	2.8	28	00	1	1.1	4.3
	18	1	0.7	2.9			1	0.7	2.9
						03	1	1.0	4.1
21	00	1	0.8	2.9		06	1	1.0	4.4
	03	1	0.7	2.8			1	0.7	2.8
	06	1	0.7	2.9		12	1	1.1	4.5
	12	1	0.7	2.9			1	0.7	2.9
	18	1	0.6	2.8		18	1	1.2	4.4
							1	1.0	3.1
22	00	1	0.6	2.7					
	03	1	0.6	2.7	29	00	1	1.2	4.1
	06	1	0.6	2.7			1	1.1	3.2
	12	1	0.7	2.8		03	1	1.4	4.2
	18	1	0.7	2.9			1	1.0	3.0
						06	1	1.6	4.1
23	00	1	0.8	2.9			1	1.0	2.9
	03	1	0.9	2.8		12	1	1.8	4.3
	06	1	0.9	2.8			1	1.1	3.1
	12	1	0.9	2.9		18	1	1.6	4.3
	18	1	0.9	3.1			1	1.3	3.1

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
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Station : Madras (Contd.)

October, 1962.

30	00	1	1.6	4.0	07	00	...	-	-		
		1	1.3	3.2			3	0.4	4.2		
	03	1	1.5	3.8		12	3	0.4	4.8		
		1	1.3	3.0		18	3	0.4	4.8		
	06	1	1.4	3.8		08	00	3	0.4	4.4	
		1	1.3	3.0				06	...	-	-
	12	1	1.2	3.6			12	3	0.4	4.8	
		1	1.2	3.0			18	3	0.4	4.5	
	18	1	1.0	3.9			09	00	3	0.4	5.0
		1	0.9	3.0					06	...	-
31	00	1	0.9	3.9	12			...	-	-	
		1	0.7	3.0	18			...	-	-	
	03	1	1.0	3.8	10			00	...	-	-
		1	0.7	3.1					06	...	-
	06	1	0.9	4.0		12		3	0.5	5.0	
		1	0.6	3.0		18		3	0.4	5.0	
	12	1	0.8	4.1		11		00	3	0.5	5.0
		1	0.6	2.9					06	...	-
	18	1	0.7	4.0			12	...	-	-	
		1	0.5	3.0			18	...	-	-	

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Station: Bokaro.

01	00	...	-	-	12	00	...	-	-
		3	0.4	3.4			3	0.4	4.8
	12	3	0.4	3.4		12	3	0.3	5.0
	18	3	0.4	3.2		18	3	0.3	5.0
02	00	3	0.4	3.4	13	00	3	0.4	5.0
		...	-	-			3	0.3	5.0
	12	...	-	-		12	3	0.4	5.0
	18	3	0.4	3.6		18	3	0.4	5.0
03	00	3	0.4	3.5	14	00	3	0.4	5.0
		...	-	-			3	0.4	4.8
	12	...	-	-		12	3	0.4	4.8
	18	...	-	-		18	3	0.4	4.6
04	00	...	-	-	15	00	3	0.4	4.6
		0,0	-	-			3	0.4	4.6
	12	3	0.4	4.0		12	3	0.3	4.6
	18	3	0.4	4.0		18	3	0.3	4.2
05	00	0,0	-	-	16	00	3	0.3	4.2
		0,0	-	-			06	...	-
	12	3	0.4	4.4		12	...	-	-
	18	3	0.4	4.2		18	...	-	-
06	00	3	0.4	4.4	17	00	...	-	-
		...	-	-			06	...	-
	12	3	0.4	4.8		12	...	-	-
	18	3	0.4	4.2		18	...	-	-

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
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Station : Bokaro(Contd.)

October, 1962.

18	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
19	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
20	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
21	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
22	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
23	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
24	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
25	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
26	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
27	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
28	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-

29	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
30	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-
31	00	...	-	-
	06	...	-	-
	12	3	0.4	4.0
	18	3	0.4	4.0

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Station: Shillong.

01	00	3	0.4	4.9
	06	3	0.3	4.7
	12	1	0.4	5.0
	18	1	0.4	4.8
02	00	1	0.4	4.8
	06	3	0.5	4.8
	12	2	0.5	4.7
	18	3	0.6	5.0
03	00	0..	-	-
	06	3	0.5	4.7
	12	3	0.6	4.8
	18	...	-	-
04	00	1	0.5	4.6
	06	...	-	-
	12	...	-	-
	18	...	-	-
05	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	0,0	-	-
06	00	0,0	-	-
	06	...	-	-
	12	3	0.3	4.5
	18	3	0.3	4.4
07	00	...	-	-
	06	3	0.4	4.6
	12	3	0.4	4.5
	18	3	0.4	4.3

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
Station : Shillong(Contd.)					October, 1962.				
08	00	3	0.3	4.2	19	00	3	0.2	3.5
	06	3	0.4	4.8		06	...	-	-
	12	3	0.4	5.0		12	...	-	-
	18	3	0.3	4.5		18	...	-	-
09	00	3	0.4	4.8	20	00	...	-	-
	06	...	-	-		06	...	-	-
	12	...	-	-		12	...	-	-
	18	...	-	-		18	...	-	-
10	00	...	-	-	21	00	...	-	-
	06	1	0.4	5.0		06	...	-	-
	12	1	0.5	5.0		12	...	-	-
	18	1	0.4	5.0		18	...	-	-
11	00	1	0.5	5.1	22	00	...	-	-
	06	3	0.5	5.0		06	...	-	-
	12	3	0.4	4.8		12	...	-	-
	18	3	0.3	4.6		18	...	-	-
12	00	3	0.4	4.5	23	00	...	-	-
	06	3	0.3	4.6		06	...	-	-
	12	3	0.3	4.5		12	...	-	-
	18	3	0.3	4.6		18	...	-	-
13	00	3	0.3	4.5	24	00	...	-	-
	06	3	0.4	4.7		06	...	-	-
	12	3	0.4	5.0		12	...	-	-
	18	3	0.4	4.8		18	...	-	-
14	00	3	0.3	4.6	25	00	...	-	-
	06	3	0.3	4.5		06	...	-	-
	12	3	0.2	4.0		12	...	-	-
	18	3	0.2	3.8		18	...	-	-
15	00	...	-	-	26	00	...	-	-
	06	0..	-	-		06	...	-	-
	12	...	-	-		12	...	-	-
	18	3	0.2	3.9		18	...	-	-
16	00	0..	-	-	27	00	...	-	-
	06	0..	-	-		06	...	-	-
	12	0..	-	-		12	...	-	-
	18	0..	-	-		18	...	-	-
17	00	3	0.2	3.7	28	00	...	-	-
	06	3	0.2	3.6		06	1	0.6	4.9
	12	3	0.2	3.6		12	1	0.6	5.0
	18	...	-	-		18	1	0.5	4.6
18	00	...	-	-	29	00	1	0.6	4.8
	06	0..	-	-		06	...	-	-
	12	0..	-	-		12	3	0.5	4.8
	18	0..	-	-		18	3	0.6	5.0

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
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Station : Shillong (Contd.).

October, 1962.

30	00	3	0.6	5.0	06	00	3	0.7	4.5	
	06	1	0.8	4.4					0.4	2.3
	12	1	0.8	4.3		06	.	.	.	.
	18	1	0.6	4.3		12	3	0.6	4.6	2.0
31	00	1	0.5	4.0	18	3	0.7	5.0		
	06	3	0.3	3.9				0.4	2.5	
	12	3	0.4	4.1						
	18	3	0.4	4.0						

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Station : Bombay.

01	00	3	0.4	3.8	08	00	3	0.6	5.0	
			0.3	2.0					0.4	2.6
	06	2	0.4	4.5		06	3	0.6	5.1	
	12	2	0.4	4.0				0.5	2.5	
02	18	3	0.4	4.5	12	3	0.6	5.1		
			0.3	1.9	18	3	0.6	2.7		
	00	3	0.4	4.2				0.6	5.1	
	06	3	0.5	4.6				0.6	2.6	
12	3	0.3	2.5							
03	18	3	0.5	4.9	09	00	3	0.4	5.0	
			0.3	2.1				0.3	2.0	
	00	3	0.7	4.8		06	3	0.6	4.9	
	06	3	0.3	1.6				0.3	2.2	
04	12	3	0.5	5.1	12	3	0.6	5.1		
	18	3	0.5	4.9	18	3	0.4	2.3		
			0.4	2.6				0.7	5.1	
	00	3	0.5	4.6				0.5	2.0	
06	3	0.4	2.7							
05	12	3	0.7	5.0	10	00	3	0.6	5.1	
	18	3	0.4	2.3				0.3	2.0	
			0.4	2.0		06	3	0.6	5.2	
	00	3	0.5	5.1				0.4	2.3	
06	06	3	0.5	5.1	12	3	0.6	5.1		
	12	3	0.4	2.5	18	3	0.6	1.7		
	18	3	0.6	4.8				0.6	5.3	
			0.3	2.0				0.5	2.0	
00	3	0.7	4.7							
07	06	3	0.3	2.0	11	00	3	0.5	5.9	
	12	3	0.7	4.9				0.3	1.8	
	18	3	0.5	2.0		06	3	0.5	5.1	
			0.4	2.0				0.4	4.0	
08	00	3	0.7	4.7	12	3	0.5	5.6		
	06	3	0.3	2.0	18	3	0.4	4.0		
	12	3	0.7	4.9				0.5	4.9	
	18	3	0.6	4.7				0.4	3.5	
		0.4	2.0							
09	00	3	0.7	4.7	12	00	3	0.5	5.0	
	06	3	0.3	2.0				0.3	3.5	
	12	3	0.5	2.0		06	3	0.5	5.2	
	18	3	0.6	4.7				0.4	3.0	

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
<b>Station : Bombay(Contd.)</b>					<b>October, 1962.</b>				
12	12	3	0.5	5.0	18	12	3	0.4	4.4
			0.3	3.5				0.3	2.9
	18	3	0.5	4.7	18	3	0.4	4.6	
			0.4	3.5				0.3	1.9
13	00	3	0.4	5.2	19	00	3	0.4	5.2
			0.4	3.5				0.3	2.3
	06	3	0.5	5.0	06	3	0.4	5.2	
			0.3	3.0				0.3	2.5
	12	3	0.5	5.5	12	3	0.4	4.0	
			0.4	3.9				0.4	2.5
	18	3	0.6	4.6	18	3	0.4	1.6	
			0.3	3.0				0.4	5.4
								0.4	1.9
14	00	3	0.5	5.2	20	00	3	0.4	4.9
			0.3	4.0				0.3	2.6
	06	3	0.5	4.8	06	.	.	.	.
			0.3	3.0	12	3	0.5	4.8	
	12	3	0.5	4.8				0.4	3.0
			0.3	3.0	18	3	0.4	4.6	
	18	3	0.4	4.8				0.4	3.0
			0.3	2.7	21	00	3	0.4	4.6
15	00	3	0.4	4.8				0.3	2.7
			0.4	3.0	06	.	.	.	.
	06	3	0.4	5.2	12	3	0.5	3.3	
			0.3	2.7				0.4	2.5
	12	3	0.5	4.9	18	.	.	.	.
			0.4	2.8	22	00	3	0.4	4.0
	18	3	0.4	4.5				0.4	2.8
			0.3	2.5	06	3	0.5	3.9	
16	00	3	0.4	5.0				0.5	3.0
			0.4	2.6	12	3	0.6	3.5	
	06	.	.	.				0.5	2.2
	12	3	0.4	4.6	18	3	0.5	3.9	
			0.3	2.3				0.3	2.2
	18	3	0.3	4.2	23	00	3	0.5	4.3
			0.3	2.0				0.4	3.0
17	00	3	0.4	4.4	06	.	.	.	.
			0.3	2.0	12	3	0.6	3.7	
	06	3	0.4	4.4				0.5	2.5
			0.3	2.4	18	3	0.6	3.9	
	12	3	0.4	4.4				0.4	2.9
			0.3	2.0	24	00	3	0.7	4.1
	18	3	0.4	4.4				0.4	2.6
			0.4	2.2	06	3	0.9	4.8	
18	00	3	0.4	5.2				0.4	2.5
			0.3	2.3	12	1	0.9	4.5	
	06	3	0.4	5.2	18	1	0.9	4.5	
			0.3	2.5					

Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
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Station : Bombay (Contd.)

October, 1962.

25	00	1	0.9	4.5
	06	1	1.0	4.5
	12	1	0.8	4.3
	18	1	0.8	4.4
26	00	3	0.7	4.4
			0.5	2.5
	06	3	0.8	4.2
			0.6	2.6
	12	3	0.6	4.5
			0.5	2.7
	18	3	0.6	4.1
			0.4	2.0
27	00	3	0.7	4.4
			0.4	2.5
	06	3	1.0	3.9
			0.6	2.7
	12	3	1.0	4.4
			0.7	3.0
	18	3	0.8	4.4
			0.6	2.5
28	00	3	0.9	4.3
			0.6	2.5
	06	3	0.6	4.1
			0.5	2.5
	12	3	0.6	4.3
			0.4	2.8
	18	3	0.6	4.5
			0.4	2.5
29	00	3	0.6	4.0
			0.4	3.0
	06	3	0.6	4.0
			0.5	2.5
	12	3	0.8	3.9
			0.5	2.5
	18	1	0.9	3.3
30	00	1	0.9	3.2
	06	3	1.9	4.1
			0.8	2.0
	12	3	1.0	3.4
			0.6	2.0
	18	3	0.8	3.5
			0.6	2.0
31	00	3	0.8	3.5
			0.4	2.3
	06	3	0.7	3.5
			0.6	2.5
	12	3	0.8	3.4
			0.4	2.0
	18	1	0.9	3.1

Station: Visakhapatnam.

01	00	0,0	-	-
	06	2	0.2	3.2
	12	2	0.3	3.6
	18	2	0.3	4.0
02	00	2	0.2	3.0
	06	2	0.3	3.2
	12	2	0.2	2.9
	18	2	0.3	3.3
03	00	2	0.2	2.7
	06	2	0.3	3.6
	12	2	0.3	3.7
	18	2	0.3	3.5
04	00	2	0.2	4.0
	06	2	0.3	3.3
	12	2	0.3	4.0
	18	2	0.3	4.2
05	00	2	0.3	3.8
	06	2	0.3	3.9
	12	2	0.4	4.3
	18	2	0.3	4.4
06	00	2	0.4	4.3
	06	2	0.4	4.2
	12	2	0.3	3.9
	18	2	0.2	3.8
07	00	2	0.4	3.6
	06	2	0.3	3.8
	12	2	0.3	4.2
	18		-	-
08	00	2	0.3	3.7
	06	2	0.3	4.1
	12	2	0.3	4.2
	18	2	0.2	3.8
09	00	2	0.3	3.8
	06	2	0.3	3.5
	12	2	0.3	4.0
	18	2	0.2	3.8
10	00	2	0.3	4.0
	06	2	0.3	4.6
	12	2	0.2	4.6
	18	1	0.2	2.0
11	00	1	0.2	2.0
	06	2	0.3	3.3
	12	2	0.2	3.2
	18	1	0.2	2.2

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Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in m.m.	Mean period in sec.
Station : Visakhapatnam(Contd.)					<u>October, 1962.</u>				
12	00	1	0.2	2.2	23	00	1	0.3	2.7
	06	2	0.2	3.9		06	1	0.4	2.5
	12	0,0	-	-		12	3	0.5	3.0
	18	2	0.2	3.7		18	3	0.6	3.1
13	00	0,0	-	-	24	00	3	0.7	3.2
	06	2	0.2	3.8		06	3	0.9	3.1
	12		-	-		12	3	1.0	3.2
	18	2	0.5	4.7		18	3	0.8	3.0
14	00	0,0	-	-	25	00	3	0.7	3.0
	06	2	0.4	4.5		06	3	0.8	3.3
	12	0,0	-	-		12	3	0.8	3.4
	18	2	0.4	4.4		18	3	0.6	3.0
15	00	1	0.2	2.5	26	00	3	0.9	2.8
	06		-	-		06	3	1.0	2.6
	12		-	-		12	3	0.6	2.7
	18	1	0.2	2.5		18	3	0.6	2.9
16	00	1	0.3	2.5	27	00	3	0.6	2.9
	06	1	0.3	2.5		06	3	0.6	3.1
	12	1	0.3	2.5		12	3	0.6	4.3
	18	1	0.3	2.5		18	3	0.6	4.0
17	00	1	0.2	2.0	28	00	3	0.6	4.4
	06	1	0.2	2.5		06	3	0.5	3.5
	12	1	0.2	2.5		12	3	0.6	3.6
	18	1	0.2	2.5		18	1	0.8	3.4
18	00	1	0.2	2.5	29	00	1	0.8	3.4
	06	1	0.2	2.5		06	1	1.3	3.6
	12	1	0.2	2.5		12	1	1.7	3.5
	18	1	0.2	2.5		18	1	1.5	3.4
19	00	1	0.2	2.5	30	00	1	1.2	3.6
	06	1	0.2	2.5		06	1	1.6	3.9
	12	1	0.2	2.5		12	1	1.1	3.3
	18	1	0.3	3.0		18	1	1.0	3.4
20	00	1	0.3	3.0	31	00	1	0.8	3.6
	06	1	0.3	3.0		06	1	0.5	3.6
	12	1	0.3	2.7		12	2	0.4	3.6
	18	1	0.2	2.7		18	2	0.5	3.5
21	00	1	0.3	2.8					
	06	1	0.3	2.6					
	12	1	0.3	2.5					
	18	1	0.4	2.7					
22	00	1	0.4	2.7					
	06	1	0.3	2.6					
	12	1	0.3	2.6					
	18	1	0.3	2.7					

Date	Hour GMT	K	Mean amplitude in micron.	Mean period in sec.	Date	Hour GMT	K	Mean amplitude in micron.	Mean period in sec.
Station: Port Blair .					<u>October, 1962.</u>				
01	00	...	-	-	12	00	...	-	-
	06	...	-	-		06	...	-	-
	12	...	-	-		12	1	0.4	7
	18	...	-	-		18	1	0.4	7
02	00	...	-	-	13	00	1	0.2	7
	06	...	-	-		06	...	-	-
	12	...	-	-		12	1	0.2	7
	18	...	-	-		18	1	0.2	7
03	00	...	-	-	14	00	...	-	-
	06	...	-	-		06	...	-	-
	12	1	0.8	6		12	1	0.4	6
	18	1	0.8	6		18	1	0.4	6
04	00	1	0.8	5	15	00	1	0.4	7
	06	...	-	-		06	...	-	-
	12	1	1.2	5		12	1	0.2	7
	18	1	0.8	6		18	1	0.4	7
05	00	1	0.8	6	16	00	1	0.4	7
	06	1	0.8	7		06	1	0.4	7
	12	1	1.2	6		12	1	0.4	7
	18	1	0.8	5		18	1	0.4	7
06	00	1	0.8	5	17	00	1	0.4	7
	06	...	-	-		06	...	-	-
	12	...	-	-		12	1	0.2	6
	18	...	-	-		18	1	0.2	6
07	00	...	-	-	18	00	1	0.2	5
	06	...	-	-		06	...	-	-
	12	1	1.2	7		12	1	0.4	7
	18	1	0.8	6		18	1	0.4	7
08	00	1	0.8	7	19	00	1	0.4	7
	06	...	-	-		06	...	-	-
	12	1	0.8	6		12	1	0.8	7
	18	1	0.8	6		18	1	0.8	7
09	00	1	1.2	6	20	00	1	0.4	7
	06	1	0.4	6		06	...	-	-
	12	1	0.8	6		12	1	0.8	7
	18	1	0.4	6		18	1	0.4	7
10	00	1	0.4	6	21	00	...	-	-
	06	1	0.4	5		06	...	-	-
	12	...	-	-		12	1	1.2	3
	18	1	0.4	6		18	1	0.8	2
11	00	1	0.4	7	22	00	1	0.8	3
	06	1	0.8	6		06	1	0.8	3
	12	1	0.4	5		12	1	0.8	3
	18	1	0.4	7		18	1	0.8	3

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 Date Hour K Mean Mean Date Hour K Mean Mean  
 GMT amplitude period GMT amplitude period  
 in micron.in sec. in micron. in sec.  
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Station: Port Blair(Contd.)

October, 1962.

23	00	1	0.8	3	28	00	...	-	-
	06	...	-	-		06	...	-	-
	12	...	-	-		12	1	1.2	3
	18	...	-	-		18	1	1.2	3
24	00	...	-	-	29	00	1	1.2	3
	06	...	-	-		06	...	-	-
	12	...	-	-		12	1	1.2	3
	18	1	0.8	4		18	1	1.2	3
25	00	1	0.8	4	30	00	1	0.8	5
	06	...	-	4 <sup>4</sup>		06	1	0.8	3
	12	1	0.8	4		12	1	1.2	3
	18	1	0.4	4		18	1	1.2	5
26	00	1	0.4	5	31	00	3	0.8	3
	06	3	0.4	4				1.2	5
	12	3	0.4	3		06	...	-	-
	18	1	1.6	3		12	1	1.2	3
27	00	...	-	-		18	1	1.2	4
	06	...	-	-					
	12	...	-	-					
	18	...	-	-					

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MAR 3 1965



# SEISMOLOGICAL BULLETIN

NOV 1962

GOVERNMENT OF INDIA  
**METEOROLOGICAL DEPARTMENT**

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PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and constants

Station	Latitude	Longitude	Height a.s.l. (Metres)	Lithographic foundation	Instrument	Compt	Period in secs	Static Magnifica- tion	Damping ratio	Paper speed mm/min.	
Agra					Columbia	E	T <sub>0</sub> =15	T <sub>g</sub> =100		15	
					Long Period	N	T <sub>0</sub> =15	T <sub>g</sub> =85		15	
					- do -	Z	T <sub>0</sub> =15	T <sub>g</sub> =70		15	
Bombay	18.54°N, 72.40°E		5	Deccan Trap	Milne-Shaw	N	12	350	13:1	15	
					Milne-Shaw	E	12	350	23:1	8	
					Sprengnether	E	T <sub>0</sub> =T <sub>g</sub> =7 secs			30	
Bokaro	23.50°N, 85.48°E			Rock	Milne-Shaw	N	12	250	20:1	15	
					Milne-Shaw	E	12	250	20:1	15	
					Wood-Anderson	E	0.8	950	h=0.8	50	
					Wood-Anderson	N	0.8	1000	h=0.8	50	
Calcutta	22.32°N, 88.22°E		(1) 7	Alluvium	Milne-Shaw	E	12	250	20:1	8	
					(2) 6 Omori-Ewing	Wood-Anderson	N	2	870	Critical	30
					Omori-Ewing	N	15	32	-	25.4	
					Omori-Ewing	E	21	30	-	25.4	
Chatra	26.50°N, 87.10°E		151	Sand stone	Milne-Shaw	E	12	250	20:1	15	
					Wood-Anderson	N	1	1000	30:1	50	
					Benioff	Z	T <sub>0</sub> =0	T <sub>g</sub> =0.45 secs	Critical	60	
					Wenner- Accelerograph	ZNE	-	-	-	-	
Colombo	05.54°N, 79.52°E		7	Beach Sand	Milne-Shaw	E	12	250	20:1	-	
Dehra Dun	30.19°N, 78.02°E		682	Gravel	Wood-Anderson	N	0.8	950	Critical		
					Wood-Anderson	E	0.8	850	Critical	50	
					Milne-Shaw	N	12	250	20:1	8	
					Milne-Shaw	E	12	250	20:1	8	
Hyderabad	17.25°N, 78.27°E		535	Granite	Milne-Shaw	E	12	250	20:1	8	
					Milne-Shaw	N	12	250	20:1	8	
Kodaikanal	10.14°N, 77.28°E		2345	Rock	Milne-Shaw	E	10	250	20:1	8	
Madras	13.00°N, 80.11°E		15	-	Sprengnether	E	T <sub>0</sub> =T <sub>g</sub> =7.2 secs		Critical	30	
New Delhi	28.35°N, 77.12°E		207	Massive Quartzite							
Poona	18.32°N, 73.51°E		550	Deccan Trap	Sprengnether	Z	T <sub>0</sub> =T <sub>g</sub> =1.5		Critical	30	
					Wood-Anderson	E	4	1000		15	
					Milne-Shaw	N	12	280	20:1	8	
Port Blair	11.49°N, 92.43°E				Wood-Anderson	N	2	1000	20:1	30	
					Wood-Anderson	E	0.8	1000	55:1	30	
					Milne-Shaw	N	12	350	20:1	8	
Sehore					Wood-Anderson	N	0.8	980	Critical	30	
Shillong	25.34°N, 91.53°E		1500	Quartzite	Wood-Anderson	N	0.8	1000	h=0.8	30	
					Sand Stone	Wood-Anderson	E	0.8	1000	h=0.8	30
					(Shillong Quartzite)	Milne-Shaw	N	12	250	20:1	8
					Benioff	Z	T <sub>0</sub> =1.0	T <sub>g</sub> =18		50	
					Sprengnether	E	T <sub>0</sub> =T <sub>g</sub> =5.3		Critical	30	
					Wenner Accelerograph	ZNE	-	-	-	-	
Tocklai	28.45°N, 94.45°E			Alluvium	Wood-Anderson	E	0.8	970	h=0.8	50	
Vizianagram	18.07°N, 83.27°E				Wood-Anderson	E	0.8	1000	h=0.8	30	
					Wood-Anderson	N	2	1000	20:1	30	

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List of Seismograph Stations with their Instruments and Constants for 1932

| Station       | Latitude | Longitude              | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation            | Instrument     | Compt   | Period<br>in<br>secs | Static<br>Magnifi-<br>cation | Damping<br>ratio           | Paper<br>speed<br>mm/min |
|---------------|----------|------------------------|--------------------------------|---------------------------------------|----------------|---------|----------------------|------------------------------|----------------------------|--------------------------|
| Bombay        | 18.54°N, | 72.40°E                |                                | Deccan Trap                           | Milne-Shaw     | N       | 12                   | 350                          | 21:1                       | 8                        |
|               |          |                        |                                |                                       | Milne-Shaw     | E       | 12                   | 250                          | 21:1                       | 8                        |
|               |          |                        |                                |                                       | Sprengnether   | E       | To= 7.3              | 5000                         | 2.30:1                     | 30                       |
|               |          |                        |                                |                                       |                |         | Tg= 7.3              |                              |                            |                          |
|               |          |                        |                                | Benioff                               | Z              | -       | -                    | -                            | 50 for S.P.<br>30 for L.P. |                          |
| Bokaro        | 23.50°N, | 85.48°E                |                                | Rock                                  | Sprengnether   | E       | To=Tg=5.5            | 5200                         | 2.33:1                     | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 930                          | Critical                   | 50                       |
|               |          |                        |                                |                                       | Wood-Anderson  | F       | 0.8                  | 830                          | Critical                   | 50                       |
|               |          |                        |                                |                                       | Milne-Shaw     | E       | 12                   | 270                          | 20:1                       | 15                       |
|               |          |                        |                                |                                       | Milne-Shaw     | N       | 12                   | 250                          | 20:1                       | 15                       |
| Calcutta      | 22.32°N, | 88.22°E (1) 7<br>(2) 5 |                                | Milne-Shaw<br>Omori-Ewing<br>Alluvium | Milne-Shaw     | E       | 12                   | 300                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Milne-Shaw     | N       | 2                    | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                                       | Omori-Ewing    | E       | 10                   | 30                           |                            | 25.4                     |
|               |          |                        |                                |                                       | Omori-Ewing    | N       | 15                   | 32                           |                            | 25.4                     |
| Chatra        | 25.50°N, | 87.10°E                | 151                            | Sand Stone                            | Milne-Shaw     | N       | 10                   | 250                          | 20:1                       | 15                       |
|               |          |                        |                                |                                       | Milne-Shaw     | E       | 10                   | 250                          | 20:1                       | 15                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 940                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Benioff(S.P)   | Z       | To=0.72              | -                            | Es=23:1                    | 50                       |
|               |          |                        |                                |                                       |                | Tg=0.45 |                      | Eg=Critical                  |                            |                          |
| Delhi         | 28.41°N, | 77.13°E                | 207                            | Quartzite<br>Sand Stone               | Sprengnether   | E       | To=Tg=7.5            | 5000                         | Critical                   | 30                       |
|               |          |                        |                                |                                       | Milne-Shaw     | N       | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                                       | Benioff        | Z       | To=Tg=1.0            | -                            | -                          | 60                       |
|               |          |                        |                                |                                       | Press Ewing    | Z       | To=30 Tg=100         | -                            | -                          | 15                       |
|               |          |                        |                                |                                       | Press Ewing    | N       | To=30 Tg=100         | -                            | -                          | 15                       |
| Press Ewing   | E        | To=30 Tg=100           | -                              | -                                     | 15             |         |                      |                              |                            |                          |
| Dehra Dun     | 30.19°N, | 78.02°E                | 582                            | Gravel                                | Wilson Lamison | Z       | To=Tg=1.5            | -                            | -                          | 50                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | E       | 0.8                  | 1000                         | Critical                   | 30                       |
|               |          |                        |                                |                                       | Milne-Shaw     | N       | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Milne-Shaw     | E       | 12                   | 250                          | 20:1                       | 8                        |
| Hyderabad     | 17.25°N, | 78.27°E                | 536                            | Granite                               | Milne-Shaw     | E       | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Milne-Shaw     | N       | 12                   | 250                          | 20:1                       | 8                        |
| Kodakanal     | 10.14°N, | 77.29°E                | 2345                           | Rock                                  | Milne-Shaw     | E       | 10                   | 250                          | 20:1                       | 8                        |
| Madras        | 13.00°N, | 80.11°E                | 15                             |                                       | Sprengnether   | E       | To=Tg=7.5            | 5000                         | 23:1                       | 30                       |
| Poona         | 18.32°N, | 73.51°E                | 550                            | Deccan Trap                           | Milne-Shaw     | N       | 12                   | 280                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Wood-Anderson  | E       | 4.0                  | 1000                         | 20:1                       | 15                       |
|               |          |                        |                                |                                       | Sprengnether   | Z       | 1.5                  | 3000                         | 2.1:1                      | 30                       |
| Port Blair    | 11.49°N, | 92.43°E                |                                |                                       | Milne-Shaw     | F       | 12                   | 290                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 2.0                  | 950                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | E       | 0.8                  | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Benioff        | Z       | To= 1.0              | Tg=1.6                       | -                          | 30                       |
| Sehore        | 23.10°N, | 77.08°E                |                                |                                       | Wood-Anderson  | E       | 0.8                  | 840                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 900                          | Critical                   | 30                       |
| Shillong      | 25.34°N, | 91.53°E                |                                | Quartzite<br>Sand Stone               | Milne-Shaw     | N       | 12                   | 250                          | 20:1                       | 8                        |
|               |          |                        |                                |                                       | Benioff        | Z       | To= 1.0              | Tg=1.0                       | -                          | 50                       |
|               |          |                        |                                |                                       | Wood-Anderson  | E       | 0.8                  | 900                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | 0.8                  | 970                          | Critical                   | 30                       |
| Tocklai       | 28.45°N, | 94.45°E                |                                | Alluvium                              | Sprengnether   | E       | To=5.5<br>Tg=6.5     | 3900                         | 2.4:1                      | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | E       | 0.8                  | 970                          | h=0.8                      | 50                       |
| Visakhapatnam | 18.07°N, | 83.27°E                |                                |                                       | Sprengnether   | E       | To=Tg=5.9            | 5000                         | 1.2:1                      | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | N       | To= 2.0              | 970                          | Critical                   | 30                       |
|               |          |                        |                                |                                       | Wood-Anderson  | E       | To= 0.8              | 970                          | Critical                   | 30                       |



From the ISC collection scanned by SISMOS



| DATE                   | STATION                                                                                         | COMPT    | PHASE                                                          | G. M. T.<br>h. m. s.                                                                               | △<br>km. | REMARKS.             |
|------------------------|-------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------|----------------------|
| <u>November, 1962.</u> |                                                                                                 |          |                                                                |                                                                                                    |          |                      |
| 01                     | Delhi                                                                                           | Z        | iP<br>i                                                        | 02 02 26<br>02 27                                                                                  |          | Slight, rarefaction. |
| 01                     | Shillong                                                                                        | Z        | eP<br>P<br>PP<br>Lq<br>eS                                      | 06 35 33<br>35 37<br>35 40<br>35 57<br>36 13                                                       | 480      | Slight.              |
| 01                     | Delhi                                                                                           | Z        | eP                                                             | 07 51 33                                                                                           |          | Slight, compression. |
| 01                     | Shillong                                                                                        | Z        | iP                                                             | 09 23 06                                                                                           |          | Slight, tremor.      |
|                        | Delhi                                                                                           | ZNE      | eP                                                             | 09 25 39                                                                                           |          | Slight.              |
| 01                     | Shillong                                                                                        | Z        | iPg<br>iSg                                                     | 11 10 48<br>10 53                                                                                  | 50       | Slight.              |
| 01                     | Epc:- 37.2° N, 70.0° E, Hindukush region.<br>h = about 132 km.<br>-H= 13 h 46 m 43.4 s (USCGS). |          |                                                                |                                                                                                    |          |                      |
|                        | Dehra Dun                                                                                       | Z        | iP<br>PP<br>PPP<br>P*<br>Pg<br>Lq<br>ZNE<br>ZN<br>Z<br>ZE<br>Z | 13 48 58<br>49 05<br>49 12<br>49 22<br>49 49<br>50 46<br>50 56<br>51 08<br>51 15<br>51 34<br>52 03 | 1160     | Slight, compression. |
|                        | Delhi                                                                                           | Z        | eP<br>iS                                                       | 13 49 10<br>51 08                                                                                  | 1160     | Slight, rarefaction. |
|                        | Chatra                                                                                          | Z<br>ZNE | iP<br>eS                                                       | 13 50 43<br>54 05                                                                                  | 2030     | Slight, compression. |
|                        | Poona                                                                                           | Z        | iP<br>iS<br>ZE                                                 | 13 51 03<br>54 58<br>56 17                                                                         | 2390     | Slight, rarefaction. |
|                        | Shillong                                                                                        | Z        | eP                                                             | 13 51 29                                                                                           |          | Slight, distant.     |
|                        | Bokaro                                                                                          | NE       | eS<br>e<br>e<br>e<br>e<br>e<br>e                               | 13 54 20<br>54 41<br>57 03<br>57 08<br>57 23<br>57 42<br>58 58<br>59 28                            |          | Slight.              |
|                        | Bombay                                                                                          | NE<br>E  | S<br>e<br>S                                                    | 13 54 34<br>56 48<br>57 05                                                                         |          | Slight.              |

| DATE                   | STATION                                                                                                           | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|--------------------------------|
| <u>November, 1962.</u> |                                                                                                                   |       |       |                      |                 |                                |
| 01                     | Calcutta                                                                                                          | E     | eS    | 13 55 26             |                 | Slight.                        |
|                        | Hyderabad                                                                                                         | E     | S     | 13 55 28             |                 | Slight.                        |
|                        |                                                                                                                   |       | L     | 57 01                |                 |                                |
|                        |                                                                                                                   |       | M     | 58 01                |                 | Period = 6 secs.<br>$\mu = 3.$ |
|                        | Visakhapatnam                                                                                                     | E     | eS    | 13 55 54             |                 | Slight.                        |
|                        |                                                                                                                   |       | i     | 58 47                |                 |                                |
|                        | Madras                                                                                                            | E     | e     | 13 57 00             |                 | Slight.                        |
|                        |                                                                                                                   |       | e     | 14 00 16             |                 |                                |
|                        |                                                                                                                   |       | e     | 00 50                |                 |                                |
| 01                     | Epc:- $37.4^{\circ}$ N $70.9^{\circ}$ E , Hindukush region.<br>h = about 124 km.<br>-H= 15 h 26 m 56.1 s (USCGS). |       |       |                      |                 |                                |
|                        | Dehra Dun                                                                                                         | Z     | eP    | 15 29 11             | 1160            | Slight.                        |
|                        |                                                                                                                   |       | PP    | 29 19                |                 |                                |
|                        |                                                                                                                   | E     | PPP   | 29 25                |                 |                                |
|                        |                                                                                                                   | Z     | Pg    | 30 09                |                 |                                |
|                        |                                                                                                                   | ZNE   | iS    | 31 10                |                 |                                |
|                        |                                                                                                                   | Z     | SS    | 31 22                |                 |                                |
|                        |                                                                                                                   |       | SSS   | 31 34                |                 |                                |
|                        |                                                                                                                   |       | Sg,M  | 32 18                |                 |                                |
|                        | Delhi                                                                                                             | Z     | iP    | 15 29 25             |                 | Slight, rarefaction.           |
|                        | Chatra                                                                                                            | Z     | iP    | 15 30 54             | 2510            | Slight, rarefaction.           |
|                        |                                                                                                                   | NE    | eS    | 34 59                |                 |                                |
|                        | Shillong                                                                                                          | Z     | eP    | 15 31 41             |                 | Slight, distant.               |
|                        | Poona                                                                                                             | Z     | eS    | 15 35 44             |                 | Slight.                        |
|                        |                                                                                                                   | ZE    | i     | 43 25                |                 |                                |
|                        |                                                                                                                   | Z     | P     | 43 40                |                 |                                |
|                        | Visakhapatnam                                                                                                     | E     | eS    | 15 36 45             |                 | Moderate.                      |
|                        |                                                                                                                   |       | eP    | 38 07                |                 |                                |
|                        |                                                                                                                   |       | iP    | 38 20                |                 |                                |
|                        |                                                                                                                   |       | iP    | 39 01                |                 |                                |
|                        |                                                                                                                   |       | i     | 42 22                |                 |                                |
|                        |                                                                                                                   |       | iP    | 42 46                |                 |                                |
|                        |                                                                                                                   |       | iS    | 44 49                |                 |                                |
|                        |                                                                                                                   |       | SSS   | 45 23                |                 |                                |
|                        | Calcutta                                                                                                          | E     | eS    | 15 36 50             |                 | Slight.                        |
|                        |                                                                                                                   |       | i     | 48 53                |                 |                                |
|                        | Bombay                                                                                                            | E     | eS    | 15 36 55             |                 | Slight.                        |
|                        |                                                                                                                   |       | e     | 43 32                |                 |                                |
|                        |                                                                                                                   |       | e     | 47 26                |                 |                                |
|                        |                                                                                                                   | NE    | e     | 53 31                |                 |                                |
|                        |                                                                                                                   |       | e     | 56 01                |                 |                                |

| DATE                  | STATION                                                                                                         | COMPT                                      | PHASE                                      | G. M. T.<br>h. m. s.                                                  | $\Delta$<br>km. | REMARKS                                                                                             |
|-----------------------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|-----------------------------------------------------------------------|-----------------|-----------------------------------------------------------------------------------------------------|
| <u>November, 1962</u> |                                                                                                                 |                                            |                                            |                                                                       |                 |                                                                                                     |
| 01                    | Madras                                                                                                          | E                                          | eS<br>e<br>e<br>e                          | 15 37 59<br>40 48<br>44 47<br>50 08                                   |                 | Slight.                                                                                             |
|                       | Hyderabad                                                                                                       | E                                          | M                                          | 15 38 07                                                              |                 | Period = 9 secs<br>u = 3.                                                                           |
| 01                    | Epc:- 1.9° N 133.0° E Off the coast of western New Guinea.<br>h = about 58 km.<br>-H= 15 h 33 m 22.6 s (USCGS). |                                            |                                            |                                                                       |                 |                                                                                                     |
|                       | Port Blair                                                                                                      | E                                          | eP<br>i<br>i<br>iS<br>i<br>i<br>i          | 15 41 03<br>42 50<br>43 20<br>47 13<br>48 41<br>49 52<br>50 51        | 4510            | Slight.                                                                                             |
|                       | Shillong                                                                                                        | ZNE<br>E                                   | iP<br>eS<br>i                              | 15 41 40<br>48 27<br>50 29                                            | 5140            | Slight, compression.<br>Initial ground motion<br>on towards West                                    |
|                       | Chatra                                                                                                          | Z                                          | iP                                         | 15 42 15                                                              |                 | Slight, distant                                                                                     |
|                       | Dehra Dun                                                                                                       | Z                                          | iP<br>iS                                   | 15 43 18<br>51 28                                                     | 6630            | Slight, compression                                                                                 |
|                       | Delhi                                                                                                           | ZE<br>ZN<br>ZE<br>ZN<br>ZNE<br><br>ZE<br>E | iP<br>i<br>PcP<br>i<br>PP<br>iS<br>PS<br>M | 15 43 19<br>43 45<br>44 09<br>44 24<br>45 36<br>51 23<br>51 55<br>- - | 6520            | Moderate. First<br>ground motion East<br>rarefaction.<br><br>Period = 20 secs.<br>Amp. = 15.75 m.m. |
| 01                    | Epc:- 1.7° N 132.9° E, Off coast of western New Guinea.<br>h = about 58 km.<br>-H= 15 h 52 m 43.2 s (USCGS).    |                                            |                                            |                                                                       |                 |                                                                                                     |
|                       | Shillong                                                                                                        | Z                                          | iP                                         | 16 00 59                                                              |                 | Slight, distant,<br>rarefaction.                                                                    |
| 01                    | Shillong                                                                                                        | Z                                          | iP                                         | 16 37 50                                                              |                 | Slight, tremor,<br>compression.                                                                     |
| 01                    | Shillong                                                                                                        | Z                                          | eP                                         | 16 45 46                                                              |                 | Slight, tremor.                                                                                     |
| 01                    | Shillong                                                                                                        | Z                                          | iP                                         | 16 52 17                                                              |                 | Slight, distant,<br>rarefaction.                                                                    |
| 01                    | Delhi                                                                                                           | Z                                          | eP                                         | 17 39 21                                                              |                 | Slight.                                                                                             |

| DATE                   | STATION                                                                                                   | COMPT    | PHASE                                                     | G. M. T.<br>h. m. s.                                                                   | $\Delta$<br>km. | REMARKS.                                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                           |          |                                                           |                                                                                        |                 |                                                                                  |
| 01                     | Epc:- 2.0° N 133.5° E (Shillong).<br>-H= 17 h 52 m 11 s                                                   |          |                                                           |                                                                                        |                 |                                                                                  |
|                        | Epc:- 109.° N 132.8° E, North of Western New Guinea.<br>h = about 36 km.<br>-H= 17 h 52 m 20.2 s (USCGS). |          |                                                           |                                                                                        |                 |                                                                                  |
|                        | Shillong                                                                                                  | ZNE<br>E | iP<br>PP<br>iS<br>e                                       | 18 00 40<br>02 28<br>07 27<br>09 22                                                    | 5140            | Slight, rarefaction.<br>Initial ground<br>motion towards<br>East.                |
|                        | Port Blair                                                                                                | E        | iP<br>i<br>PP<br>i<br>iS                                  | 18 00 52<br>01 43<br>02 15<br>03 15<br>07 01                                           | 4500            | Slight.                                                                          |
|                        | Calcutta                                                                                                  | E        | eP<br>PcP<br>PP<br>iS                                     | 18 01 03<br>02 23<br>02 57<br>10 44                                                    | 5450            | Slight.                                                                          |
|                        | Chatra                                                                                                    | Z<br>E   | iP<br>eS                                                  | 18 01 13<br>08 30                                                                      | 5670            | Feeble, rarefaction.                                                             |
|                        | Bokaro                                                                                                    | NE       | eP<br>PP<br>eS<br>PS<br>PPS<br>SS<br>Lr<br>M              | 18 01 17<br>03 14<br>08 36<br>08 40<br>08 47<br>12 03<br>15 49<br>20 01                | 5700            | Slight. Initial<br>ground motion<br>North-West.                                  |
|                        | Vishakhapatnam                                                                                            | E        | iP<br>iPP<br>ePPP<br>iS<br>ePS<br>ePPS<br>eCS             | 18 01 23<br>03 22<br>04 25<br>08 46<br>08 59<br>09 08<br>11 05                         | 5780            | Moderate. First<br>ground movement<br>East.                                      |
|                        | Madras                                                                                                    | E        | iP<br>PP<br>PPP<br>eS<br>PS<br>PPS<br>SS<br>Lq<br>Lr<br>M | 01 39<br>03 46<br>02 52<br>09 10<br>09 18<br>09 25<br>12 50<br>14 32<br>17 18<br>21 51 | 5920            | Moderate. Initial<br>ground movement<br>towards West.                            |
|                        | Hyderabad                                                                                                 | E        | iP<br>PP<br>PPP<br>iS<br>SS<br>Lr<br>M                    | 18 01 54<br>04 01<br>05 22<br>09 42<br>13 10<br>18 37<br>23 43                         | 6220            | Slight. Initial<br>ground movement<br>towards West.<br><br>Pd. = 9 secs. $\mu=3$ |

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| DATE                   | STATION                                                                                                         | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                 |       |       |                      |                 |                                                                  |
| 01                     | Delhi                                                                                                           | ZNE   | iP    | 18 02 18             | 6560            | Moderate. First ground motion North, East, rarefaction.          |
|                        |                                                                                                                 |       | i     | 02 44                |                 |                                                                  |
|                        |                                                                                                                 | E     | PcP   | 03 11                |                 |                                                                  |
|                        |                                                                                                                 | ZE    | i     | 03 41                |                 |                                                                  |
|                        |                                                                                                                 | NE    | i     | 04 44                |                 |                                                                  |
|                        |                                                                                                                 | ZNE   | iS    | 10 24                |                 |                                                                  |
|                        |                                                                                                                 | N     | SS    | 14 44                |                 |                                                                  |
|                        |                                                                                                                 | E     | M     | - -                  |                 | Period = 27 secs.<br>Amp. = 9 mm.                                |
|                        | Dehra Dun                                                                                                       | ZNE   | iP    | 18 02 19             | 6640            | Moderate. First ground movement towards South West, rarefaction. |
|                        |                                                                                                                 | N     | PcP   | 03 00                |                 |                                                                  |
|                        |                                                                                                                 | E     | PP    | 04 41                |                 |                                                                  |
|                        |                                                                                                                 | NE    | PPP   | 06 09                |                 |                                                                  |
|                        |                                                                                                                 | N     | PcS   | 07 01                |                 |                                                                  |
|                        |                                                                                                                 | NE    | iS    | 10 30                |                 |                                                                  |
|                        |                                                                                                                 | E     | SS    | 14 37                |                 |                                                                  |
|                        |                                                                                                                 |       | PKKP1 | 22 45                |                 |                                                                  |
|                        | Poona                                                                                                           | ZE    | iP    | 18 02 24             | 6780            | Slight, rarefaction. Initial ground movement East.               |
|                        |                                                                                                                 | E     | iS    | 10 42                |                 |                                                                  |
|                        | Bombay                                                                                                          | E     | eP    | 18 02 33             | 6880            | Slight.                                                          |
|                        |                                                                                                                 |       | PP    | 04 47                |                 |                                                                  |
|                        |                                                                                                                 | NE    | eS    | 10 56                |                 |                                                                  |
|                        |                                                                                                                 | E     | e     | 11 33                |                 |                                                                  |
| 01                     | Chatra                                                                                                          | Z     | eP    | 20 21 54             | 380             | Feeble.                                                          |
|                        |                                                                                                                 |       | eS    | 22 35                |                 |                                                                  |
| 01                     | Shillong                                                                                                        | Z     | iPg   | 20 59 42             |                 | Slight.                                                          |
| 01                     | Epc:- $43.9^{\circ}$ N $145.2^{\circ}$ E, Kurile Islands.<br>h = about 131 km.<br>-H= 23 h 20 m 59.6 s (USCGS). |       |       |                      |                 |                                                                  |
|                        | Delhi                                                                                                           | Z     | iP    | 23 29 40             |                 | Slight, rarefaction.                                             |
|                        |                                                                                                                 |       | i     | 30 23                |                 |                                                                  |
|                        |                                                                                                                 |       | i     | 30 55                |                 |                                                                  |
| 02                     | Chatra                                                                                                          | Z     | iP    | 10 42 48             | 190             | Feeble, compression                                              |
|                        |                                                                                                                 |       | eS    | 43 11                |                 |                                                                  |
|                        | Shillong                                                                                                        | Z     | eP    | 10 42 59             |                 | Slight, near.                                                    |
| 02                     | Shillong                                                                                                        | Z     | eP    | 13 09 22             |                 | Slight, distant.                                                 |
| 02                     | Epc:- $36.5^{\circ}$ N $71.4^{\circ}$ E, Hindukush.<br>h = about 33 km.<br>-H= 13 h 23 m 01.0 s (USCGS).        |       |       |                      |                 |                                                                  |
|                        | Delhi                                                                                                           | Z     | iP    | 13 25 17             |                 | Slight, compression.                                             |
|                        | Chatra                                                                                                          | Z     | iP    | 13 26 51             | 1710            | Slight, compression                                              |
|                        |                                                                                                                 |       | eS    | 29 43                |                 |                                                                  |

| DATE                   | STATION                                                                                     | COMPT               | PHASE                                         | G. M.T.<br>h. m. s.                                                        | $\Delta$<br>km. | REMARKS.                                           |
|------------------------|---------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------|----------------------------------------------------------------------------|-----------------|----------------------------------------------------|
| <u>November, 1962.</u> |                                                                                             |                     |                                               |                                                                            |                 |                                                    |
| 02                     | Shillong                                                                                    | Z                   | iP                                            | 13 27 40                                                                   |                 | Slight, distant,<br>rarefaction.                   |
| 02                     | Dehra Dun                                                                                   | NE                  | e<br>i                                        | 13 50 55<br>14 06 02                                                       |                 | Tremor.                                            |
| 02                     | Shillong                                                                                    | Z                   | eP                                            | 14 47 19                                                                   |                 | Slight, near.                                      |
|                        | Chatra                                                                                      | Z                   | iP<br>e                                       | 14 48 47<br>50 09                                                          |                 | Feeble, rarefaction.                               |
|                        | Delhi                                                                                       | E<br>ZNE            | iP<br>e                                       | 14 51 37<br>56 07                                                          |                 | Slight. First<br>ground motion towards<br>West.    |
| 02                     | Epc:- 10.0° S 117.8° E, South Sumbawa.<br>h = about 33 km.<br>-H= 14 h 46 m 39.2 s (USCGS). |                     |                                               |                                                                            |                 |                                                    |
|                        | Shillong                                                                                    | Z                   | iP                                            | 14 54 40                                                                   |                 | Slight, distant,<br>compression.                   |
|                        | Madras                                                                                      | E                   | eP<br>PP<br>PPP<br>iS<br>PPS<br>Lq<br>Lr<br>M | 14 54 45<br>56 27<br>57 04<br>15 01 16<br>01 30<br>05 02<br>07 11<br>11 00 | 4860            | Slight.                                            |
|                        | Visakhapatnam                                                                               | E                   | eP<br>eS                                      | 14 54 53<br>15 01 17                                                       | 4740            | Moderate.                                          |
|                        | Chatra                                                                                      | Z                   | eP<br>ePP                                     | 14 55 09<br>56 43                                                          |                 | Slight.                                            |
|                        | Port                                                                                        | E                   | eP<br>PP<br>i<br>i<br>eS<br>SS<br>Lr<br>M     | 14 55 21<br>56 09<br>56 30<br>58 30<br>59 39<br>15 00 51<br>01 51<br>03 57 | 2730            | Slight. Identifica-<br>tion of phases<br>doubtful. |
|                        | Poona                                                                                       | Z<br>NE             | iP<br>eS                                      | 14 55 46<br>15 03 03                                                       | 5670            | Slight, rarefaction.                               |
|                        | Bombay                                                                                      | ZNE<br>E<br>NE<br>N | eP<br>e<br>eS<br>M                            | 14 56 00<br>58 07<br>15 03 22<br>24 -                                      | 5760            | Slight.                                            |
|                        | Dehra Dun                                                                                   | Z                   | eP                                            | 14 56 11                                                                   |                 | Slight.                                            |
|                        | Hyderabad                                                                                   | E                   | M                                             | 15 02 00                                                                   |                 | Period = 6 secs.<br>$\mu = 2$                      |

| DATE                   | STATION                                                                                                 | COMPT       | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|------------------------|---------------------------------------------------------------------------------------------------------|-------------|--------------|----------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                                         |             |              |                            |                 |                                  |
| 02                     | Delhi                                                                                                   | N<br>E<br>Z | i<br>i<br>i  | 15 03 39<br>03 43<br>03 57 |                 | Slight.                          |
| 02                     | Epc:- 36.7° N 141.1° E, Near east coast of Honshu, Japan.<br>h = about 75 km. (USCGS).<br>-H= 1500 25.4 |             |              |                            |                 |                                  |
|                        | Shillong                                                                                                | Z           | iP           | 15 08 20                   |                 | Slight, distant,<br>rarefaction. |
|                        | Dehra Dun                                                                                               | Z           | iP           | 15 08 33                   |                 | Slight.                          |
|                        | Chatra                                                                                                  | Z           | iP           | 15 08 47                   |                 | Feeble, distant,<br>compression. |
|                        | Delhi                                                                                                   | Z           | iP           | 15 09 40                   |                 | Slight, rarefaction.             |
|                        | Poona                                                                                                   | Z           | iP           | 15 10 35                   |                 | Slight, distant,<br>rarefaction. |
| 02                     | Epc:- 10.2° S 117.6° E, South of Sumbawa.<br>h = about 33 km.<br>-H= 15 h 12 m 37.2 s (USCGS).          |             |              |                            |                 |                                  |
|                        | Chatra                                                                                                  | Z           | eP<br>e<br>i | 15 20 17<br>21 11<br>23 11 |                 | Feeble, distant.                 |
|                        | Shillong                                                                                                | Z           | eP           | 15 20 41                   |                 | Slight.                          |
|                        | Poona                                                                                                   | Z           | eP           | 15 21 48                   |                 | Slight, distant.                 |
| 02                     | Chatra                                                                                                  | Z           | iP           | 16 17 23                   |                 | Feeble, distant,<br>rarefaction. |
|                        | Delhi                                                                                                   | Z           | iP           | 16 17 33                   |                 | Slight, compression.             |
| 02                     | Shillong                                                                                                | Z           | eP           | 23 31 24                   |                 | Slight, distant.                 |
| 02                     | Shillong                                                                                                | Z           | eP           | 23 45 38                   |                 | Slight.                          |
| 03                     | Shillong                                                                                                | Z           | iP           | 00 45 10                   |                 | Slight, distant,<br>compression. |
| 03                     | Shillong                                                                                                | Z           | iP           | 01 11 45                   |                 | Slight, distant,<br>rarefaction. |
| 03                     | Shillong                                                                                                | Z           | iP           | 03 20 41                   |                 | Slight, distant,<br>compression. |
| 03                     | Epc:- 10.3° S, 117.8° E, South of Sumbawa,<br>-H = 05h. 00m. 29.7s., h = about 33 km. (USCGS).          |             |              |                            |                 |                                  |
|                        | Shillong                                                                                                | Z           | iP           | 05 08 33                   |                 | Slight, distant,<br>rarefaction. |
|                        | Delhi                                                                                                   | Z           | iP           | 05 09 58                   |                 | Slight, compression.             |

| DATE                   | STATION                                                                                                           | COMPT   | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                      |
|------------------------|-------------------------------------------------------------------------------------------------------------------|---------|--------------|----------------------------|-----------------|-------------------------------|
| <u>November, 1962.</u> |                                                                                                                   |         |              |                            |                 |                               |
| 03                     | Delhi                                                                                                             | Z       | iP<br>i      | 08 34 17<br>34 25          |                 | Slight, compression.          |
| 03                     | Epc:- 15.0° S 167.4° E, New Hebrides Island, Felt at Santo.<br>h = about 134 km.<br>-H= 14 h 28 m 15.2 s (USCGS). |         |              |                            |                 |                               |
|                        | Shillong                                                                                                          | Z       | eP           | 14 40 32                   |                 | Slight, distant.              |
| 03                     | Epc:- 37.1° N 95.5° E, Tsinghai Province, China.<br>h = about 33 km.<br>-H= 15 h 01 m 39.6 s (USCGS).             |         |              |                            |                 |                               |
|                        | Shillong                                                                                                          | Z       | eP           | 15 04 28                   |                 | Slight, distant.              |
| 03                     | Delhi                                                                                                             | Z       | iP           | 16 35 58                   |                 | Slight, compression.          |
| 03                     | Delhi                                                                                                             | Z       | iP           | 16 37 34                   |                 | Slight, compression.          |
|                        | Shillong                                                                                                          | Z       | eP           | 16 38 20                   |                 | Slight, distant.              |
| 03                     | Dehra Dun                                                                                                         | Z       | eP<br>i      | 17 35 49<br>37 24          |                 | Slight.                       |
| 03                     | Epc:- 4.5° S 103.4° E, Southern Sumatra.<br>h = about 33 km.<br>-H= 19 h 04 m 20.8 s (USCGS).                     |         |              |                            |                 |                               |
|                        | Shillong                                                                                                          | Z       | iP           | 19 10 45                   |                 | Slight, distant, compression. |
|                        | Delhi                                                                                                             | Z       | iP           | 19 12 05                   |                 | Slight, compression.          |
| 03                     | Shillong                                                                                                          | Z       | iP           | 20 34 27                   |                 | Slight, distant, rarefaction. |
| 03                     | Shillong                                                                                                          | Z       | iP           | 22 07 57                   |                 | Slight, distant, compression. |
| 03                     | Shillong                                                                                                          | Z       | iP           | 23 27 05                   |                 | Slight, distant, compression. |
|                        | Chatra                                                                                                            | Z<br>ZE | eP<br>i      | 23 27 40<br>30 02          |                 | Slight, distant.              |
|                        | Calcutta                                                                                                          | E       | eP           | 23 29 36                   |                 | Slight.                       |
|                        | Bokaro                                                                                                            | E       | eP<br>i<br>e | 23 30 05<br>31 14<br>32 03 |                 | Slight, distant.              |
|                        | Bombay                                                                                                            | E<br>NE | e<br>e       | 23 35 16<br>39 42          |                 | Slight.                       |
| 03                     | Bombay                                                                                                            | N<br>E  | e<br>e<br>e  | 23 50 05<br>51 21<br>57 06 |                 | Slight.                       |



| DATE                   | STATION                                                                                               | COMP         | PHASE                                     | G. M. T.<br>h. m. s.                                              | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------|-------------------------------------------------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                                       |              |                                           |                                                                   |                 |                                  |
| 04                     | Shillong                                                                                              | Z            | iP                                        | 00 35 02                                                          |                 | Slight, distant,<br>rarefaction. |
| 04                     | Chatra                                                                                                | Z            | eP<br>eS                                  | 02 36 52<br>38 31                                                 | 960             | Feeble, compression.             |
|                        | Calcutta                                                                                              | E            | e                                         | 02 39 36                                                          |                 | Slight.                          |
|                        | Delhi                                                                                                 | Z            | iP                                        | 02 41 54                                                          |                 | Slight, compression.             |
| 04                     | Delhi                                                                                                 | Z            | iP                                        | 07 17 51                                                          |                 | Slight, rarefaction.             |
| 04                     | Epc:- 40.3° N 77.7° E, Sinkiang Province, China.<br>h = about 33 km.<br>-H= 10 h 57 m 04.2 s (USCGS). |              |                                           |                                                                   |                 |                                  |
|                        | Dehra Dun                                                                                             | Z            | iP<br>Pg<br>iS<br>SS<br>SSS<br>S*<br>Sg,M | 10 59 28<br>11 00 18<br>01 17<br>01 28<br>01 39<br>01 51<br>02 19 | 1060            | Slight, compression.             |
|                        | Delhi                                                                                                 | Z            | iP<br>iS                                  | 10 59 46<br>11 01 53                                              | 1240            | Slight, compression.             |
|                        | Shillong                                                                                              | Z            | eP                                        | 11 01 24                                                          |                 | Slight.                          |
| 04                     | Delhi                                                                                                 | Z            | eP                                        | 12 41 17                                                          |                 | Slight.                          |
| 04                     | Port Blair                                                                                            | NE           | e<br>i<br>i<br>i<br>i                     | 13 41 14<br>41 45<br>42 05<br>42 40<br>42 50                      |                 | Slight.                          |
|                        | Visakhapatnam                                                                                         | E<br>NE<br>E | eP<br>i<br>e                              | 13 42 12<br>43 40<br>46 12                                        |                 | Slight.                          |
|                        | Shillong                                                                                              | Z            | iP<br>i                                   | 13 42 15<br>43 47                                                 |                 | Slight.                          |
|                        | Bokaro                                                                                                | NE           | eP<br>i<br>i<br>e<br>e<br>e               | 13 42 26<br>46 01<br>46 17<br>46 35<br>47 18<br>48 49             |                 | Slight, distant.                 |
| 04                     | Chatra                                                                                                | Z<br>ZNE     | eP<br>PP<br>PPP<br>Lq<br>eS<br>SS<br>M    | 13 42 45<br>42 53<br>43 00<br>44 43<br>44 52<br>45 05<br>46 13    | 1240            | Slight.                          |

| DATE                   | STATION                                                                                                                                          | COMPT                         | PHASE                         | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                                                   |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|----------------------------------------------------------------|-----------------|------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                                                  |                               |                               |                                                                |                 |                                                            |
| 04                     | Calcutta                                                                                                                                         | E                             | e                             | 13 43 09                                                       |                 | Slight.                                                    |
|                        |                                                                                                                                                  |                               | e                             | 44 36                                                          |                 |                                                            |
|                        |                                                                                                                                                  |                               | e                             | 45 18                                                          |                 |                                                            |
|                        | Madras                                                                                                                                           | E                             | e                             | 13 43 12                                                       | 1080            | Slight.                                                    |
|                        |                                                                                                                                                  |                               | e                             | 44 56                                                          |                 |                                                            |
|                        |                                                                                                                                                  |                               | e                             | 45 03                                                          |                 |                                                            |
|                        |                                                                                                                                                  |                               | e                             | 45 13                                                          |                 |                                                            |
|                        |                                                                                                                                                  |                               | e                             | 45 20                                                          |                 |                                                            |
|                        |                                                                                                                                                  |                               | e                             | 46 07                                                          |                 |                                                            |
|                        | Poona                                                                                                                                            | Z<br>ZN                       | iP<br>e                       | 13 44 15<br>47 17                                              |                 | Slight, distant,<br>rarefaction.                           |
|                        | Delhi                                                                                                                                            | Z                             | iP<br>i<br>i<br>i             | 13 44 22<br>44 31<br>47 26<br>47 31                            |                 | Slight, rarefaction.                                       |
| 04                     | Shillong                                                                                                                                         | Z                             | iPg<br>iS                     | 15 10 38<br>11 03                                              | 290             | Slight.                                                    |
|                        | Chatra                                                                                                                                           | Z                             | eP<br>Es                      | 15 11 37<br>12 51                                              | 710             | Feeble.                                                    |
| 04                     | Delhi                                                                                                                                            | Z                             | eP                            | 20 04 48                                                       |                 | Slight.                                                    |
| 04                     | Delhi                                                                                                                                            | Z                             | iP                            | 20 55 46                                                       |                 | Tremor, compression.                                       |
| 04                     | Epic: - 43.2° S 75.6° W, Off coast of Southern Chile.<br>-H= 22 h 53 m 34.2 s (G.M.T.)<br>Mag. : 5 $\frac{3}{4}$ -6(Pas); 5 $\frac{1}{2}$ (Pal). |                               |                               |                                                                |                 |                                                            |
|                        | Bombay                                                                                                                                           | ZNE<br>N<br>NE<br>E<br>E<br>E | ePKP<br>e<br>e<br>e<br>e<br>e | 23 13 06<br>16 50<br>17 56<br>27 32<br>30 40<br>32 01<br>33 36 |                 | Slight.                                                    |
|                        | Poona                                                                                                                                            | ZNE                           | iPKP                          | 23 13 07                                                       |                 | Slight, rarefaction.<br>Initial ground move-<br>ment East. |
|                        | Madras                                                                                                                                           | E                             | ePKP<br>e<br>e<br>e<br>e      | 23 13 08<br>14 33<br>16 44<br>20 29<br>28 26                   |                 | Slight.                                                    |
|                        | Port Blair                                                                                                                                       | N                             | iPKP                          | 23 13 18                                                       |                 |                                                            |
|                        | Calcutta                                                                                                                                         | E                             | ePKP                          | 23 13 21                                                       |                 | Slight.                                                    |
|                        | Delhi                                                                                                                                            | Z                             | iPKP<br>i                     | 23 13 22<br>13 33                                              |                 | Slight, distant,<br>rarefaction.                           |
|                        | Dehra Dun                                                                                                                                        | ZE                            | ePKP                          | 23 13 27                                                       |                 | Slight.                                                    |

| DATE                   | STATION                                                                                                                     | COMPT                                        | PHASE                                                                            | G. M. T.<br>h. m. s.                                                                                        | △<br>km. | REMARKS.                                                                                          |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------|---------------------------------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                             |                                              |                                                                                  |                                                                                                             |          |                                                                                                   |
| 04                     | Shillong                                                                                                                    | Z                                            | iPKP                                                                             | 23 13 27                                                                                                    |          | Slight, distant, compression.                                                                     |
|                        | Chatra                                                                                                                      | Z                                            | iPKP                                                                             | 23 13 28                                                                                                    |          | Feeble, distant, rarefaction.                                                                     |
| 05                     | Delhi                                                                                                                       | Z                                            | eP                                                                               | 11 55 52                                                                                                    |          | Slight.                                                                                           |
| 05                     | Shillong                                                                                                                    | Z                                            | iP<br>iS                                                                         | 15 48 24<br>48 51                                                                                           | 230      | Slight.                                                                                           |
|                        | Chatra                                                                                                                      | Z                                            | iP<br>eS                                                                         | 15 49 21<br>50 35                                                                                           | 710      | Feeble, compression.                                                                              |
| 05                     | Shillong                                                                                                                    | Z                                            | iPg<br>iSg                                                                       | 19 55 52<br>56 03                                                                                           | 90       | Slight.                                                                                           |
| 05                     | Delhi                                                                                                                       | Z                                            | eP                                                                               | 23 32 50                                                                                                    |          | Slight.                                                                                           |
|                        | Chatra                                                                                                                      | Z                                            | eP<br>e                                                                          | 23 34 26<br>34 42                                                                                           | 120      | Feeble.                                                                                           |
| 06                     | Epc:- 30.0° N 35.0° E (Shillong)<br>-H= 00 h 09 m 40 s , h = surface.                                                       |                                              |                                                                                  |                                                                                                             |          |                                                                                                   |
|                        | Epc:- 28.0° N 55.6° E, Southern Iran, Felt : Straits of Hormuz Island.<br>h = about 33 km.<br>-H= 00 h 09 m 47.2 s (USCGS). |                                              |                                                                                  |                                                                                                             |          |                                                                                                   |
|                        | Bombay                                                                                                                      | ZNE<br>E<br>NE<br>N                          | eP<br>PP<br>PPP<br>eS<br>SS<br>M                                                 | 00 14 00<br>14 18<br>14 33<br>17 36<br>18 05<br>25 11                                                       | 2180     | Slight.<br><br>Period = 15 secs.<br>u = 3.                                                        |
|                        | Delhi                                                                                                                       | ZNE<br>Z<br>ZE<br>N<br>ZNE<br>ZN<br>ZNE<br>Z | iP<br>PP<br>PPP<br>i<br>i<br>iS<br>SS<br>PcP, SSS, Lr<br>i<br>i<br>M<br>PcP, ScP | 00 14 08<br>14 22<br>14 37<br>14 58<br>17 33<br>17 44<br>17 58<br>18 19<br>18 36<br>19 40<br>19 54<br>21 42 | 2180     | Moderate. First ground motion South East, compression.<br><br>Period = 21 secs.<br>Amp. = 29 m.m. |
| 06                     | Poona                                                                                                                       | ZNE<br>ZE<br>N                               | iP<br>PP<br>PPP<br>iS                                                            | 00 14 12<br>14 34<br>14 56<br>17 56                                                                         | 2260     | Slight, compression.                                                                              |

| DATE                    | STATION       | COMPT | PHASE    | G. M. T.<br>h. m. s. | △<br>km.                                       | REMARKS.                                            |
|-------------------------|---------------|-------|----------|----------------------|------------------------------------------------|-----------------------------------------------------|
| <u>November , 1962.</u> |               |       |          |                      |                                                |                                                     |
| 06                      | Poona(Contd.) | ZNE   | Lq       | 00 18 10             |                                                |                                                     |
|                         |               | N     | SS       | 18 22                |                                                |                                                     |
|                         |               | Z     | Lr       | 19 10                |                                                |                                                     |
|                         | Dehra Dun     | NE    | iP       | 00 14 19             | 2270                                           | Moderate. First ground movement towards North-East. |
|                         |               |       | PP       | 14 41                |                                                |                                                     |
|                         |               |       | PPP      | 14 52                |                                                |                                                     |
|                         |               | N     | i        | 17 42                |                                                |                                                     |
|                         |               | NE    | iS       | 18 03                |                                                |                                                     |
|                         |               |       | Lq       | 18 12                |                                                |                                                     |
|                         |               | E     | SS       | 18 35                |                                                |                                                     |
|                         |               | E     | Lr       | 18 50                |                                                |                                                     |
|                         |               | NE    | M        | 20 32                |                                                |                                                     |
|                         | Sehore        | NE    | eP       | 00 14 23             |                                                | Moderate, distant.                                  |
|                         | Madras        | E     | eP       | 00 15 35             | 3050                                           | Moderate.                                           |
|                         |               |       | PP       | 16 21                |                                                |                                                     |
|                         |               |       | e        | 16 54                |                                                |                                                     |
|                         |               |       | iS       | 20 15                |                                                |                                                     |
|                         |               |       | Lq       | 21 16                |                                                |                                                     |
|                         |               |       | e        | 22 02                |                                                |                                                     |
|                         |               |       | Lr       | 22 38                |                                                |                                                     |
| M                       |               |       | 24 44    |                      |                                                |                                                     |
| ScS                     |               |       | 26 25    |                      |                                                |                                                     |
| Chatra                  | Z             | iP    | 00 15 36 |                      | Moderate, compression.                         |                                                     |
| Bokaro                  | NE            | iP    | 00 15 37 | 3230                 | Moderate.                                      |                                                     |
|                         |               | PP    | 16 34    |                      |                                                |                                                     |
|                         |               | PcP   | 18 32    |                      |                                                |                                                     |
|                         |               | S     | 20 29    |                      |                                                |                                                     |
|                         |               | Lq    | 21 46    |                      |                                                |                                                     |
|                         |               | SSS   | 22 18    |                      |                                                |                                                     |
|                         |               | Lr    | 23 16    |                      |                                                |                                                     |
|                         |               | M     | 25 34    |                      |                                                |                                                     |
| Visakhapatnam           | E             | iP    | 00 15 42 | 3210                 | Moderate, distant. First ground movement West. |                                                     |
|                         |               | PP    | 16 32    |                      |                                                |                                                     |
|                         |               | sS    | 20 32    |                      |                                                |                                                     |
|                         |               | SSS   | 22 26    |                      |                                                |                                                     |
| Calcutta                | E             | eP    | 00 16 00 | 3280                 | Slight.                                        |                                                     |
|                         |               | PP    | 17 08    |                      |                                                |                                                     |
|                         |               | PPP   | 17 17    |                      |                                                |                                                     |
|                         |               | PcP   | 18 46    |                      |                                                |                                                     |
|                         |               | iS    | 21 08    |                      |                                                |                                                     |
|                         |               | i     | 21 39    |                      |                                                |                                                     |
|                         |               | Lq    | 22 26    |                      |                                                |                                                     |
| Shillong                | Z             | iP    | 00 18 15 | 3610                 | Slight, compression.                           |                                                     |
|                         | E             | eS    | 21 30    |                      |                                                |                                                     |
|                         | M             | 27 46 |          |                      |                                                |                                                     |
| 06                      | Delhi         | Z     | iP       | 01 08 35             |                                                | Slight, rarefaction.                                |

| DATE                   | STATION                                                                                                                                          | COMPT   | PHASE      | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                    |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|----------------------|-----------------|-------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                                                  |         |            |                      |                 |                                                             |
| 06                     | Shillong                                                                                                                                         | Z       | iP         | 04 09 41             |                 | Slight.                                                     |
| 06                     | Delhi                                                                                                                                            | Z       | eP         | 07 13 30             |                 | Slight, compression.                                        |
| 06                     | Shillong                                                                                                                                         | Z       | eP         | 08 30 38             |                 | Slight, distant.                                            |
| 06                     | Bokaro                                                                                                                                           | E       | iP         | 08 33 33             |                 | Feeble, near.                                               |
| 06                     | Bokaro                                                                                                                                           | E       | iP         | 09 33 13             |                 | Feeble, near.                                               |
| 06                     | Shillong                                                                                                                                         | Z       | iP         | 10 27 49             |                 | Slight.                                                     |
| 06                     | Delhi                                                                                                                                            | Z       | eP<br>i    | 12 07 40<br>07 49    |                 | Slight, compression.                                        |
| 06                     | Delhi                                                                                                                                            | Z       | iP         | 12 42 56             |                 | Slight, rarefaction.                                        |
| 06                     | Delhi                                                                                                                                            | Z       | iPg<br>iSg | 14 55 53<br>56 45    | 20              | Slight, rarefaction.                                        |
| 06                     | Shillong                                                                                                                                         | Z       | iP         | 15 13 53             |                 | Slight, distant, compression.                               |
| 06                     | Shillong                                                                                                                                         | Z       | eP         | 16 40 46             |                 | Slight, distant,                                            |
| 06                     | Shillong                                                                                                                                         | Z       | eP         | 17 10 40             |                 | Slight, distant.                                            |
| 06                     | Epc: 10.5 <sup>0</sup> N, 121.9 <sup>0</sup> E, Near West Coast of Panay, Philippine, Island,<br>- H = 10h. 48m. 42.4s., h about 33 km. (USCGS). |         |            |                      |                 |                                                             |
| 06                     | Delhi                                                                                                                                            | Z       | eP         | 20 44 46             |                 | Slight, compression.                                        |
|                        | Shillong                                                                                                                                         | Z       | iP         | 20 55 07             |                 | Slight, distant, rarefaction.                               |
|                        | Bokaro                                                                                                                                           | E       | eP<br>e    | 20 55 49<br>57 21    |                 | Slight, distant.                                            |
|                        | Delhi                                                                                                                                            | Z       | eP         | 20 56 59             |                 | Slight, distant, compression.                               |
|                        | Poona                                                                                                                                            | ZE      | iP         | 20 57 12             |                 | Slight, distant, Rarefaction, Initial ground movement East. |
|                        | Bombay                                                                                                                                           | Z<br>NE | eP<br>e    | 20 57 21<br>21 04 18 |                 | Slight.                                                     |
| 06                     | Port Blair                                                                                                                                       | E       | i          | 21 05 22             |                 | Slight.                                                     |
| 06                     | Shillong                                                                                                                                         | Z       | eP         | 21 37 32             |                 | Slight, distant.                                            |
| 06                     | Shillong                                                                                                                                         | Z       | iP         | 22 10 57             |                 | Slight, distant, rarefaction.                               |
| 06                     | Shillong                                                                                                                                         | Z       | iPg        | 22 13 27<br>13 31    | 30              | Slight.                                                     |

| DATE                   | STATION                                                                                  | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                |
|------------------------|------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|---------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                          |       |       |                      |                 |                                                         |
| 07                     | Delhi                                                                                    | Z     | iP    | 09 40 03             |                 | Slight, rarefaction.                                    |
| 07                     | Delhi                                                                                    | Z     | iP    | 12 30 50             |                 | Slight, rarefaction.                                    |
| 07                     | Epc:- 40.5° N 29.4° W, Azores,<br>h = about 33 km.<br>-H= 12 h 57 m 45.7 s (USCGS).      |       |       |                      |                 |                                                         |
| 07                     | Delhi                                                                                    | Z     | eP    | 13 10 10             |                 | Slight, distant,<br>rarefaction.                        |
|                        | Dehra Dun                                                                                | Z     | iP    | 13 10 11             |                 | Slight, rarefaction.                                    |
|                        | Shillong                                                                                 | Z     | eP    | 13 14 36             |                 | Slight, distant.                                        |
| 07                     | Epc:- 7.8° S 119.8° E, Flores Sea,<br>h = about 156 km.<br>-H= 16 h 03 m 04.1 s (USCGS). |       |       |                      |                 |                                                         |
|                        | Shillong                                                                                 | Z     | iP    | 16 10 51             |                 | Slight, distant.                                        |
|                        | Port Blair                                                                               | E     | eP    | 16 10 53             | 2470            | Slight.                                                 |
|                        |                                                                                          |       | eS    | 14 55                |                 |                                                         |
|                        |                                                                                          |       | Lq    | 15 12                |                 |                                                         |
|                        |                                                                                          |       | SSS   | 15 40                |                 |                                                         |
|                        |                                                                                          |       | Lr    | 16 12                |                 |                                                         |
|                        |                                                                                          |       | M     | 17 21                |                 |                                                         |
|                        |                                                                                          |       | M     | 16 25 -              |                 | Period= 14 secs.<br>$\mu = 3.$                          |
|                        | Visakhapatnam                                                                            | NE    | iP    | 16 11 01             | 1080            | Slight. First ground<br>movement towards<br>South East. |
|                        |                                                                                          | E     | iS    | 12 52                |                 |                                                         |
|                        |                                                                                          | E     | iPcS  | 20 37                |                 |                                                         |
|                        | Madras                                                                                   | E     | eP    | 16 11 02             | 10              | Slight.                                                 |
|                        |                                                                                          |       | eS    | 12 55                |                 |                                                         |
|                        |                                                                                          |       | e     | 14 06                |                 |                                                         |
|                        | Bokaro                                                                                   | E     | iP    | 16 11 19             | 1110            | Slight. Initial<br>ground movement<br>towards West.     |
|                        |                                                                                          |       | eS    | 13 13                |                 |                                                         |
|                        |                                                                                          |       | i     | 17 47                |                 |                                                         |
|                        |                                                                                          |       | i     | 19 04                |                 |                                                         |
|                        |                                                                                          |       | i     | 20 50                |                 |                                                         |
|                        | Chatra                                                                                   | Z     | eP    | 16 11 21             |                 | Feeble, distant,<br>compression.                        |
|                        | Poona                                                                                    | ZE    | iP    | 16 12 01             | 5480            | Slight, compression.                                    |
|                        |                                                                                          | Z     | ScP   | 16 49                |                 | Initial ground move-<br>ment West.                      |
|                        |                                                                                          | N     | iS    | 19 07                |                 |                                                         |
|                        | Bombay                                                                                   | ZE    | eP    | 16 12 09             | 5650            | Slight.                                                 |
|                        |                                                                                          | E     | eS    | 19 25                |                 |                                                         |
|                        |                                                                                          |       | ScS   | 21 36                |                 |                                                         |
|                        | Delhi                                                                                    | ZE    | iP    | 16 12 17             | 5780            | Slight, compression.                                    |
|                        |                                                                                          | Z     | i     | 13 02                |                 |                                                         |
|                        |                                                                                          |       | e     | 16 59                |                 |                                                         |
|                        |                                                                                          | ZNE   | iS    | 19 40                |                 |                                                         |

| DATE                   | STATION                                                                                                              | COMP. | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS                       |
|------------------------|----------------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|-------------------------------|
| <u>November, 1962.</u> |                                                                                                                      |       |       |                      |                 |                               |
| 07                     | Dehra Dun                                                                                                            | Z     | iP    | 16 12 26             |                 | Slight, rarefaction.          |
|                        |                                                                                                                      |       | i     | 13 26                |                 |                               |
|                        |                                                                                                                      | E     | i     | 21 54                |                 |                               |
| 07                     | Epc:- 20.4° N 122.1° E, Batan Island, Philippine Island region.<br>h = about 57 km.<br>-H= 20 h 02 m 12.8 s (USCGS). |       |       |                      |                 |                               |
|                        | Shillong                                                                                                             | Z     | eP    | 20 08 02             |                 | Slight, distant.              |
|                        | Chatra                                                                                                               | Z     | iP    | 20 08 43             |                 | Slight, distant, rarefaction. |
|                        | Poona                                                                                                                | Z     | eP    | 20 10 29             |                 | Slight, distant.              |
| 07                     | Epc:- 51.5° N 176.1° E, Rat Islands, Aleutian Islands.<br>h = about 43 km.<br>-H= 22 h 26 m 33.8 s (USCGS).          |       |       |                      |                 |                               |
|                        | Shillong                                                                                                             | Z     | iP    | 22 37 22             |                 | Slight, distant, rarefaction. |
|                        | Chatra                                                                                                               | Z     | eP    | 22 37 35             |                 | Slight, distant.              |
| 08                     | Poona                                                                                                                | Z     | iP    | 0 22 00              |                 | Slight, distant, rarefaction. |
|                        | Delhi                                                                                                                | Z     | iP    | 00 22 00             |                 | Slight, rarefaction.          |
|                        |                                                                                                                      |       | i     | 22 01                |                 |                               |
|                        | Dehra Dun                                                                                                            | Z     | iP    | 00 22 06             |                 | Slight, rarefaction.          |
| 08                     | Shillong                                                                                                             | Z     | iP    | 00 53 07             |                 | Slight, distant, compression. |
| 08                     | Shillong                                                                                                             | Z     | eP    | 06 52 26             |                 | Slight, near.                 |
| 08                     | Bokaro                                                                                                               | E     | iPg   | 08 05 54             |                 | Feeble, near.                 |
| 08                     | Epc:- 14.7° S 167.1° E, New Hebrides Islands.<br>h = about 86 km.<br>-H= 10 h 03 m 22.8 s (USCGS).                   |       |       |                      |                 |                               |
|                        | Shillong                                                                                                             | Z     | eP    | 10 15 41             |                 | Slight, distant.              |
| 08                     | Bokaro                                                                                                               | E     | i     | 10 20 04             |                 | Slight, tremor.               |
| 08                     | Shillong                                                                                                             | Z     | iPg   | 14 30 35             | 110             | Slight, felt.                 |
|                        |                                                                                                                      |       | Sg    | 30 48                |                 |                               |
| 08                     | Epc:- 45.2° N 147.2° E, Kurile Islands region.<br>h = about 148 km.<br>-H= 18 h 48 m 06.3 s (USCGS).                 |       |       |                      |                 |                               |
|                        | Shillong                                                                                                             | Z     | eP    | 18 56 15             |                 | Slight, distant.              |
|                        | Chatra                                                                                                               | Z     | iP    | 18 56 56             |                 | Rarefaction, feeble.          |

| DATE                   | STATION                                                                                                                      | COMPT | PHASE | G. M. T. $\Delta$ | REMARKS                                                         |
|------------------------|------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------------------|-----------------------------------------------------------------|
|                        |                                                                                                                              |       |       | h. m. s. km.      |                                                                 |
| <u>November, 1962.</u> |                                                                                                                              |       |       |                   |                                                                 |
| 08                     | Delhi                                                                                                                        | Z     | iP    | 18 57 37          | Slight, compression.                                            |
| 08                     | Chatra                                                                                                                       | Z     | eP    | 20 26 21          | Feeble.                                                         |
| 08                     | Epc:- 52.0° N 174.9° E, Near Islands, Aleutian Islands.<br>h = about 33 km.<br>-H= 21 h 15 m 56.0 s (USCGS).                 |       |       |                   |                                                                 |
|                        | Shillong                                                                                                                     | Z     | iP    | 21 26 40          | Slight, distant, compression.                                   |
|                        | Chatra                                                                                                                       | Z     | iP    | 21 26 54          | Feeble, distant, compression.                                   |
|                        | Dehra Dun                                                                                                                    | Z     | iP    | 21 27 10          | Feeble, rarefaction.                                            |
|                        | Delhi                                                                                                                        | Z     | iP    | 21 27 20          | Slight, rarefaction.                                            |
|                        | Poona                                                                                                                        | Z     | iP    | 21 28 15          | Slight, distant, compression.                                   |
| 09                     | Shillong                                                                                                                     | Z     | iP    | 00 17 18          | Slight, distant, compression.                                   |
| 09                     | Epc:- 33.4° N 47.2° E, Iraq-Iran Border region.<br>Felt : Pol-E-Dohtar.<br>h = about 33 km.<br>-H= 01 h 11 m 02.1 s (USCGS). |       |       |                   |                                                                 |
|                        | Delhi                                                                                                                        | ZNE   | iP    | 01 16 35          | Slight, compression.<br>First ground motion towards South East. |
|                        |                                                                                                                              | Z     | PP    | 17 33             |                                                                 |
|                        |                                                                                                                              | ZNE   | iS    | 21 14             |                                                                 |
|                        |                                                                                                                              | E     | SS    | 23 04             |                                                                 |
|                        |                                                                                                                              | Z     | Lr    | 24 04             |                                                                 |
|                        |                                                                                                                              | Z     | M     | 26 30             |                                                                 |
|                        | Bombay                                                                                                                       | ZE    | eP    | 01 16 46          | Slight.                                                         |
|                        |                                                                                                                              | E     | eS    | 21 26             |                                                                 |
|                        |                                                                                                                              |       | e     | 21 49             |                                                                 |
|                        | Dehra Dun                                                                                                                    | ZE    | iP    | 01 16 36          | Slight, compression.<br>First ground movement towards West.     |
|                        |                                                                                                                              | E     |       | 20 13             |                                                                 |
|                        | Poona                                                                                                                        | ZE    | iP    | 01 16 54          | Slight, distant, compression. Initial ground movement West.     |
|                        |                                                                                                                              | N     | iS    | 22 09             |                                                                 |
|                        | Chatra                                                                                                                       | Z     | iP    | 01 17 55          | Feeble, distant, compression.                                   |
|                        | Visakhapatnam                                                                                                                | NE    | iP    | 01 18 05          | Slight, distant.<br>First ground movement towards East.         |
|                        |                                                                                                                              |       | iS    | 23 46             |                                                                 |
|                        | Madras                                                                                                                       | E     | iP    | 01 18 07          | Slight, Initial ground motion towards East.                     |
|                        |                                                                                                                              |       | e     | 18 23             |                                                                 |
|                        |                                                                                                                              |       | PP    | 19 26             |                                                                 |
|                        |                                                                                                                              |       | PPP   | 19 45             |                                                                 |



| DATE                   | STATION                                                                                                                   | COMPT | PHASE      | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|---------------------------------------------------------------------------------------------------------------------------|-------|------------|----------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                                                           |       |            |                      |                 |                                  |
| 09                     | Madras (contd.)                                                                                                           | E     | eS<br>Lr   | 01 23 48<br>28 07    |                 |                                  |
|                        | Shillong                                                                                                                  | Z     | iP         | 01 18 29             |                 | Slight, distant,<br>compression. |
|                        | Calcutta                                                                                                                  | E     | e          | 01 29 01             |                 | Slight.                          |
|                        | Shillong                                                                                                                  | Z     | iPg<br>iSg | 04 02 19<br>02 31    | 110             | Slight.                          |
| 09                     | Epc:- 10.4° N 126.2° E, Off east coast of Samar, Philippine Islands.<br>h = about 33 km.<br>-H= 04 h 47 m 20.4 s (USCGS). |       |            |                      |                 |                                  |
|                        | Shillong                                                                                                                  | Z     | iP         | 04 54 11             |                 | Slight, distant,<br>compression. |
| 09                     | Shillong                                                                                                                  | Z     | ePg<br>iSg | 05 10 56<br>11 14    | 180             | Slight.                          |
| 09                     | Delhi                                                                                                                     | Z     | eP         | 09 02 54             |                 | Compression, slight.             |
| 09                     | Epc:- 35.8° N 140.3° E, Near east coast of Honshu, Japan, Felt.<br>h = about 33 km.<br>-H= 09 h 21 m 30.8 s (USCGS).      |       |            |                      |                 |                                  |
|                        | Shillong                                                                                                                  | Z     | iP         | 09 29 23             |                 | Slight, distant,<br>compression. |
|                        | Chatra                                                                                                                    | Z     | eP<br>i    | 09 29 52<br>31 29    |                 | Feeble, distant.                 |
|                        | Dehra Dun                                                                                                                 | Z     | iP         | 09 30 38             |                 | Slight.                          |
|                        | Delhi                                                                                                                     | Z     | iP         | 09 30 45             |                 | Slight, compression.             |
|                        | Poona                                                                                                                     | Z     | iP         | 09 31 40             |                 | Slight, distant,<br>compression. |
| 09                     | Delhi                                                                                                                     | Z     | eP         | 14 53 01             |                 | Tremor, rarefaction.             |
| 09                     | Shillong                                                                                                                  | Z     | iP         | 15 46 40             |                 | Slight, distant,<br>compression. |
| 09                     | Shillong                                                                                                                  | Z     | iP<br>iS   | 22 26 48<br>27 18    | 270             | Slight.                          |
| 09                     | Cnatra                                                                                                                    | Z     | eP<br>eS   | 22 40 52<br>41 44    | 490             | Feeble.                          |
|                        | Delhi                                                                                                                     | Z     | eP         | 22 41 34             |                 | Slight, rarefaction.             |
|                        | Shillong                                                                                                                  | Z     | eP         | 22 44 04             |                 | Slight, distant.                 |
| 09                     | Delhi                                                                                                                     | Z     | eP         | 23 41 15             |                 | Slight, rarefaction.             |

| DATE                   | STATION                                                                                                       | COMPT | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                                   |
|------------------------|---------------------------------------------------------------------------------------------------------------|-------|----------|----------------------|-----------------|----------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                               |       |          |                      |                 |                                                                            |
| 10                     | Shillong                                                                                                      | Z     | iP       | 00 03 59             |                 | Slight, distant, rarefaction.                                              |
| 10                     | Delhi                                                                                                         | Z     | iP       | 00 05 50             |                 | Slight, compression.                                                       |
| 10                     | Epc:- 27.9° N 55.6° E, Near South coast of Iran, Felt :<br>h = about 33 km.<br>-H= 01 h 32 m 03.7 s (USCGS).  |       |          |                      |                 |                                                                            |
|                        | Delhi                                                                                                         | Z     | eP       | 10 36 25             |                 | Slight, rarefaction.                                                       |
| 10                     | Epc:- 43.8° N 142.2° E, Kurile Islands.<br>h = about 60 km.<br>-H= 01 h 33 m 19.0 s (USCGS).<br>Mag: 5½(Pal). |       |          |                      |                 |                                                                            |
|                        | Shillong                                                                                                      | Z     | iP       | 01 41 20             |                 | Slight, distant, compression.                                              |
|                        | Chatra                                                                                                        | Z     | iP       | 01 42 17             |                 | Slight, distant, rarefaction.                                              |
|                        | Bokaro                                                                                                        | EN    | iP<br>iS | 01 42 38<br>50 06    | 5870            | Initial ground movement towards West, slight, deep focus.                  |
|                        | Port Blair                                                                                                    | N     | iP       | 01 42 59             | 6220            | Slight. First ground movement towards South.                               |
|                        |                                                                                                               | E     | PcP      | 43 49                |                 |                                                                            |
|                        |                                                                                                               |       | PcS      | 47 46                |                 |                                                                            |
|                        |                                                                                                               | NE    | iS       | 50 47                |                 |                                                                            |
|                        |                                                                                                               | E     | PS       | 50 57                |                 |                                                                            |
|                        |                                                                                                               |       | PPS      | 51 04                |                 |                                                                            |
|                        |                                                                                                               |       | ScS      | 52 46                |                 |                                                                            |
|                        |                                                                                                               |       | Lq       | 56 42                |                 |                                                                            |
|                        |                                                                                                               |       | Lr       | 59 33                |                 |                                                                            |
|                        |                                                                                                               |       | M        | 02 03 33             |                 |                                                                            |
|                        | Del'                                                                                                          | ZNE   | iP       | 01 43 00             | 6340            | Moderate. First ground motion towards South, West, compression deep focus. |
|                        |                                                                                                               |       | pP       | 43 14                |                 |                                                                            |
|                        |                                                                                                               |       | sP       | 43 22                |                 |                                                                            |
|                        |                                                                                                               |       | iS       | 50 48                |                 |                                                                            |
|                        |                                                                                                               |       | sS       | 57 12                |                 |                                                                            |
|                        | Visakhapatnam                                                                                                 | E     | iP       | 01 43 19             | 6530            | Moderate, distant. First ground movement towards East.                     |
|                        |                                                                                                               |       | eS       | 51 24                |                 |                                                                            |
| M                      | Madras                                                                                                        | E     | iP       | 01 43 54             | 7090            | Slight. Initial ground movement towards West.                              |
|                        |                                                                                                               |       | e        | 44 07                |                 |                                                                            |
|                        |                                                                                                               |       | PcP      | 44 26                |                 |                                                                            |
|                        |                                                                                                               |       | PP       | 46 11                |                 |                                                                            |
|                        |                                                                                                               |       | PPP      | 47 47                |                 |                                                                            |
|                        |                                                                                                               |       | eS       | 52 29                |                 |                                                                            |
|                        | Poona                                                                                                         | ZNE   | iP       | 01 43 59             | 7160            | Slight, distant, compression. Initial ground movement towards South, West. |
|                        |                                                                                                               |       | i        | 44 15                |                 |                                                                            |
|                        |                                                                                                               | ZE    | i        | 44 21                |                 |                                                                            |
|                        |                                                                                                               | E     | iS       | 52 38                |                 |                                                                            |

| DATE                   | STATION                                                                                                                           | COMPT | PHASE                                           | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------------------------------|----------------------------------------------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                                                                   |       |                                                 |                                                                |                 |                                  |
| 10                     | Bombay                                                                                                                            | NE    | eP<br>PP<br>eS<br>E PS<br>NE PPS<br>SKS<br>E SS | 01 43 59<br>46 33<br>52 45<br>53 01<br>53 13<br>53 49<br>56 59 | 7310            | Slight.                          |
|                        | Calcutta                                                                                                                          | E     | i                                               | 01 49 54                                                       |                 | Slight.                          |
| 01                     | Shillong                                                                                                                          | Z     | iPg<br>Sg                                       | 07 02 05<br>02 14                                              | 80              | Slight.                          |
| 10                     | Delhi                                                                                                                             | Z     | eP<br>i                                         | 09 08 46<br>08 51                                              |                 | Slight.                          |
|                        | Dehra Dun                                                                                                                         | Z     | iP                                              | 09 09 36                                                       |                 | Slight, rarefaction.             |
| 10                     | Epc:- 19.3° N 121.1° E, Near northern coast of Luzon,<br>Philippine Islands.<br>h = about 32 km.<br>-H= 11 h 03 m 36.8 s (USCGS). |       |                                                 |                                                                |                 |                                  |
|                        | Shillong                                                                                                                          | Z     | eP                                              | 11 09 25                                                       |                 | Slight, distant,<br>compression. |
| 10                     | Delhi                                                                                                                             | Z     | eP<br>i                                         | 11 49 22<br>49 24                                              |                 | Slight.                          |
| 10                     | Delhi                                                                                                                             | Z     | eP                                              | 11 52 02                                                       |                 | Slight, rarefaction.             |
| 10                     | Shillong                                                                                                                          | Z     | eP                                              | 18 41 53                                                       |                 | Slight, distant.                 |
| 10                     | Epc:- 38.3° N 141.8° E, Near east coast of Honshu, Japan.<br>h = about 100 km.<br>-H= 19 h 32 m 05.4 s (USCGS).                   |       |                                                 |                                                                |                 |                                  |
|                        | Shillong                                                                                                                          | Z     | iP                                              | 19 40 03                                                       |                 | Slight, distant,<br>compression. |
|                        | Delhi                                                                                                                             | Z     | eP                                              | 19 41 21                                                       |                 | Slight, compression.             |
| 10                     | Epc:- 9.8° S 123.8° E, Near north coast of Tunor Island.<br>h = about 33 km.<br>-H= 21 h 13 m 25.5 s (USCGS).                     |       |                                                 |                                                                |                 |                                  |
|                        | Shillong                                                                                                                          | Z     | eP                                              | 21 21 55                                                       |                 | Slight, distant.                 |
| 10                     | Shillong                                                                                                                          | Z     | iPg                                             | 23 35 17                                                       |                 | Slight, local.                   |
|                        | Chatra                                                                                                                            | Z     | eP<br>eS                                        | 23 36 02<br>36 44                                              | 380             | Feeble.                          |
| 11                     | Delhi                                                                                                                             | Z     | iP                                              | 03 15 01                                                       |                 | Slight, compression.             |
| 11                     | Delhi                                                                                                                             | Z     | iP                                              | 03 26 28                                                       |                 | Slight, rarefaction.             |

| DATE                   | STATION                                                                                              | COMPT        | PHASE                         | G. M. T.<br>h. m. s.                         | △<br>km. | REMARKS.                                    |
|------------------------|------------------------------------------------------------------------------------------------------|--------------|-------------------------------|----------------------------------------------|----------|---------------------------------------------|
| <u>November, 1962.</u> |                                                                                                      |              |                               |                                              |          |                                             |
| 11                     | Delhi                                                                                                | Z            | eP                            | 03 56 33                                     |          | Slight, rarefaction.                        |
| 11                     | Shillong                                                                                             | ZE<br>E      | iPg<br>Sg<br>PPP<br>SS<br>SSS | 04 21 04<br>21 15<br>21 19<br>21 31<br>21 39 | 90       | Slight, initial ground motion towards West. |
| 11                     | Chatra                                                                                               | Z            | eP<br>eS                      | 04 21 55<br>22 43                            | 450      | Slight.                                     |
|                        | Delhi                                                                                                | Z            | iP<br>i                       | 04 24 37<br>25 11                            |          | Slight, rarefaction.                        |
| 11                     | Delhi                                                                                                | Z            | iP                            | 04 26 19                                     |          | Slight.                                     |
| 11                     | Delhi                                                                                                | Z            | eP                            | 05 05 51                                     |          | Slight, rarefaction.                        |
| 11                     | Delhi                                                                                                | Z            | eP                            | 05 13 48                                     |          | Slight.                                     |
| 11                     | Delhi                                                                                                | Z            | eP                            | 05 22 18                                     |          | Slight, compression.                        |
| 11                     | Delhi                                                                                                | Z            | eP<br>i                       | 05 23 31<br>23 42                            |          | Slight.                                     |
| 11                     | Delhi                                                                                                | Z            | iP                            | 06 16 43                                     |          | Slight, rarefaction.                        |
| 11                     | Delhi                                                                                                | Z            | iP                            | 06 48 09                                     |          | Slight, rarefaction.                        |
| 11                     | Delhi                                                                                                | Z            | eP<br>i                       | 07 06 32<br>06 40                            |          | Slight, rarefaction.                        |
| 11                     | Delhi                                                                                                | Z            | eP                            | 07 13 00                                     |          | Slight, rarefaction.                        |
| 11                     | Delhi                                                                                                | Z            | eP                            | 07 15 04                                     |          | Slight, rarefaction.                        |
| 11                     | Epc:- 23.9° S 69.5° E, Mascarene Island region.<br>h = about 33 km.<br>-H= 07 h 39 m 13.4 s (USCGS). |              |                               |                                              |          |                                             |
|                        | Poona                                                                                                | Z<br>N       | iP<br>eS                      | 07 47 09<br>53 21                            | 4540     | Slight, rarefaction.                        |
|                        | Bombay                                                                                               | ZE<br>E<br>N | eP<br>e<br>eS                 | 07 47 12<br>50 39<br>53 38                   | 4780     | Slight.                                     |
|                        | Delhi                                                                                                | Z            | iP                            | 07 47 29                                     |          | Slight, rarefaction.                        |
|                        | Shillong                                                                                             | Z            | iP                            | 07 48 35                                     |          | Slight, distant, rarefaction.               |
|                        | Dehra Dun                                                                                            | Z            | iP                            | 07 49 41                                     |          | Slight.                                     |
| 11                     | Delhi                                                                                                | ZNE<br>Z     | eS<br>e                       | 07 54 55<br>08 02 59                         | 4830     | Slight.                                     |

| DATE                   | STATION                                                                                                                                                  | COMPT | PHASE              | G. M. T.<br>h. m. s.                | $\Delta$<br>km. | REMARKS.                                          |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------|-------------------------------------|-----------------|---------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                                                          |       |                    |                                     |                 |                                                   |
| 11                     | Bokaro                                                                                                                                                   | NE    | i                  | 08 27 54                            |                 | Tremor.                                           |
| 11                     | Delhi                                                                                                                                                    | Z     | eP                 | 08 37 37                            |                 | Slight, rarefaction.                              |
| 11                     | Delhi                                                                                                                                                    | Z     | iP                 | 08 54 46                            |                 | Slight, compression.                              |
| 11                     | Delhi                                                                                                                                                    | Z     | iP                 | 08 55 45                            |                 | Slight, rarefaction.                              |
| 11                     | Shillong                                                                                                                                                 | Z     | iP                 | 09 07 24                            |                 | Slight, compression.                              |
| 11                     | Bokaro                                                                                                                                                   | NE    | i                  | 09 12 52                            |                 | Slight.                                           |
| 11                     | Delhi                                                                                                                                                    | Z     | iP                 | 09 41 43                            |                 | Slight, compression.                              |
| 11                     | Delhi                                                                                                                                                    | Z     | eP<br>i            | 09 43 01<br>43 03                   |                 | Slight, rarefaction.                              |
| 11                     | Delhi                                                                                                                                                    | Z     | eP<br>i            | 09 52 29<br>52 38                   |                 | Slight.                                           |
| 11                     | Epc:- $23.8^{\circ}$ S $69.4^{\circ}$ E, Mascarene Islands region.<br>h = about 33 km.<br>-H= 10 h 31 m 48.3 s (USCGS).                                  |       |                    |                                     |                 |                                                   |
|                        | Pooma                                                                                                                                                    | Z     | iP                 | 10 39 43                            |                 | Slight, distant, rarefaction.                     |
|                        | Bombay                                                                                                                                                   | Z     | e                  | 10 39 45                            |                 | Slight.                                           |
|                        | Delhi                                                                                                                                                    | Z     | iP<br>e<br>eS<br>e | 10 40 57<br>41 02<br>48 31<br>56 37 | 5980            | Slight, compression.                              |
|                        | Shillong                                                                                                                                                 | Z     | eP                 | 10 41 09                            |                 | Slight, distant.                                  |
|                        | Dehra Dun                                                                                                                                                | Z     | eP                 | 10 42 13                            |                 | Slight.                                           |
| 11                     | Epc:- $55.8^{\circ}$ N $113.1^{\circ}$ E, Lake Bai Kol region. USSR.<br>h = about 33 km.<br>-H= 11 h 31 m 44.5 s (USCGS).<br>Mag.: $6\frac{1}{4}$ (Pas). |       |                    |                                     |                 |                                                   |
|                        | Shillong                                                                                                                                                 | Z     | iP                 | 11 38 28                            |                 | Distant, rarefaction.                             |
|                        | Chatra                                                                                                                                                   | Z     | iP                 | 11 38 32                            |                 | Distant, rarefaction.                             |
|                        | Delhi                                                                                                                                                    | Z     | iP<br>e            | 11 38 54<br>47 38                   |                 | Compression.                                      |
|                        | Bokaro                                                                                                                                                   | E     | eP<br>iS           | 11 39 01<br>44 51                   | 4180            | Distant.                                          |
|                        | Dehra Dun                                                                                                                                                | ZN    | iP                 | 11 39 41                            |                 | Compression. First ground movement towards South. |

| DATE                   | STATION                                                                                   | COMPT | PHASE                                                          | G. M. T.<br>h. m. s.                                                                  | $\Delta$<br>km. | REMARKS.                                                                                                                |
|------------------------|-------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                           |       |                                                                |                                                                                       |                 |                                                                                                                         |
| 11                     | Bombay                                                                                    | Z     | eP                                                             | 11 40 19                                                                              | 5310            |                                                                                                                         |
|                        |                                                                                           | NE    | eS                                                             | 47 16                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           | E     | PS                                                             | 47 29                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           |       | SS                                                             | 51 01                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           | N     | e                                                              | 53 59                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           | E     | e                                                              | 57 28                                                                                 |                 |                                                                                                                         |
|                        | Poona                                                                                     | ZE    | iP                                                             | 11 40 19                                                                              |                 | Distant, compression.<br>Initial ground move-<br>ment towards West.                                                     |
|                        | Calcutta                                                                                  | E     | i                                                              | 11 49 19                                                                              |                 |                                                                                                                         |
| 11                     | Epc:- 19.3° S 177.6° W, Fiji Islands.<br>h=about 547 km.<br>-H= 11 h 57 m 47.9 s (USCGS). |       |                                                                |                                                                                       |                 |                                                                                                                         |
|                        | Delhi                                                                                     | Z     | eP                                                             | 12 12 24                                                                              |                 | Slight.                                                                                                                 |
|                        | Delhi                                                                                     | Z     | eP                                                             | 12 34 39                                                                              |                 | Slight.                                                                                                                 |
| 11                     | Shillong                                                                                  | Z     | iPg<br>Sg                                                      | 13 31 30<br>31 43                                                                     | 110             | Slight.                                                                                                                 |
| 11                     | Shillong                                                                                  | Z     | eP<br>eS                                                       | 14 32 38<br>33 56                                                                     | 550             | Slight.                                                                                                                 |
| 11                     | Epc:- 17.2° N 40.7° E, Red Sea.<br>h = about 34 km.<br>-H= 15 h 15 m 33.6 s (USCGS).      |       |                                                                |                                                                                       |                 |                                                                                                                         |
|                        | Bombay                                                                                    | ZE    | eP                                                             | 15 21 47                                                                              | 3370            | Slight.                                                                                                                 |
|                        |                                                                                           | E     | e                                                              | 25 15                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           | N     | e                                                              | 27 24                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           | E     | e                                                              | 27 59                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           |       | e                                                              | 28 55                                                                                 |                 |                                                                                                                         |
|                        |                                                                                           | E     | e                                                              | 30 33                                                                                 |                 |                                                                                                                         |
|                        | Poona                                                                                     | ZE    | iP<br>PP<br>eS                                                 | 15 21 56<br>23 10<br>27 23                                                            | 3810            | Slight, compression.<br>Initial ground move-<br>ment East.                                                              |
|                        | Delhi                                                                                     | ZNE   | iP<br>i<br>i<br>PP<br>PPP<br>iS<br>PcS, ScP<br>eSS<br>ScS<br>M | 15 22 30<br>22 35<br>23 33<br>23 50<br>24 08<br>28 10<br>28 32<br>30 29<br>32 32<br>- | 4010            | Moderate. First<br>ground motion toward-<br>ds North East,<br>compression.<br><br>Period = 1600 secs.<br>Amp. = 22 m.m. |
|                        | Madras                                                                                    | E     | iP<br>PP<br>PPP<br>eS<br>Lq<br>Lr<br>M                         | 15 22 54<br>24 26<br>24 49<br>28 54<br>31 38<br>33 28<br>36 40                        | 4330            | Slight. Initial<br>ground motion toward-<br>ds East.                                                                    |

| DATE                   | STATION                                                                                                                                                 | COMPT    | PHASE                              | G. M. T.<br>h. m. s.                                  | $\Delta$<br>km. | REMARKS.                                                                 |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------|-------------------------------------------------------|-----------------|--------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                                                         |          |                                    |                                                       |                 |                                                                          |
| 11                     | Visakhapatnam                                                                                                                                           | E        | iP<br>eS                           | 15 23 13<br>29 33                                     | 4670            | Moderate. First ground movement towards East.                            |
|                        | Bokaro                                                                                                                                                  | E        | iP<br>PcP<br>PP<br>PPP<br>iS<br>SS | 15 23 32<br>25 13<br>25 23<br>25 52<br>30 03<br>33 39 | 4860            | Slight. Initial ground motion towards East.                              |
|                        | Dehra Dun                                                                                                                                               | ZE<br>NE | iP<br>iS                           | 15 23 39<br>29 30                                     | 4180            | Slight. distant, shock. First ground movement towards East, compression. |
|                        | Chatra                                                                                                                                                  | Z        | iP<br>eS                           | 15 23 40<br>30 07                                     | 4780            | Slight, compression.                                                     |
|                        | Calcutta                                                                                                                                                | E        | iP<br>iS<br>Lq                     | 15 23 53<br>29 40<br>33 17                            | 4120            | Slight.                                                                  |
|                        | Shillong                                                                                                                                                | Z        | iP                                 | 15 24 13                                              |                 | Slight, distant, rarefaction.                                            |
| 11                     | Shillong                                                                                                                                                | Z        | eP                                 | 15 43 46                                              |                 | Slight, near, tremor.                                                    |
| 11                     | Chatra                                                                                                                                                  | Z        | ePg<br>Sg                          | 16 10 29<br>10 42                                     | 110             | Feeble.                                                                  |
| 11                     | Epc:- 12.9° S 166.5° E, Santa Cruz Islands, Felt : Port Villa.<br>h= about 77 km.<br>-H= 16 h 09 m 57.6 s (USCGS).<br>Mag. : = 6-6 $\frac{1}{4}$ (Pas). |          |                                    |                                                       |                 |                                                                          |
| 11                     | Shillong                                                                                                                                                | Z        | iP                                 | 16 22 12                                              |                 | Distant, compression.                                                    |
|                        | Calcutta                                                                                                                                                | E        | iP<br>iS                           | 16 22 25<br>32 33                                     | 8990            |                                                                          |
|                        | Chatra                                                                                                                                                  | Z<br>NE  | iP<br>eS                           | 16 22 32<br>32 56                                     | 9340            | Compression.                                                             |
|                        | Bokaro                                                                                                                                                  | NE       | iP<br>SKS<br>iS                    | 16 22 37<br>32 29<br>33 11                            | 9610            | Initial ground motion towards West, deep focus.                          |
|                        | Visakhapatnam                                                                                                                                           | E        | iP<br>iS                           | 16 22 41<br>33 03                                     | 9290            | First ground movement East.                                              |
|                        | Madras                                                                                                                                                  | E        | eP<br>PP<br>PPP<br>SKS<br>iS<br>e  | 16 22 49<br>26 17<br>28 20<br>33 15<br>33 36<br>33 56 | 9890            |                                                                          |

| DATE                   | STATION                                               | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                |
|------------------------|-------------------------------------------------------|-------|-------|----------------------|-----------------|-------------------------|
| <u>November, 1962.</u> |                                                       |       |       |                      |                 |                         |
| 11                     | Delhi                                                 | Z     | iP    | 16 23 16             | 10340           | Compression.            |
|                        |                                                       | ZNE   | iSKS  | 33 45                |                 |                         |
|                        |                                                       | NE    | S,ScS | 34 21                |                 |                         |
|                        |                                                       | ZE    | PS    | 35 47                |                 |                         |
|                        | Poona                                                 | Z     | iP    | 16 23 21             | 10550           | Compression.            |
|                        |                                                       |       | i     | 23 35                |                 |                         |
|                        |                                                       | E     | i     | 33 47                |                 |                         |
|                        |                                                       |       | eS    | 34 34                |                 |                         |
|                        | Bombay                                                | Z     | e     | 16 23 24             | 10720           |                         |
|                        |                                                       |       | e     | 23 37                |                 |                         |
|                        |                                                       |       | e     | 33 54                |                 |                         |
|                        |                                                       | N     | eS    | 34 42                |                 |                         |
| 11                     | Dehra Dun                                             | Z     | iP    | 16 24 14             | 9580            | Rarefaction, slock,     |
|                        |                                                       | NE    | iS    | 34 49                |                 | other phases not clear. |
| 11                     | Epc:- 43.2° S 76.0° W, Off coast of Southern Chile.   |       |       |                      |                 |                         |
|                        | h = about 33 km.                                      |       |       |                      |                 |                         |
|                        | -H= 22 h 14 m 18.7 s (G.M.T.)                         |       |       |                      |                 |                         |
|                        | Mag.: 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ (Pas) (USCGS). |       |       |                      |                 |                         |
| 11                     | Poona                                                 | ZNE   | iPKP  | 22 33 51             |                 | Compression. Initial    |
|                        |                                                       | E     | i     | 38 36                |                 | ground movement East,   |
|                        |                                                       |       |       |                      |                 | North.                  |
|                        | Madras                                                | E     | ePKP  | 22 33 51             |                 |                         |
|                        |                                                       |       | e     | 37 55                |                 |                         |
|                        |                                                       |       | e     | 47 35                |                 |                         |
|                        | Bombay                                                | ZNE   | ePKP  | 22 33 51             |                 |                         |
|                        |                                                       | N     | e     | 37 28                |                 |                         |
|                        | Hyderabad                                             | E     | e     | 22 34 00             |                 |                         |
|                        | Vishakhapatnam                                        | E     | iPKP  | 22 34 07             |                 | First ground move-      |
|                        |                                                       |       | e     | 37 35                |                 | ment East.              |
|                        | Delhi                                                 | Z     | iPKP  | 22 34 08             | 17080           | Initial ground moti-    |
|                        |                                                       | ZNE   | i     | 34 36                |                 | on towards North,       |
|                        |                                                       |       | PP    | 38 03                |                 | rarefaction.            |
|                        |                                                       | ZE    | i     | 44 47                |                 |                         |
|                        |                                                       | Z     | i     | 47 39                |                 |                         |
|                        |                                                       |       | i     | 58 36                |                 |                         |
|                        | Bokaro                                                | E     | ePKP  | 22 34 11             |                 |                         |
|                        | Shillong                                              | Z     | ePKP  | 22 34 13             |                 |                         |
|                        | Chatra                                                | ZNE   | iPKP  | 22 34 15             |                 | Compression.            |
|                        |                                                       |       | i     | 35 05                |                 |                         |
|                        | Dehra Dun                                             | ZNE   | iPKP  | 22 35 22             |                 | First ground move-      |
|                        |                                                       | Z     | i     | 35 28                |                 | ment towards North-     |
|                        |                                                       |       | i     | 35 49                |                 | East.                   |



| DATE                   | STATION                                                                                      | COMPT | PHASE     | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|----------------------------------------------------------------------------------------------|-------|-----------|----------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                              |       |           |                      |                 |                                  |
| 11                     | Calcutta                                                                                     | E     | e         | 23 34 23             |                 |                                  |
| 12                     | Shillong                                                                                     | Z     | iP        | 02 34 59             |                 | Slight, distant,<br>rarefaction. |
| 12                     | Delhi                                                                                        | Z     | iP<br>i   | 04 47 36<br>48 09    |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | iP        | 05 45 13             |                 | Slight, compression.             |
| 12                     | Delhi                                                                                        | Z     | eP        | 05 54 40             |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | iP        | 05 55 43             |                 | Tremor, rarefaction.             |
| 12                     | Chatra                                                                                       | Z     | eP        | 07 36 13             |                 | Feeble, distant.                 |
| 12                     | Delhi                                                                                        | Z     | iP<br>i   | 07 47 33<br>47 38    |                 | Slight, compression.             |
| 12                     | Shillong                                                                                     | Z     | iP        | 07 52 32             |                 | Slight, distant,<br>compression. |
| 12                     | Bokaro                                                                                       | E     | iP        | 08 05 18             |                 | Feeble, local.                   |
| 12                     | Shillong                                                                                     | Z     | iPg<br>Sg | 08 24 38<br>24 49    | 90              | Slight.                          |
| 12                     | Delhi                                                                                        | Z     | eP<br>i   | 08 37 12<br>37 21    |                 | Slight, compression.             |
| 12                     | Delhi                                                                                        | Z     | iP        | 08 42 53             |                 | Slight, rarefaction.             |
| 12                     | Bokaro                                                                                       | E     | i         | 09 21 34             |                 | Tremor.                          |
| 12                     | Delhi                                                                                        | Z     | eP<br>i   | 09 29 43<br>29 47    |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | i         | 09 31 23             |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | eP<br>i   | 09 46 25<br>46 39    |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | eP        | 10 41 25             |                 | Slight, compression.             |
| 12                     | Delhi                                                                                        | Z     | iP        | 11 13 21             |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | iP        | 11 52 00             |                 | Slight, rarefaction.             |
| 12                     | Delhi                                                                                        | Z     | iP        | 12 42 02             |                 | Slight, rarefaction.             |
| 12                     | Epc:- 26.0° N 128.4° E, Rayukyu Island.<br>h = about 40 km.<br>-H= 12 h 49 m 10.8 s (USCGS). |       |           |                      |                 |                                  |
|                        | Shillong                                                                                     | ZE    | iP        | 12 55 44             |                 | Slight, distant,<br>compression. |
|                        | Chatra                                                                                       | ZNE   | iP        | 12 56 05             |                 | Slight, distant,<br>compression. |

| DATE                   | STATION                                                                                                            | COMPT              | PHASE                         | G. M. T.<br>h. m. s.                                     | $\Delta$<br>km. | REMARKS.                                                      |
|------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|----------------------------------------------------------|-----------------|---------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                    |                    |                               |                                                          |                 |                                                               |
| 12                     | Calcutta                                                                                                           | E                  | eP<br>iS<br>M                 | 12 56 22<br>13 02 11<br>10 19                            | 4180            | Slight.                                                       |
|                        | Bokaro                                                                                                             | E                  | iP<br>iS                      | 12 56 33<br>13 02 39                                     | 4950            | Slight, distant.                                              |
|                        | Visakhapatnam                                                                                                      | E                  | iP<br>iS                      | 12 57 07<br>13 03 43                                     | 4950            | Slight, distant.<br>First ground movement East.               |
|                        | Dehra Dun                                                                                                          | ZE<br>Z<br>E       | iP<br>i<br>eS                 | 12 57 20<br>57 32<br>13 04 04                            | 5090            |                                                               |
|                        | Delhi                                                                                                              | ZE<br>E<br>NE<br>E | iP<br>i<br>i<br>eS<br>PS<br>i | 12 57 56<br>57 35<br>57 59<br>13 04 14<br>04 15<br>07 40 | 5120            | Slight, compression.<br>Initial ground movement towards West. |
| 12                     | Madras                                                                                                             | E                  | eP<br>PP<br>eS                | 12 57 43<br>59 34<br>13 04 47                            | 5430            | Slight.                                                       |
|                        | Poona                                                                                                              | ZE<br>Z            | iP<br>i<br>iS                 | 12 58 09<br>58 18<br>13 05 31                            | 5770            | Slight, compression.<br>Initial ground movement towards West. |
|                        | Bombay                                                                                                             | ZE<br>NE<br>N      | eP<br>eS<br>M                 | 12 58 15<br>13 05 49<br>23 -                             | 5980            | Slight.                                                       |
|                        | Dehra Dun                                                                                                          | ZE<br>Z<br>E       | iP<br>i<br>eS                 | 12 58 20<br>58 32<br>13 05 04                            | 5100            | Slight, compression.<br>First ground movement towards East.   |
| 12                     | Chatra                                                                                                             | Z                  | eP<br>eS                      | 13 45 05<br>45 29                                        | 210             | Feeble.                                                       |
| 12                     | Shillong                                                                                                           | ZNE                | iPg<br>Sg                     | 14 29 23<br>29 26                                        | 20              | Slight, almost at the station. Felt.                          |
| 12                     | Chatra                                                                                                             | Z                  | eP<br>i                       | 14 45 42<br>46 41                                        |                 | Feeble, distant.                                              |
| 12                     | Delhi                                                                                                              | Z                  | eP                            | 15 36 54                                                 |                 | Slight, rarefaction.                                          |
| 12                     | Epc:- 35.5° N 135.8° E, Southern Honshu, Japan.<br>h = about 33 km.<br>-H= 16 h 16 m 56.1 s (USCGS).               |                    |                               |                                                          |                 |                                                               |
|                        | Shillong                                                                                                           | Z                  | iP                            | 16 24 19                                                 |                 | Slight, rarefaction.                                          |
| 12                     | Epc:- 51.5° N 178.4° W, Andreana of Islands, Aleutian Island.<br>h = about 57 km.<br>-H= 19 h 32 m 38.0 s (USCGS). |                    |                               |                                                          |                 |                                                               |

| DATE                   | STATION                                                                                                    | COMPT | PHASE   | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                      |
|------------------------|------------------------------------------------------------------------------------------------------------|-------|---------|----------------------|-----------------|-------------------------------|
| <u>November, 1962.</u> |                                                                                                            |       |         |                      |                 |                               |
| 12                     | Delhi                                                                                                      | Z     | eP      | 19 43 22             |                 | Slight, compression.          |
|                        | Shillong                                                                                                   | Z     | iP      | 19 43 47             |                 | Slight, distant, compression. |
|                        | Chatra                                                                                                     | Z     | iP      | 19 44 00             |                 | Feeble, compression.          |
|                        | Dehra Dun                                                                                                  | Z     | iP      | 19 45 15             |                 | Slight, rarefaction.          |
|                        | Poona                                                                                                      | Z     | iP      | 19 45 16             |                 | Slight, distant, compression. |
| 12                     | Shillong                                                                                                   | Z     | eP      | 20 07 20             |                 | Slight.                       |
| 13                     | Delhi                                                                                                      | Z     | iP      | 02 28 07             |                 | Slight, rarefaction.          |
| 13                     | Delhi                                                                                                      | Z     | eP      | 02 56 46             |                 | Slight, compression.          |
| 13                     | Shillong                                                                                                   | Z     | iP      | 03 14 07             |                 | Slight, distant, rarefaction. |
| 13                     | Epc:- 42.0° N 141.9° E, Off coast of Hakkaido, Japan.<br>h = about 61 km.<br>-H= 08 h 54 m 39.1 s (USCGS). |       |         |                      |                 |                               |
|                        | Shillong                                                                                                   | Z     | iP      | 09 02 44             |                 | Slight, distant, rarefaction. |
|                        | Chatra                                                                                                     | Z     | iP      | 09 03 12             |                 | Feeble, distant, compression. |
|                        | Delhi                                                                                                      | Z     | iP      | 09 03 53             |                 | Slight, compression.          |
|                        | Poona                                                                                                      | Z     | iP      | 09 04 52             |                 | Slight, distant, compression. |
| 13                     | Delhi                                                                                                      | Z     | iP<br>i | 09 46 19<br>47 57    |                 | Slight, rarefaction.          |
| 13                     | Shillong                                                                                                   | Z     | iP      | 13 26 27             |                 | Slight, distant, rarefaction. |
| 13                     | Delhi                                                                                                      | Z     | iP      | 15 49 28             |                 | Slight, compression.          |
| 13                     | Delhi                                                                                                      | Z     | eP      | 15 54 30             |                 | Slight.                       |
| 13                     | Chatra                                                                                                     | Z     | eP<br>i | 17 46 42<br>47 04    |                 | Feeble.                       |
| 13                     | Chatra                                                                                                     | Z     | iP      | 22 06 45             |                 | Feeble, distant, compression. |
| 13                     | Shillong                                                                                                   | Z     | eP      | 22 34 05             |                 | Slight.                       |
|                        | Chatra                                                                                                     | Z     | e       | 22 34 41             |                 | Feeble.                       |
| 14                     | Shillong                                                                                                   | Z     | eP      | 00 31 17             |                 | Slight.                       |
| 14                     | Shillong                                                                                                   | Z     | eP      | 03 43 28             |                 | Slight, distant.              |

| DATE                   | STATION                                                                                                               | COMPT    | PHASE         | G. M. T.<br>h. m. s.          | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|----------|---------------|-------------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                                                       |          |               |                               |                 |                                  |
| 14                     | Chatra                                                                                                                | Z<br>ZE  | eP<br>eS      | 04 08 45<br>09 03             | 140             | Feeble.                          |
| 14                     | Shillong                                                                                                              | Z        | eP            | 04 28 08                      |                 | Slight, distant.                 |
| 14                     | Chatra                                                                                                                | Z<br>ZNE | iP<br>iS      | 04 51 20<br>51 40             | 160             | Slight, compression.             |
|                        | Shillong                                                                                                              | Z        | eP<br>iS      | 04 52 19<br>53 18             | 560             | Slight.                          |
| 14                     | Madras                                                                                                                | E        | e             | 05 52 17                      |                 | Feeble.                          |
|                        | Shillong                                                                                                              | Z        | iP            | 05 53 05                      |                 | Slight, distant,<br>rarefaction. |
|                        | Chatra                                                                                                                | Z        | eP            | 05 53 13                      |                 | Feeble, distant.                 |
|                        | Delhi                                                                                                                 | Z        | iP            | 05 54 18                      |                 | Slight, compression.             |
| 14                     | Shillong                                                                                                              | Z        | eP            | 06 41 09                      |                 | Slight, distant.                 |
| 14                     | Epc:- $35.7^{\circ}$ N $148.8^{\circ}$ E, Central Honshu, Japan.<br>h = about 61 km.<br>-H= 07 h 48 m 05.5 s (USCGS). |          |               |                               |                 |                                  |
|                        | Shillong                                                                                                              | Z        | iP            | 07 55 58                      |                 | Slight, distant,<br>compression. |
|                        | Chatra                                                                                                                | Z        | eP            | 07 56 28                      |                 | Feeble, distant.                 |
|                        | Delhi                                                                                                                 | Z<br>NE  | iP<br>i<br>eS | 07 57 21<br>57 30<br>08 04 49 | 5870            | Slight, compression.             |
|                        | Dabra Dun                                                                                                             | Z        | iP            | 07 58 13                      |                 | Slight.                          |
|                        | Poona                                                                                                                 | Z        | iP            | 07 58 14                      |                 | Slight, distant,<br>compression. |
|                        | Bombay                                                                                                                | E        | eP<br>e       | 07 58 38<br>08 06 39          |                 | Slight.                          |
| 14                     | Shillong                                                                                                              | Z        | iP            | 08 01 42                      |                 | Slight, distant,<br>rarefaction. |
| 14                     | Delhi                                                                                                                 | Z        | iP            | 15 50 55                      |                 | Slight, compression.             |
| 14                     | Shillong                                                                                                              | Z        | iP            | 20 11 41                      |                 | Slight, distant,<br>compression. |
| 14                     | Delhi                                                                                                                 | Z        | eP            | 21 20 10                      |                 | Slight.                          |
| 14                     | Shillong                                                                                                              | Z        | iPg           | 21 47 25                      |                 | Slight, near,<br>compression.    |
| 14                     | Shillong                                                                                                              | Z        | eP            | 21 57 22                      |                 | Slight, near.                    |

| DATE                   | STATION                                                                                       | COMPT     | PHASE                                            | G. M. T.<br>h. m. s.                                                             | $\Delta$<br>km. | REMARKS.                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------|-----------|--------------------------------------------------|----------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                               |           |                                                  |                                                                                  |                 |                                                                          |
| 14                     | Epc:- 0.3° S 123.0° E, Northern Celebes.<br>h = about 92 km.<br>-H= 21 h 59 m 16.1 s (USCGS). |           |                                                  |                                                                                  |                 |                                                                          |
|                        | Shillong                                                                                      | ZNE<br>NE | iP<br>eS<br>M                                    | 22 06 42<br>10 07<br>12 42                                                       | 2070            | Slight, distant,<br>compression. First<br>ground motion<br>towards West. |
|                        | Chatra                                                                                        | Z         | iP                                               | 22 07 16                                                                         |                 | Slight, distant,<br>compression.                                         |
|                        | Madras                                                                                        | E         | eP<br>e<br>PP<br>PPP<br>eS<br>e<br>Lq<br>Lr<br>M | 22 07 20<br>07 44<br>08 52<br>09 27<br>13 50<br>14 26<br>17 29<br>19 34<br>22 45 | 4850            | Slight.                                                                  |
|                        | Visakhapatnam                                                                                 | N         | eP<br>iS                                         | 22 07 26<br>14 06                                                                | 5020            | Moderate                                                                 |
|                        | Delhi                                                                                         | Z<br>NE   | eP<br>iS<br>i<br>i                               | 22 08 18<br>15 38<br>15 49<br>16 09                                              | 5720            | Slight, rarefaction                                                      |
|                        | Bombay                                                                                        | E         | eP<br>e<br>eS                                    | 22 08 21<br>13 11<br>15 41                                                       | 5720            | Slight                                                                   |
|                        | Poona                                                                                         | Z<br>NE   | eP<br>eS                                         | 22 08 21<br>16 03                                                                | 6120            | Slight                                                                   |
|                        | Calcutta                                                                                      | %E        | e<br>i                                           | 22 09 00<br>12 49                                                                |                 | Slight                                                                   |
| 14                     | Delhi                                                                                         | Z         | eP                                               | 22 48 40                                                                         |                 | Slight, rarefaction                                                      |
| 14                     | Shillong                                                                                      | ZE        | iP                                               | 22 53 33                                                                         |                 | Slight, distant,<br>compression                                          |
| 14                     | Dehra Dun                                                                                     | Z         | iP<br>i<br>i                                     | 23 09 22<br>09 46<br>10 15                                                       |                 | Slight                                                                   |
| 15                     | Shillong                                                                                      | Z         | eP                                               | 03 25 00                                                                         |                 | Slight                                                                   |
| 15                     | Delhi                                                                                         | Z         | iP<br>i<br>i<br>i                                | 06 16 08<br>17 24<br>17 28<br>17 30                                              |                 | Slight, rarefaction                                                      |
| 15                     | Shillong                                                                                      | Z         | iP                                               | 07 52 31                                                                         |                 | Slight, distant,<br>compression                                          |

| DATE                   | STATION                                                                                              | COMPT  | PHASE            | G. M. T.                      | Δ<br>km. | REMARKS.                         |
|------------------------|------------------------------------------------------------------------------------------------------|--------|------------------|-------------------------------|----------|----------------------------------|
|                        |                                                                                                      |        |                  | h. m. s.                      |          |                                  |
| <u>November, 1962.</u> |                                                                                                      |        |                  |                               |          |                                  |
| 15                     | Bokaro                                                                                               | NE     | eP<br>i          | 15 10 00<br>10 19             |          | Slight.                          |
| 15                     | Epc:- 36.0° N, 140.3° E, Central Honshu, Japan.<br>h = about 90 km.<br>-H= 15 h 48 m 40.1 s (USCGS). |        |                  |                               |          |                                  |
|                        | Shillong                                                                                             | Z      | iP               | 13 56 28                      |          | Slight, compression.             |
| 15                     | Epc:- 38.3° S 73.2° W, Central Chile.<br>h = about 33 km.<br>-H= 15 h 51 m 57.6 s (USCGS).           |        |                  |                               |          |                                  |
|                        | Delhi                                                                                                | Z      | iP<br>i          | 13 57 48<br>57 50             |          | Slight, rarefaction.             |
|                        | Bombay                                                                                               | ZE     | e                | 16 11 31                      |          | Slight.                          |
|                        | Poona                                                                                                | Z      | iPKP             | 16 11 32                      |          | Slight, distant,<br>rarefaction. |
|                        | Madras                                                                                               | E      | ePKP<br>e<br>e   | 16 11 53<br>12 34<br>17 12 32 |          | Slight.                          |
| 15                     | Delhi                                                                                                | Z      | iPKP<br>i<br>iPP | 16 11 44<br>12 34<br>15 42    | 17100    | Slight, compression.             |
|                        | Shillong                                                                                             | Z      | ePKP             | 16 14 42                      |          | Slight, distant.                 |
| 15                     | Poona                                                                                                | Z      | iP               | 16 29 02                      |          | Slight, distant,<br>compression. |
|                        | Shillong                                                                                             | Z      | iP               | 16 29 26                      |          | Slight, distant,<br>compression. |
|                        | Dehra Dun                                                                                            | Z      | iP               | 16 30 16                      |          | Slight.                          |
| 15                     | Shillong                                                                                             | Z      | eP               | 16 33 54                      |          | Slight.                          |
| 15                     | Epc:- 6.9° S 146.7° E, New Guinea.<br>h = about 40 km.<br>-H= 16 h 25 m 09.4 s (USCGS).              |        |                  |                               |          |                                  |
|                        | Shillong                                                                                             | Z      | iP               | 16 35 30                      |          | Slight, distant,<br>compression. |
|                        | Poona                                                                                                | Z      | iP<br>i          | 16 36 54<br>37 08             |          | Slight, distant,<br>compression. |
|                        | Delhi                                                                                                | E      | i<br>i<br>i      | 16 37 04<br>46 28<br>46 54    |          | Slight.                          |
|                        | Bombay                                                                                               | Z<br>E | e<br>M           | 16 37 14<br>17 16 -           |          | Slight.                          |

| DATE                   | STATION                                                                                                                                                               | COMPT              | PHASE                         | G. M. T.<br>h. m. s.                                  | $\Delta$<br>km. | REMARKS.              |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------------------|-------------------------------------------------------|-----------------|-----------------------|
| <u>November, 1962.</u> |                                                                                                                                                                       |                    |                               |                                                       |                 |                       |
| 15                     | Dehra Dun                                                                                                                                                             | Z                  | iP<br>i                       | 16 37 49<br>38 02                                     |                 | Slight.               |
| 15                     | Shillong                                                                                                                                                              | Z                  | e                             | 17 04 42                                              |                 | Slight, distant.      |
| 15                     | Shillong                                                                                                                                                              | Z                  | iPg                           | 17 56 14                                              |                 | Slight, near.         |
| 15                     | Epc:- 8.7° S 79.8° W, Near coast of north Peru.<br>h = about 45 km.<br>-H= 23 h 25 m 15.7 s (USCGS).<br>Mag.: 6 (Pas)                                                 |                    |                               |                                                       |                 |                       |
|                        | Delhi                                                                                                                                                                 | ZE                 | iPKP<br>i<br>i<br>i<br>i<br>i | 23 45 00<br>45 06<br>45 09<br>45 14<br>45 16<br>45 18 |                 | Compression.          |
|                        | Bombay                                                                                                                                                                | ZE<br>Z<br>ZE<br>E | ePKP<br>e<br>e<br>M           | 23 45 01<br>45 13<br>45 13<br>00 57 -                 |                 |                       |
| 15                     | Poona                                                                                                                                                                 | Z<br>ZE<br>Z       | iPKP<br>i<br>PKP2<br>PP       | 23 45 03<br>45 10<br>45 22<br>48 50                   | 16890           | Compression.          |
|                        | Shillong                                                                                                                                                              | Z                  | iPKP                          | 23 45 12                                              |                 | Compression.          |
|                        | Madras                                                                                                                                                                | E                  | ePKP<br>ePP<br>e<br>M?        | 23 45 21<br>49 33<br>00 09 43<br>49 31                | 17450           |                       |
| 16                     | Dehra Dun                                                                                                                                                             | Z                  | iP<br>i<br>i                  | 00 45 66<br>46 01<br>46 08                            |                 | Slight, compression.  |
|                        | Hyderabad                                                                                                                                                             | E                  | M                             | 00 55 15                                              |                 | Period=21 secs. u= 7. |
| 16                     | Shillong                                                                                                                                                              | Z                  | eP                            | 02 37 16                                              |                 | Slight, near.         |
| 16                     | Epc:- 32.3° S 111.1° W, Eastern Island region.<br>h = about 43 km.<br>-H= 07 h 18m 37.3 s (G.M.T.)<br>Mag.: 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ (Pas), 6 (Pal), (USCGS). |                    |                               |                                                       |                 |                       |
|                        | Poona                                                                                                                                                                 | Z                  | iPKP<br>e                     | 07 38 39<br>43 10                                     |                 | Rarefaction.          |
|                        | Chatra                                                                                                                                                                | Z                  | ePKP                          | 07 38 42                                              |                 |                       |
|                        | Delhi                                                                                                                                                                 | Z                  | ePKP                          | 07 38 43                                              |                 | Compression.          |

| DATE                   | STATION                                                                                                                     | COMPT     | PHASE                                            | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------|-------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                             |           |                                                  |                                                                         |                 |                                                                                                        |
| 16                     | Madras                                                                                                                      | E         | ePKP                                             | 07 38 47                                                                | 18020           | Moderate.                                                                                              |
|                        |                                                                                                                             |           | PKP2                                             | 39 36                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | PKS                                              | 42 23                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | PP                                               | 43 21                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | PPP                                              | 47 05                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | SKKS                                             | 49 55                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | SKSP                                             | 53 45                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | PPS                                              | 56 55                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | SS                                               | 08 03 44                                                                |                 |                                                                                                        |
|                        |                                                                                                                             |           | SSS                                              | 09 56                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | Lr                                               | 35 44                                                                   |                 |                                                                                                        |
|                        | Bombay                                                                                                                      | ZE<br>E   | ePKP1                                            | 07 38 47                                                                | 17890           | Moderate.                                                                                              |
|                        |                                                                                                                             |           | PP                                               | 43 14                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | e                                                | 45 45                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | e                                                | 08 04 04                                                                |                 |                                                                                                        |
|                        |                                                                                                                             |           | eSS                                              | 04 53                                                                   |                 |                                                                                                        |
|                        |                                                                                                                             |           | M                                                | 56 -                                                                    |                 |                                                                                                        |
|                        | Dehra Dun                                                                                                                   | Z         | ePKP                                             | 07 39 39                                                                |                 |                                                                                                        |
|                        | Shillong                                                                                                                    | Z         | e                                                | 07 58 28                                                                |                 |                                                                                                        |
|                        | Hyderabad                                                                                                                   | N         | M                                                | 08 38 27                                                                |                 | Period = 24 secs.<br>$\mu = 19$ .                                                                      |
| 16                     | Shillong                                                                                                                    | Z         | iPg<br>iSg                                       | 13 50 28<br>50 41                                                       | 110             | Slight, rarefaction.                                                                                   |
| 16                     | Epc:- 14.0° N 93.5° E.<br>-H= 21 h 10 m 00 s (Shillong)<br>Mag .: 5.8.                                                      |           |                                                  |                                                                         |                 |                                                                                                        |
|                        | Epc:- 13.5° N 93.2° E, Andaman Islands.<br>h = about 33 km.<br>-H= 21 h 10 m 01.8 s (USCGS).<br>g: 6-6 $\frac{1}{4}$ (Pal). |           |                                                  |                                                                         |                 |                                                                                                        |
|                        | Port Blair                                                                                                                  | NE        | P                                                | 21 10 28                                                                | (approximate)   | Near, both eclipse clocks stopped possibly due to the shock.                                           |
|                        | Calcutta                                                                                                                    | E         | iP<br>iS<br>M                                    | 21 12 26<br>14 20<br>15 13                                              | 1110            |                                                                                                        |
|                        | Visakhapatnam                                                                                                               | NE        | iP<br>iS                                         | 21 12 31<br>14 20                                                       | 1060            | First ground movement South, East.                                                                     |
|                        | Shillong                                                                                                                    | ZNE<br>NE | iP<br>PP<br>PPP<br>Lq<br>iS<br>SS<br>SSS/Lr<br>M | 21 12 51<br>13 00<br>13 07<br>14 55<br>15 05<br>15 17<br>15 30<br>15 57 | 1310            | Compression, initial ground motion towards North and West.<br>Mag : 6.<br><br>Pd.17 secs. $\mu = 33$ . |



| DATE                   | STATION    | COMPT  | PHASE | G. M. T. | $\Delta$ | REMARKS.                                                  |
|------------------------|------------|--------|-------|----------|----------|-----------------------------------------------------------|
|                        |            |        |       | h. m. s. | km.      |                                                           |
| <u>November, 1962.</u> |            |        |       |          |          |                                                           |
| 16                     | Madras     | E      | eP    | 21 12 57 | 1360     |                                                           |
|                        |            |        | PP    | 13 07    |          |                                                           |
|                        |            |        | PPP   | 13 15    |          |                                                           |
|                        |            |        | i     | 13 32    |          |                                                           |
|                        |            |        | Lq    | 15 07    |          |                                                           |
|                        |            |        | iS    | 15 15    |          |                                                           |
|                        |            |        | SS    | 15 28    |          |                                                           |
|                        |            | Lr/SSS |       | 15 45    |          |                                                           |
|                        |            |        | i     | 16 10    |          |                                                           |
|                        |            |        | M     | 16 45    |          |                                                           |
|                        | Bokaro     | NE     | iP    | 21 12 58 | 1380     | Initial ground movement towards North, West.              |
|                        |            |        | PP    | 13 07    |          |                                                           |
|                        |            |        | Lq    | 15 04    |          |                                                           |
|                        |            |        | eS    | 15 18    |          |                                                           |
|                        |            |        | SS    | 15 30    |          |                                                           |
|                        |            |        | Lr    | 15 39    |          |                                                           |
|                        |            |        | M     | 16 47    |          |                                                           |
|                        |            |        | M     | 22 07    |          | n = 200.                                                  |
|                        | Chatra     | Z      | iP    | 21 13 22 | 1530     | Rarefaction. Initial ground movement towards North, West. |
|                        |            |        | PP    | 13 48    |          |                                                           |
|                        |            |        | PPP   | 14 13    |          |                                                           |
|                        |            |        | Lq    | 15 20    |          |                                                           |
|                        |            |        | eS    | 15 57    |          |                                                           |
|                        |            |        | SS    | 16 39    |          |                                                           |
|                        |            |        | Sg    | 16 57    |          |                                                           |
|                        |            |        | SSS   | 17 20    |          |                                                           |
|                        | Hyderabad  | N      | eP    | 21 13 24 | 1520     | Period = 15 secs.<br>n = 43.                              |
|                        |            |        | iS    | 15 57    |          |                                                           |
|                        |            |        | SS    | 16 10    |          |                                                           |
|                        |            |        | Lr    | 16 57    |          |                                                           |
|                        |            |        | M     | 17 51    |          |                                                           |
|                        | Kodaikanal | E      | eP    | 21 13 39 | 1920     | Initial ground movement of S. Phase towards West.         |
|                        |            |        | iS    | 16 51    |          |                                                           |
|                        |            |        | SSS   | 17 24    |          |                                                           |
|                        |            |        | M     | 19 21    |          |                                                           |
|                        | Dehra Dun  | ZNE    | iP    | 21 14 09 | 2410     | Rarefaction. First ground movement towards North-West.    |
|                        |            |        | PP    | 14 31    |          |                                                           |
|                        |            |        | PPP   | 14 34    |          |                                                           |
|                        |            |        | iS    | 18 05    |          |                                                           |
|                        |            |        | Lq    | 18 20    |          |                                                           |
|                        |            |        | SS    | 18 37    |          |                                                           |
|                        |            |        | SSS   | 18 52    |          |                                                           |
|                        |            |        | Lr    | 19 18    |          |                                                           |
|                        |            |        | M     | 21 01    |          |                                                           |
|                        | Sehore     | E      | iP    | 21 14 13 |          |                                                           |
|                        |            | NE     | eS    | 17 19    |          |                                                           |
|                        |            |        | SS    | 17 42    |          |                                                           |
|                        |            |        | PcS   | 22 23    |          |                                                           |
|                        |            |        | ScS   | 25 43    |          |                                                           |

| DATE                   | STATION                                                                                                                | COMPT | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                           |
|------------------------|------------------------------------------------------------------------------------------------------------------------|-------|----------|----------------------|-----------------|------------------------------------|
| <u>November, 1962.</u> |                                                                                                                        |       |          |                      |                 |                                    |
| 16                     | Poona                                                                                                                  | ZNE   | iP       | 21 14 25             | 2030            | Compression.                       |
|                        |                                                                                                                        | ZN    | PP       | 14 40                |                 |                                    |
|                        |                                                                                                                        | ZNE   | PPP      | 14 49                |                 |                                    |
|                        |                                                                                                                        |       | iS       | 17 45                |                 |                                    |
|                        |                                                                                                                        |       | SS       | 18 02                |                 |                                    |
|                        |                                                                                                                        |       | SSS      | 18 19                |                 |                                    |
|                        |                                                                                                                        |       | Lr       | 18 48                |                 |                                    |
|                        |                                                                                                                        |       | M        | 20 02                |                 |                                    |
|                        | Bombay                                                                                                                 | ZE    | eP       | 21 14 37             | 2500            |                                    |
|                        |                                                                                                                        | E     | PP       | 15 03                |                 |                                    |
|                        |                                                                                                                        | Z     | e        | 18 09                |                 |                                    |
|                        |                                                                                                                        | Z     | Lq       | 18 23                |                 |                                    |
|                        |                                                                                                                        | E     | eS       | 18 40                |                 |                                    |
|                        |                                                                                                                        |       | Lr       | 19 12                |                 |                                    |
|                        |                                                                                                                        |       | M        | 24 24                |                 | Pd.17 secs. $\mu = 47$ .           |
|                        | Delhi                                                                                                                  | ZNE   | iP       | 21 14 47             | 2300            | Compression. First                 |
|                        |                                                                                                                        | ZE    | PP       | 15 03                |                 | ground motion toward               |
|                        |                                                                                                                        |       | PPP      | 15 23                |                 | s North, West.                     |
|                        |                                                                                                                        | NE    | i        | 16 15                |                 |                                    |
|                        |                                                                                                                        | ZNE   | i        | 18 26                |                 |                                    |
|                        |                                                                                                                        |       | iS       | 21 18 34             |                 |                                    |
|                        |                                                                                                                        |       | PcP, Lq  | 18 47                |                 |                                    |
|                        |                                                                                                                        | NE    | SS       | 19 08                |                 |                                    |
|                        |                                                                                                                        |       | Lr       | 19 12                |                 |                                    |
|                        |                                                                                                                        |       | SSS      | 19 16                |                 |                                    |
|                        |                                                                                                                        |       | i        | 19 50                |                 |                                    |
| 16                     | Delhi                                                                                                                  | NE    | i        | 21 20 12             |                 | Slight.                            |
|                        |                                                                                                                        | Z     | i        | 20 34                |                 |                                    |
|                        |                                                                                                                        |       | i        | 20 56                |                 |                                    |
|                        |                                                                                                                        |       | M        | 21 34                |                 | Period = 18 secs.                  |
|                        |                                                                                                                        | ZE    | PcS, ScP | 22 28                |                 |                                    |
|                        |                                                                                                                        | Z     | ScS      | 26 17                |                 |                                    |
| 16                     | Epc:-- $14.0^\circ$ N $92.8^\circ$ E, Andaman Islands region.<br>$\mu =$ about 33 km.<br>-H= 22 h 45 m 43.5 s (USCGS). |       |          |                      |                 |                                    |
|                        | Shillong                                                                                                               | Z     | iP       | 22 48 28             |                 | . Slight, distant,<br>compression. |
|                        | Madras                                                                                                                 | E     | eP       | 22 48 38             | 1290            | Feeble.                            |
|                        |                                                                                                                        |       | Lq       | 50 45                |                 |                                    |
|                        |                                                                                                                        |       | eS       | 50 50                |                 |                                    |
|                        | Chatra                                                                                                                 | Z     | iP       | 22 49 00             |                 | Feeble, distant,<br>compression.   |
|                        | Dehra Dun                                                                                                              | Z     | iP       | 22 49 43             |                 | Feeble, rarefaction.               |
|                        | Poona                                                                                                                  | Z     | iP       | 22 50 03             |                 | Slight, distant,<br>compression.   |
|                        |                                                                                                                        |       | i        | 53 23                |                 |                                    |
|                        | Delhi                                                                                                                  | Z     | iP       | 22 50 24             |                 | Slight, rarefaction.               |
| 16                     | Poona                                                                                                                  | Z     | iP       | 22 53 50             |                 | Slight, distant.                   |
|                        |                                                                                                                        |       | i        | 54 31                |                 |                                    |

| DATE                   | STATION                                                                                   | COMPT   | PHASE              | G. M. T.<br>h. m. s.                | $\Delta$<br>km. | REMARKS.                                             |
|------------------------|-------------------------------------------------------------------------------------------|---------|--------------------|-------------------------------------|-----------------|------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                           |         |                    |                                     |                 |                                                      |
| 16                     | Madras                                                                                    | E       | e                  | 23 00 59                            |                 | Feeble.                                              |
| 17                     | Delhi                                                                                     | Z       | iP                 | 00 19 35                            |                 | Slight, compression.                                 |
|                        | Shillong                                                                                  | Z       | eP                 | 00 32 35                            |                 | Slight, near.                                        |
| 17                     | Shillong                                                                                  | Z       | eP                 | 01 07 44                            |                 | Slight, near, compression.                           |
| 17                     | Epc:- 2.7° S 126.9° E, Molluca Sea.<br>h = about 37 km.<br>-H= 01 h 13 m 22.8 s (USCGS).  |         |                    |                                     |                 |                                                      |
|                        | Shillong                                                                                  | Z       | iP                 | 01 21 00                            |                 | Slight, compression.                                 |
|                        | Dehra Dun                                                                                 | Z       | eP                 | 01 21 51                            |                 | Slight.                                              |
|                        | Delhi                                                                                     | Z       | iP<br>i            | 01 22 42<br>22 43                   |                 | Slight, compression.                                 |
|                        | Poona                                                                                     | Z       | eP                 | 01 22 46                            |                 | Slight, distant.                                     |
| 17                     | Port Blair                                                                                | N<br>NE | eP<br>eS           | 03 49 57<br>09 09                   | 160             | Slight.                                              |
| 17                     | Port Blair                                                                                | N       | eP<br>eS           | 04 08 49<br>09 09                   | 110             | Slight.                                              |
| 17                     | Shillong                                                                                  | Z       | iP                 | 07 12 55                            |                 | Slight.                                              |
| 17                     | Bokaro                                                                                    | NE      | iP                 | 08 44 53                            |                 | Slight.                                              |
| 17                     | Port Blair                                                                                | NE      | eP<br>eS           | 09 02 56<br>03 09                   | 130             | Slight.                                              |
| 17                     | Poona                                                                                     | Z       | iP                 | 11 26 51                            |                 | Slight, distant, compression.                        |
|                        | Port Blair                                                                                | N       | e<br>e             | 13 42 03<br>42 15                   |                 | Slight, near.                                        |
| 17                     | Epc:- 2.8° N 121.7° E, Celebes Sea.<br>h = about 609 km.<br>-H= 14 h 21 m 30.6 s (USCGS). |         |                    |                                     |                 |                                                      |
|                        | Shillong                                                                                  | ZE      | iP<br>iS           | 14 27 51<br>32 51                   | 33 60           | Slight, rarefaction.                                 |
|                        | Visakhapatnam                                                                             | NE      | iP<br>iS           | 14 28 24<br>33 51                   | 3810            | Moderate. First ground movement towards North, East. |
|                        | Chatra                                                                                    | Z       | iP                 | 14 28 24                            |                 | Feeble, distant, rarefaction.                        |
|                        | Madras                                                                                    | E       | iP<br>e<br>iS<br>e | 14 28 35<br>30 26<br>34 13<br>37 29 | 3990            | Slight. Initial ground motion towards East.          |

| DATE                   | STATION                                                                                       | COMPT              | PHASE               | G. M. T.<br>h. m. s.                | $\Delta$<br>km. | REMARKS                                                           |
|------------------------|-----------------------------------------------------------------------------------------------|--------------------|---------------------|-------------------------------------|-----------------|-------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                               |                    |                     |                                     |                 |                                                                   |
| 17                     | Poona                                                                                         | ZE<br>Z<br>NE      | iP<br>i<br>iS<br>i  | 14 29 27<br>33 37<br>35 49<br>38 12 | 4700            | Slight,compression.<br>Initial ground move-<br>ment towards East. |
|                        | Delhi                                                                                         | Z<br>NE<br>Z<br>NE | iP<br>iS<br>eS<br>i | 14 29 27<br>35 50<br>35 50<br>38 12 | 4720            | Slight,rarefaction.                                               |
|                        | Port Blair                                                                                    | N                  | eS<br>i             | 14 31 05<br>36 17                   |                 | Slight.                                                           |
|                        | Calcutta                                                                                      | E                  | i<br>i              | 14 33 10<br>37 01                   |                 | Slight.                                                           |
| 17                     | Delhi                                                                                         | Z                  | iP<br>i             | 15 14 31<br>16 05                   |                 | Slight,<br>rarefaction.                                           |
| 17                     | Port Blair                                                                                    | N                  | e                   | 15 37 50                            |                 | Tremor.                                                           |
| 17                     | Chatra                                                                                        | Z                  | eP<br>eS            | 15 44 06<br>44 25                   | 160             | Feeble.                                                           |
| 17                     | Port Blair                                                                                    | N<br>NE            | e<br>i              | 16 16 28<br>16 37                   |                 | Slight,near.                                                      |
| 17                     | Port Blair                                                                                    | N                  | e                   | 16 36 06                            |                 | Slight,near.                                                      |
| 17                     | Shillong                                                                                      | Z                  | iP                  | 19 55 37                            |                 | Slight,distant,<br>compression.                                   |
| 17                     | Port Blair                                                                                    | NE                 | i<br>e<br>i         | 21 26 31<br>26 49<br>26 56          |                 | Slight,near.                                                      |
| 17                     | Delhi                                                                                         | Z                  | eP                  | 22 05 01                            |                 | Slight,compression.                                               |
| 17                     | Epc:- 63.3° N 150.0° W, Central Alaska.<br>h = about 125 km.<br>-H= 22 h 28 m 29.3 s (USCGS). |                    |                     |                                     |                 |                                                                   |
|                        | Chatra                                                                                        | Z                  | eP                  | 22 43 15                            |                 | Slight,near.                                                      |
|                        | Delhi                                                                                         | Z                  | iP                  | 22 44 26                            |                 | Slight,compression.                                               |
| 18                     | Chatra                                                                                        | Z                  | eP                  | 00 27 46                            |                 | Feeble ,near.                                                     |
| 18                     | Port Blair                                                                                    | N<br>NE            | eP<br>i             | 01 04 58<br>05 31                   |                 | Slight,near.                                                      |
|                        | Madras                                                                                        | E                  | eP<br>e<br>e<br>e   | 01 06 57<br>07 06<br>09 19<br>09 25 |                 | Feeble.                                                           |
|                        | Delhi                                                                                         | Z                  | iP                  | 01 09 10                            |                 | Slight,compression.                                               |

| DATE                   | STATION                                                                                                    | COMPT | PHASE            | G. M. T.<br>h. m. s.                   | $\Delta$<br>km. | REMARKS.                      |
|------------------------|------------------------------------------------------------------------------------------------------------|-------|------------------|----------------------------------------|-----------------|-------------------------------|
| <u>November, 1962.</u> |                                                                                                            |       |                  |                                        |                 |                               |
| 18                     | Port Blair                                                                                                 | N     | e                | 02 04 52                               |                 | Slight, near.                 |
| 18                     | Dehra Dun                                                                                                  | Z     | iP               | 03 59 25                               |                 | Slight.                       |
|                        | Delhi                                                                                                      | Z     | eP               | 03 59 52                               |                 | Slight, compression.          |
| 18                     | Epc:- $0.2^{\circ}$ S $125.1^{\circ}$ E, Molluca Sea.<br>h = about 56 km.<br>-H= 06 h 43 m 08.3 s (USCGS). |       |                  |                                        |                 |                               |
|                        | Shillong                                                                                                   | Z     | iP               | 06 50 47                               |                 | Slight, distant, compression. |
|                        | Chatra                                                                                                     | Z     | iP               | 06 51 22                               |                 | Feeble, distant, compression. |
|                        | Poona                                                                                                      | Z     | eP               | 06 52 23                               |                 | Slight, distant.              |
|                        | Delhi                                                                                                      | Z     | iP               | 06 52 25                               |                 | Slight, compression.          |
|                        | Dehra Dun                                                                                                  | Z     | iP<br>i          | 06 52 29<br>52 45                      |                 | Feeble, rarefaction.          |
| 18                     | Shillong                                                                                                   | Z     | iP               | 06 56 47                               |                 | Slight, distant, compression. |
|                        | Port Blair                                                                                                 | N     | e<br>i           | 06 58 45<br>59 20                      |                 | Slight, near.                 |
| 18                     | Delhi                                                                                                      | Z     | e                | 07 09 55                               |                 | Slight.                       |
| 18                     | Shillong                                                                                                   | Z     | ePg              | 07 18 11                               |                 | Slight, near.                 |
| 18                     | Port Blair                                                                                                 | N     | e                | 08 03 58                               |                 | Slight, near.                 |
| 18                     | Shillong                                                                                                   | Z     | iPg<br>iSg       | 09 34 14<br>34 24                      | 90              | Slight.                       |
| 18                     | Shillong                                                                                                   | Z     | eP               | 10 33 53                               |                 | Slight.                       |
| 18                     | Kodaikanal                                                                                                 | E     | i<br>i<br>i<br>i | 13 39 50<br>45 08<br>14 47 24<br>53 18 |                 | Distant.                      |
| 18                     | Shillong                                                                                                   | Z     | ePg<br>Sg        | 14 33 38<br>33 50                      | 100             | Slight.                       |
| 18                     | Shillong                                                                                                   | Z     | iP               | 24 00 00                               |                 | Slight.                       |
| 19                     | Port Blair                                                                                                 | NE    | e<br>e           | 00 01 51<br>02 17                      |                 | Slight.                       |
|                        | Shillong                                                                                                   | Z     | iP               | 06 04 00                               |                 | Slight, distant, rarefaction. |
| 19                     | Port Blair                                                                                                 | NE    | e<br>e           | 01 57 30<br>57 45                      |                 | Slight, near.                 |

| DATE                   | STATION                                                                                             | COMPT    | PHASE               | G. M. T.<br>h. m. s.                | △<br>km. | REMARKS.                                    |
|------------------------|-----------------------------------------------------------------------------------------------------|----------|---------------------|-------------------------------------|----------|---------------------------------------------|
| <u>November, 1962.</u> |                                                                                                     |          |                     |                                     |          |                                             |
| 19                     | Epc:- 24.3° N 122.6° E, Ryukyu Islands.<br>h = about 53 km.<br>-H = 04 h 15 m 36.1 s (USCGS).       |          |                     |                                     |          |                                             |
|                        | Chatra                                                                                              | Z        | iP                  | 04 22 00                            |          | Feeble, distant, compression.               |
|                        | Delhi                                                                                               | Z        | iP                  | 04 23 13                            |          | Slight, compression.                        |
| 19                     | Shillong                                                                                            | E        | eP<br>eS            | 05 41 45<br>46 10                   | 2830     | Slight.                                     |
| 19                     | Delhi                                                                                               | Z        | eP                  | 07 32 30                            |          | Slight, distant, compression.               |
| 19                     | Dehra Dun                                                                                           | E        | eP                  | 09 03 12                            |          | Slight.                                     |
| 19                     | Poona                                                                                               | Z        | eP                  | 10 34 13                            |          | Slight, distant.                            |
| 19                     | Delhi                                                                                               | Z        | iP<br>i             | 10 55 56<br>56 01                   |          | Slight, compression.                        |
| 19                     | Chatra                                                                                              | Z        | iP<br>i             | 11 42 48<br>42 57                   |          | Feeble, near, compression.                  |
|                        | Chatra                                                                                              | Z        | iP<br>i             | 14 04 37<br>06 33                   |          | Slight, rarefaction.                        |
|                        | Delhi                                                                                               | Z        | iP                  | 14 06 21                            |          | Slight, distant, compression.               |
|                        | Bokaro                                                                                              | NE       | eP                  | 14 07 27                            |          | Slight.                                     |
|                        | Calcutta                                                                                            | E        | e                   | 14 08 18                            |          | Slight.                                     |
| 19                     | Shillong                                                                                            | E        | iP<br>Pg<br>S<br>Sg | 14 34 30<br>34 49<br>35 13<br>35 38 | 390      | Slight, initial ground motion towards West. |
| 19                     | Chatra                                                                                              | Z<br>ZNE | iP<br>iS            | 20 41 56<br>42 21                   | 210      | Slight, compression.                        |
|                        | Shillong                                                                                            | E        | iP<br>eS            | 20 42 13<br>42 35                   | 180      | Slight.                                     |
| 19                     | Epc:- 53.8° N 163.6° W, Unimak Island region.<br>h = about 33 km.<br>-H = 06 h 54 m 04.1 s (USCGS). |          |                     |                                     |          |                                             |
|                        | Delhi                                                                                               | Z        | iP                  | 21 57 09                            |          | Slight, compression.                        |
| 20                     | Epc:- 55.6° N 158.8° E, Kamchatka.<br>h = about 33 km.<br>-H = 06 h 54 m 04.1 s (USCGS).            |          |                     |                                     |          |                                             |
| 20                     | Chatra                                                                                              | Z        | iP                  | 07 03 59                            |          | Feeble, distant, rarefaction.               |

| DATE                   | STATION                                                                                       | COMPT | PHASE         | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-----------------------------------------------------------------------------------------------|-------|---------------|----------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                               |       |               |                            |                 |                                  |
| 20                     | Chatra                                                                                        | Z     | iP            | 10 22 34                   |                 | Feeble, distant,<br>compression. |
| 20                     | Epc:- 42.6° N 143.4° E, Hokkaido, Japan.<br>h = about 40 km.<br>-H= 16 h 02 m 14.5 s (USCGS). |       |               |                            |                 |                                  |
|                        | Chatra                                                                                        | Z     | iP            | 16 10 53                   |                 | Feeble, distant,<br>rarefaction. |
|                        | Delhi                                                                                         | Z     | iP<br>i<br>i  | 16 11 38<br>11 57<br>12 41 |                 | Slight, rarefaction.             |
| 20                     | Chatra                                                                                        | Z     | iP<br>i       | 21 38 27<br>38 46          |                 | Feeble, distant,<br>rarefaction. |
| 20                     | Chatra                                                                                        | Z     | eP            | 22 34 09                   |                 | Feeble, distant.                 |
| 21                     | Delhi                                                                                         | Z     | iP<br>i<br>iS | 04 33 09<br>33 24<br>33 54 | 410             | Slight, rarefaction.             |
|                        | Chatra                                                                                        | Z     | eP<br>e       | 04 33 29<br>34 15          |                 | Feeble, distant.                 |
|                        | Bokaro                                                                                        | E     | S<br>eS       | 04 34 45<br>35 23          |                 | Slight.                          |
| 21                     | Shillong                                                                                      | Z     | iP            | 05 50 42                   |                 | Slight, distant,<br>compression. |
| 21                     | Dehra Dun                                                                                     | Z     | iP<br>iS      | 08 10 07<br>11 46          | 960             | Feeble, compression.             |
|                        | Delhi                                                                                         | Z     | iP<br>iS      | 08 10 18<br>11 56          | 950             | Slight, rarefaction.             |
| 21                     | Bokaro                                                                                        | EN    | iP            | 09 28 58                   |                 | Feeble, near.                    |
| 21                     | Shillong                                                                                      | Z     | eP<br>iS      | 10 30 51<br>31 14          | 190             | Slight.                          |
| 21                     | Shillong                                                                                      | Z     | eP            | 12 21 58                   |                 | Slight, distant.                 |
| 21                     | Epc:- 26.0° N 128.2° E, Ryukyu Islands.<br>h = about 33 km.<br>-H= 15 h 04 m 15.4 s (USCGS).  |       |               |                            |                 |                                  |
|                        | Shillong                                                                                      | Z     | iP            | 15 10 47                   |                 | Slight, distant,<br>compression. |
|                        | Chatra                                                                                        | Z     | iP            | 15 11 24                   |                 | Feeble, distant,<br>rarefaction. |
|                        | Delhi                                                                                         | Z     | iP            | 15 12 31                   |                 | Slight, compression.             |

| DATE                   | STATION       | COMPT | PHASE       | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|------------------------|---------------|-------|-------------|----------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |               |       |             |                            |                 |                                  |
| 21                     | Shillong      | Z     | iPg<br>iSg  | 16 40 31<br>40 40          | 80              | Slight.                          |
| 21                     | Chatra        | Z     | iP<br>i     | 19 17 34<br>18 45          |                 | Feeble, distant,<br>compression. |
|                        | Delhi         | Z     | eP          | 19 18 14                   |                 | Slight.                          |
|                        | Shillong      | Z     | iP          | 19 18 21                   |                 | Slight, distant,<br>rarefaction. |
| 22                     | Delhi         | Z     | iP          | 03 19 09                   |                 | Slight, rarefaction.             |
| 22                     | Port Blair    | NE    | e<br>e<br>i | 07 12 38<br>12 58<br>13 06 |                 | Slight, near.                    |
|                        | Shillong      | Z     | eP          | 07 14 50                   |                 | Slight, distant.                 |
| 22                     | Port Blair    | NE    | e<br>i      | 07 25 20<br>25 38          |                 | Slight, near.                    |
|                        | Visakhapatnam | E     | eP<br>iS    | 07 27 11<br>28 59          | 1060            | Slight.                          |
|                        | Shillong      | Z     | iP          | 07 27 31                   |                 | Slight, distant,<br>rarefaction. |
|                        | Chatra        | Z     | eP          | 07 28 05                   |                 | Feeble, distant.                 |
|                        | Delhi         | Z     | eP          | 07 29 24                   |                 | Slight, distant,<br>compression. |
|                        | Dehra Dun     | Z     | eP          | 07 29 37                   |                 | Slight.                          |
|                        | Bokaro        | E     | i           | 07 30 00                   |                 | Slight, distant.                 |
|                        | Poona         | Z     | e           | 07 32 40                   |                 | Slight, distant.                 |
| 22                     | Shillong      | Z     | eP          | 07 50 03                   |                 | Slight, distant.                 |
| 22                     | Bokaro        | E     | iP          | 08 01 41                   |                 | Feeble, local.                   |
| 22                     | Bokaro        | E     | iP          | 08 33 31                   |                 | Feeble, local.                   |
| 22                     | Bokaro        | NE    | iP          | 08 39 52                   |                 | Feeble, local.                   |
| 22                     | Port Blair    | NE    | e<br>i<br>i | 09 07 46<br>08 05<br>08 12 |                 | Slight.                          |
|                        | Shillong      | Z     | eP          | 09 10 02                   |                 | Slight, distant,<br>rarefaction. |
| 22                     | Delhi         | Z     | iP          | 10 07 09                   |                 | Tremor, rarefaction.             |
| 22                     | Shillong      | Z     | eP<br>S     | 11 30 58<br>31 32          | 300             | Slight.                          |



| DATE                   | STATION   | COMPT | PHASE                            | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-----------|-------|----------------------------------|----------------------------------------------------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |           |       |                                  |                                                                |                 |                                  |
| 22                     | Chatra    | Z     | eP<br>i                          | 13 47 43<br>47 56                                              |                 | Feeble, near.                    |
| 22                     | Shillong  | Z     | eP                               | 14 21 41                                                       |                 | Slight, distant.                 |
| 22                     | Delhi     | Z     | eP                               | 14 30 06                                                       |                 | Slight, distant,<br>compression. |
| 22                     | Shillong  | Z     | iPg                              | 15 25 38                                                       |                 | Near, tremor.                    |
| 22                     | Delhi     | Z     | iP                               | 22-48 22                                                       |                 | Slight, rarefaction.             |
| 22                     | Delhi     | Z     | iP<br>i                          | 22 49 57<br>50 00                                              |                 | Slight, rarefaction.             |
| 22                     | Delhi     | Z     | iP                               | 23 32 09                                                       |                 | Slight, rarefaction.             |
| 23                     | Dehra Dun | Z     | eP                               | 00 43 54                                                       |                 | Slight.                          |
|                        | Poona     | Z     | iP                               | 00 49 58                                                       |                 | Slight, distant,<br>compression. |
|                        | Bombay    | E     | e                                | 00 49 59                                                       |                 | Slight.                          |
|                        |           |       | e                                | 56 57                                                          |                 |                                  |
|                        |           | N     | M                                | 01 57 -                                                        |                 |                                  |
|                        | Shillong  | Z     | iP                               | 00 50 06                                                       |                 | Slight, distant,<br>compression. |
| 23                     | Poona     | Z     | iP                               | 01 04 41                                                       |                 | Slight, distant,<br>rarefaction. |
|                        | Dehra Dun | Z     | iP                               | 01 04 45                                                       |                 | Slight.                          |
| 23                     | Dehra Dun | Z     | iP<br>i                          | 06 37 51<br>38 47                                              |                 | Feeble, rarefaction.             |
| 23                     | Delhi     | Z     | iP<br>i<br>i<br>i<br>i<br>i<br>i | 08 37 47<br>37 52<br>38 02<br>38 29<br>38 50<br>38 55<br>39 00 |                 | Slight, rarefaction.             |
| 23                     | Delhi     | Z     | iP                               | 18 07 01                                                       |                 | Slight, compression.             |
| 23                     | Delhi     | Z     | iPg<br>iSg                       | 19 07 47<br>07 57                                              | 90              | Slight, rarefaction.             |
| 23                     | Dehra Dun | Z     | eP<br>i                          | 20 30 10<br>30 42                                              |                 | Feeble.                          |
|                        | Delhi     | Z     | iP<br>P*<br>Pg<br>iS<br>Sg       | 20 30 16<br>30 24<br>30 31<br>30 59<br>31 20                   | 390             | Slight, rarefaction.             |

| DATE                   | STATION                                                                                                       | COMPT        | PHASE                 | G. M. T.<br>h. m. s.                    | $\Delta$<br>km. | REMARKS.                      |
|------------------------|---------------------------------------------------------------------------------------------------------------|--------------|-----------------------|-----------------------------------------|-----------------|-------------------------------|
| <u>November, 1962.</u> |                                                                                                               |              |                       |                                         |                 |                               |
| 23                     | Chatra                                                                                                        | Z            | iP                    | 20 30 51                                |                 | Feeble, distant, compression. |
|                        | Poona                                                                                                         | Z            | eP                    | 20 35 30                                |                 | Slight, distant.              |
| 23                     | Delhi                                                                                                         | Z            | iP<br>iS              | 23 05 14<br>06 47                       | 900             | Slight, compression.          |
| 23                     | Delhi                                                                                                         | Z            | iP                    | 23 23 11                                |                 | Slight, rarefaction.          |
| 24                     | Port Blair                                                                                                    | N<br>E<br>NE | i<br>e<br>i<br>i<br>i | 07 08 33<br><br>08 38<br>08 42<br>08 56 |                 | Slight, near.                 |
|                        | Chatra                                                                                                        | Z            | eP                    | 07 11 27                                |                 | Feeble, distant.              |
|                        | Delhi                                                                                                         | Z            | iP<br>i               | 07 12 42<br>12 44                       |                 | Slight, compression.          |
|                        | Dehra Dun                                                                                                     | Z            | iP                    | 07 12 52                                |                 | Feeble, rarefaction.          |
|                        | Bokaro                                                                                                        | E            | iP                    | 07 13 02                                |                 | Slight, distant.              |
| 24                     | Bokaro                                                                                                        | NE           | iP                    | 08 32 00                                |                 | Feeble, local.                |
| 24                     | Delhi                                                                                                         | Z            | iPn<br>i<br>iSn       | 09 23 01<br>23 07<br>23 36              | 310             | Slight, compression.          |
| 24                     | Chatra                                                                                                        | Z            | iP                    | 16 01 58                                |                 | Feeble, rarefaction.          |
|                        | Delhi                                                                                                         | Z            | iPn<br>iSn            | 16 02 30<br>03 13                       | 390             | Slight, rarefaction.          |
| 24                     | Chatra                                                                                                        | Z            | eP                    | 17 33 47                                |                 | Feeble, distant.              |
| 25                     | Bokaro                                                                                                        | N            | iP                    | 08 33 16                                |                 | Slight, distant.              |
| 25                     | Delhi                                                                                                         | Z            | iP                    | 09 18 39                                |                 | Tremor, rarefaction.          |
| 25                     | Epc:- 10.6° N 125.2° E, Near north coast of Leyte, P.I .<br>h = about 47 km.<br>-H= 09 h 51 m 22.8 s (USCGS). |              |                       |                                         |                 |                               |
|                        | Shillong                                                                                                      | Z            | iP                    | 09 58 10                                |                 | Slight, distant, rarefaction. |
| 25                     | Bokaro                                                                                                        | NE           | iP                    | 09 59 54                                |                 | Slight.                       |
|                        | Dehra Dun                                                                                                     | Z            | eP                    | 09 59 58                                |                 | Slight, rarefaction.          |
|                        | Delhi                                                                                                         | Z            | eP                    | 09 59 59                                |                 | Slight, distant, rarefaction. |
|                        | Bombay                                                                                                        | E            | e                     | 10 07 49                                |                 | Slight.                       |

| DATE                   | STATION                                                                       | COMPT           | PHASE                                            | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                          |
|------------------------|-------------------------------------------------------------------------------|-----------------|--------------------------------------------------|-------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                               |                 |                                                  |                                                                         |                 |                                                                   |
| 25                     | Port Blair                                                                    | E               | M(M)<br>M                                        | 10 08 53<br>11 -                                                        |                 | Pperiod = 15 secs.<br>u = 3.                                      |
| 25                     | Delhi                                                                         | Z               | iP                                               | 11 56 14                                                                |                 | Tremor, compression.                                              |
| 25                     | Shillong                                                                      | ZNE             | iPg<br>Sg                                        | 12 50 57<br>51 06                                                       | 80              | Slight, felt.                                                     |
| 25                     | Shillong                                                                      | Z               | iPg                                              | 14 31 02                                                                |                 | Slight.                                                           |
| 25                     | Delhi                                                                         | Z               | eP                                               | 15 47 40                                                                |                 | Slight, distant,<br>compression.                                  |
| 25                     | Delhi                                                                         | Z               | iP                                               | 16 04 12                                                                |                 | Slight, distant,<br>rarefaction.                                  |
| 25                     | Delhi                                                                         | Z               | iPg<br>iSg                                       | 21 49 43<br>49 48                                                       | 50              | Slight, compression.                                              |
| 25                     | Shillong                                                                      | Z               | iPg<br>iSg                                       | 23 50 32<br>50 37                                                       | 50              | Slight.                                                           |
| 26                     | Epc:- $36.2^{\circ}$ N $70.0^{\circ}$ E, Himdukush.<br>-H= 01 h 41 m 04.9 s . |                 |                                                  |                                                                         |                 |                                                                   |
|                        | Dehra Dun                                                                     | ZNE             | eP<br>PP<br>PPP<br>Lq<br>iS<br>Lr,SS<br>SSS<br>M | 01 43 09<br>43 16<br>43 23<br>44 35<br>44 45<br>44 57<br>45 08<br>45 38 | 930             | Slight.                                                           |
|                        | Delhi                                                                         | ZNE<br>E<br>ZNE | iP<br>i<br>iS                                    | 01 43 18<br>44 35<br>44 57                                              | 960             | Slight, rarefaction.<br>First ground motion<br>on North, West.    |
|                        | Poona                                                                         | ZN<br>X<br>ZE   | iP<br>PPP<br>iS<br>SS<br>SSS<br>Lr<br>M          | 01 45 08<br>45 29<br>48 15<br>48 36<br>48 51<br>48 58<br>50 27          | 1880            | Slight, compression.<br>Initial ground movement<br>towards North. |
|                        | Bokaro                                                                        | E               | iP<br>i<br>eS<br>i                               | 01 45 13<br>46 04<br>48 23<br>48 47                                     | 1900            | Slight. Initial<br>ground motion to-<br>wards East.               |
|                        | Bombay                                                                        | E               | e<br>e                                           | 01 45 35<br>48 15                                                       |                 | Slight.                                                           |
|                        | Visakhapatnam                                                                 | NE              | iP<br>iPP<br>iPPP                                | 01 45 50<br>46 20<br>46 33                                              | 2440            | Slight. First<br>ground movement<br>towards South East.           |

| DATE                   | STATION                                                                                               | COMPT                     | PHASE                                                                     | G. M. T.<br>h. m. s.                                                                                        | △<br>km. | REMARKS .                                                                     |
|------------------------|-------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                       |                           |                                                                           |                                                                                                             |          |                                                                               |
| 26                     | Visakhapatnam<br>(Contd.)                                                                             | NE                        | iS<br>iSS<br>iSSS<br>iLr                                                  | 01 49 48<br>50 48<br>51 02<br>51 44                                                                         |          |                                                                               |
|                        | Shillong                                                                                              | Z                         | iP<br>e                                                                   | 01 47 45<br>49 31                                                                                           |          | Slight, distant,<br>rarefaction.                                              |
|                        | Madras                                                                                                | E                         | e<br>e<br>e<br>M?                                                         | 01 50 58<br>51 30<br>52 08<br>53 51                                                                         |          | Slight, earlier<br>phases not recor-<br>ded.                                  |
| 26                     | Shillong                                                                                              | Z                         | iP<br>iS                                                                  | 02 39 13<br>39 46                                                                                           | 300      | Slight, rarefaction.                                                          |
| 26                     | Epc:- 40.0° N 77.0° E.<br>-H= 05 h 29 m 20 s (Shillong)                                               |                           |                                                                           |                                                                                                             |          |                                                                               |
|                        | Epc:- 39.8° N 77.2° E, Shikiang Province, China.<br>h = about 14 km.<br>-H= 05 h 29 m 30.2 s (USCGS). |                           |                                                                           |                                                                                                             |          |                                                                               |
|                        | Dehra Dun                                                                                             | ZNE                       | eP<br>PP<br>PPP<br>P*<br>Pg<br>Lq<br>iS<br>SS<br>Lr<br>SSS<br>S*<br>Sg, M | 05 31 50<br>31 57<br>32 04<br>32 12<br>32 36<br>33 22<br>33 32<br>33 44<br>33 49<br>33 55<br>34 06<br>34 32 | 1000     | Slight.                                                                       |
|                        | Delhi                                                                                                 | Z<br>NE<br>ZNE<br>ZE<br>E | iP<br>eP<br>i<br>iS<br>i<br>iSS<br>i<br>Lr<br>SSS<br>i<br>M(?)<br>i       | 05 32 08<br>32 08<br>32 10<br>34 03<br>34 06<br>34 14<br>34 17<br>34 20<br>34 24<br>35 26<br>35 35<br>35 39 | 1120     | Slight, rarefaction.                                                          |
|                        | Chatra                                                                                                | Z<br>ZNE                  | iP<br>S                                                                   | 05 33 04<br>35 47                                                                                           | 1620     | Slight, rarefaction.                                                          |
|                        | Bokaro                                                                                                | E<br>NE<br>E              | eP<br>iS<br>M                                                             | 05 33 40<br>36 56<br>39 20                                                                                  | 1970     | Moderate.                                                                     |
|                        | Shillong                                                                                              | ZNE<br>ZE                 | iP<br>PPP<br>iS<br>SSS<br>M                                               | 05 33 40<br>34 13<br>37 19<br>38 55<br>40 51                                                                | 2140     | Slight, rarefaction.<br>Initial ground mo-<br>tion towards North<br>and West. |

| DATE                   | STATION                                                                                                    | COMPT                | PHASE                                   | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                                                                  |
|------------------------|------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------|----------------------------------------------------------------|-----------------|---------------------------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                            |                      |                                         |                                                                |                 |                                                                           |
| 26                     | Calcutta                                                                                                   | E                    | e<br>iS                                 | 05 34 12<br>37 41                                              | 2110            | Slight.                                                                   |
|                        | Bombay                                                                                                     | ZNE<br>E<br>E<br>N   | eP<br>eS<br>Lq<br>SS<br>SSS<br>M<br>M   | 05 34 17<br>38 01<br>38 15<br>38 34<br>38 50<br>41 37<br>43 08 | 2270            | Moderate.<br><br>Period 12 secs.<br>u = 6.<br>Period = 9 secs.<br>u = 12. |
|                        | Poona                                                                                                      | ZN<br>Z<br>ZNE<br>ZE | iP<br>PP<br>PPP<br>iS<br>Lq<br>SS<br>Lr | 05 34 20<br>34 44<br>34 54<br>38 19<br>38 40<br>38 57<br>39 40 | 2450            | Slight, compression.<br>Initial ground move-<br>ment towards North.       |
|                        | Visakhapatnam                                                                                              | NE                   | eP<br>eS<br>eLq<br>eSS<br>eSSS          | 05 34 33<br>38 43<br>39 27<br>39 41<br>39 55                   | 2600            | Moderate.                                                                 |
|                        | Sehore                                                                                                     | NE<br>E              | ePs<br>e<br>e<br>e<br>e<br>e            | 05 36 14<br>36 22<br>36 29<br>38 17<br>38 27<br>38 47          |                 | Slight.                                                                   |
|                        | Madras                                                                                                     | E                    | eS<br>Lq<br>Lr<br>i<br>M                | 05 39 51<br>40 42<br>42 10<br>43 49<br>44 32                   |                 | Slight.                                                                   |
|                        | Kodaikanal                                                                                                 | E                    | e<br>e                                  | 05 40 33<br>43 45                                              |                 | Slight, near.                                                             |
| 26                     | Delhi                                                                                                      | Z                    | iP                                      | 08 14 18                                                       |                 | Slight, rarefaction                                                       |
|                        | Epc:- 42.2° N 144.4° E, Off coast of Hokkaido, Japan.<br>h = about 33 km.<br>-H= 13 h 28 m 33.7 s (USCGS). |                      |                                         |                                                                |                 |                                                                           |
|                        | Dehra Dun                                                                                                  | Z                    | iP                                      | 13 37 57                                                       |                 | Slight.                                                                   |
|                        | Delhi                                                                                                      | Z                    | iP<br>i                                 | 13 38 04<br>38 16                                              |                 | Slight, compression                                                       |
| 26                     | Delhi                                                                                                      | Z                    | eP                                      | 16 17 26                                                       |                 | Slight, distant,<br>rarefaction.                                          |

| DATE                   | STATION                                                                                       | COMPT               | PHASE                          | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                                                 |
|------------------------|-----------------------------------------------------------------------------------------------|---------------------|--------------------------------|----------------------------------------------|-----------------|----------------------------------------------------------|
| <u>November, 1962.</u> |                                                                                               |                     |                                |                                              |                 |                                                          |
| 26                     | Delhi                                                                                         | Z                   | iP<br>i                        | 16 55 31<br>55 33                            |                 | Slight, compression.                                     |
| 26                     | Madras                                                                                        | E                   | iP<br>iS<br>M                  | 20 49 22<br>49 48<br>49 52                   | 220             | Slight. Initial ground movement towards East.            |
|                        | Poona                                                                                         | Z                   | e<br>e                         | 20 51 49<br>52 19                            | 250             | Slight.                                                  |
|                        |                                                                                               | E                   | e<br>e                         | 52 25<br>52 31                               |                 |                                                          |
|                        | Bombay                                                                                        | ZE                  | e                              | 20 52 46                                     |                 | Tremor.                                                  |
| 27                     | Epc:- 25.1° N 122.9° E, Ryukyu Islands.<br>h = about 148 km.<br>-H= 06 h 52 m 57.8 s (USCGS). |                     |                                |                                              |                 |                                                          |
|                        | Shillong                                                                                      | ZE<br>E             | iP<br>iS                       | 06 58 38<br>07 03 11                         | 2950            | Slight, compression.                                     |
|                        | Chatra                                                                                        | Z<br>NE             | iP<br>iS<br>i                  | 06 59 14<br>07 04 13<br>09 25                | 3350            | Slight, rarefaction.                                     |
|                        | Bokaro                                                                                        | NE                  | eP<br>iS                       | 06 59 29<br>07 04 39                         | 3520            | Slight, other phases not clear.                          |
|                        | Visakhapatnam                                                                                 | NE                  | iP<br>iS<br>iScS/iLr           | 07 00 04<br>05 41<br>09 58                   | 3970            | Moderate. First ground movement towards North East.      |
|                        | Dehra Dun                                                                                     | NE<br>NE            | iP,<br>iS                      | 07 00 21<br>06 14                            | 4220            | Feeble. First ground movement towards East, compression. |
|                        | Delhi                                                                                         | ZE<br>Z<br>E<br>Z   | iP<br>i<br>ePP<br>iPPP         | 07 00 25<br>01 06<br>02 05<br>02 22          | 4270            | Slight, compression. Initial ground motion towards West. |
|                        |                                                                                               |                     | i<br>NE iS, PcS, ScP<br>E iScS | 05 56<br>06 21<br>10 10                      |                 |                                                          |
|                        | Madras                                                                                        | E                   | iP<br>iS<br>e                  | 07 00 38<br>06 46<br>10 11                   | 4480            | Slight. Initial ground motion towards West.              |
|                        | Poona                                                                                         | ZE<br>Z             | iP<br>PcP<br>ScP               | 07 01 08<br>02 34<br>06 18                   | 4850            | Slight, compression. Initial ground movement West.       |
|                        |                                                                                               | ZNE<br>N            | iS<br>SS                       | 07 38<br>10 39                               |                 |                                                          |
|                        | Bombay                                                                                        | ZNE<br>E<br>NE<br>E | eP<br>PP<br>eS<br>ScS<br>SS    | 07 01 14<br>03 14<br>07 52<br>10 45<br>11 31 | 4980            | Slight.                                                  |

| DATE                   | STATION                                                                                                     | COMPT  | PHASE             | G. M. T.<br>h. m. s.                | /<br>km. | REMARKS.                         |
|------------------------|-------------------------------------------------------------------------------------------------------------|--------|-------------------|-------------------------------------|----------|----------------------------------|
| <u>November, 1962.</u> |                                                                                                             |        |                   |                                     |          |                                  |
| 27                     | Port Blair                                                                                                  | E      | M(?)              | 07 11 33                            |          |                                  |
| 27                     | Madras                                                                                                      | E      | eP<br>eS<br>M     | 07 57 26<br>57 52<br>57 58          | 220      | Feeble.                          |
|                        | Poona                                                                                                       | Z      | e                 | 08 00 24                            |          | Slight, near.                    |
|                        | Bombay                                                                                                      | Z      | e<br>e            | 08 00 51<br>00 57                   |          | Tremor.                          |
| 27                     | Port Blair                                                                                                  | E      | eP<br>iS          | 08 30 26<br>30 43                   | 130      | Slight.                          |
| 27                     | Delhi                                                                                                       | Z      | iP                | 11 53 56                            |          | Slight, near,<br>compression.    |
| 27                     | Epc:- 14.9° N 119.9° E, Near West coast of Luzon, P.I.<br>h = about 35 km.<br>-H= 12 h 07 m 12.7 s (USCGS). |        |                   |                                     |          |                                  |
|                        | Shillong                                                                                                    | Z<br>N | eP<br>e           | 12 13 05<br>18 00                   |          | Slight.                          |
|                        | Chatra                                                                                                      | Z      | eP                | 12 13 44                            |          | Feeble, distant.                 |
|                        | Poona                                                                                                       | Z      | eP                | 12 15 24                            |          | Slight, distant.                 |
|                        | Bombay                                                                                                      | Z      | eP<br>e<br>E<br>E | 12 15 28<br>15 37<br>15 51<br>17 25 | 4970     | Slight.                          |
|                        |                                                                                                             |        | eS<br>PPS         | 22 05<br>22 23                      |          |                                  |
|                        | Port Blair                                                                                                  | E      | M(?)<br>M         | 12 22 13<br>24 -                    |          | Period = 15 secs.<br>u = 7.      |
| 27                     | Delhi                                                                                                       | Z      | iPg               | 13 35 16                            |          | Slight, local,<br>rarefaction.   |
| 27                     | Epc:- 12.2° N 143.8° E, Mariana Islands.<br>h = about 33 km.<br>-H= 16 h 50 m 27.7 s (USCGS).               |        |                   |                                     |          |                                  |
|                        | Shillong                                                                                                    | Z      | iP                | 16 59 26                            |          | Slight, rarefaction.             |
|                        | Chatra                                                                                                      | Z      | iP                | 16 59 41                            |          | Slight, distant,<br>rarefaction. |
|                        | Dehra Dun                                                                                                   | Z      | eP                | 17 00 56                            |          | Slight.                          |
|                        | Delhi                                                                                                       | Z      | eP                | 17 00 57                            |          | Slight, rarefaction.             |
|                        | Poona                                                                                                       | Z      | iP                | 17 01 22                            |          | Slight, distant,<br>rarefaction. |

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| DATE                   | STATION                                                                                       | COMPT        | PHASE                 | G. M. T.<br>h. m. s.                | △<br>km. | REMARKS.                                            |
|------------------------|-----------------------------------------------------------------------------------------------|--------------|-----------------------|-------------------------------------|----------|-----------------------------------------------------|
| <u>November, 1962.</u> |                                                                                               |              |                       |                                     |          |                                                     |
| 28                     | Epc:- 12.1° N 143.7° E, Mariana Islands.<br>h = about 33 km.<br>-H= 02 h 35 m 48.8 s (USCGS). |              |                       |                                     |          |                                                     |
|                        | Chatra                                                                                        | Z<br>NE      | iP<br>e               | 02 45 19<br>53 05                   |          | Slight, distant,<br>compression.                    |
|                        | Dehra Dun                                                                                     | Z            | iP                    | 02 46 16                            |          | Slight.                                             |
| 28                     | Delhi                                                                                         | Z            | iP                    | 02 46 18                            |          | Slight, compression.                                |
|                        | Poona                                                                                         | Z            | iP                    | 02 46 43                            |          | Slight, distant,<br>rarefaction.                    |
| 28                     | Calcutta                                                                                      | E            | i                     | 02 52 46                            |          | Slight.                                             |
|                        | Bombay                                                                                        | NE           | e<br>e                | 02 55 41<br>56 44                   |          | Slight.                                             |
| 28                     | Epc:- 24.3° N 141.3° E, Volcano Islands.<br>h= about 82 km.<br>-H= 05 h 53 m 13.0 s (USCGS).  |              |                       |                                     |          |                                                     |
|                        | Chatra                                                                                        | Z            | iP                    | 06 01 56                            |          | Feeble, distant,<br>compression.                    |
|                        | Delhi                                                                                         | Z            | iP                    | 06 02 54                            |          | Slight, compression.                                |
|                        | Poona                                                                                         | Z            | iP                    | 06 03 34                            |          | Slight, distant,<br>compression.                    |
| 28                     | Shillong                                                                                      | Z            | iPg<br>iSg            | 07 39 41<br>39 59                   | 180      | Slight, rarefaction.                                |
| 28                     | Shillong                                                                                      | ZE           | eP                    | 08 09 45                            |          | Slight, near.                                       |
|                        | Chatra                                                                                        | Z            | iP                    | 08 10 53                            |          | Feeble, distant,<br>rarefaction.                    |
| 28                     | Port Blair                                                                                    | NE           | e                     | 15 25 42                            |          | Slight, near.                                       |
| 28                     | Epc:- 10.0° N 94.5° E, Nicobar Island.<br>-H= 15 h 25 m 47 s (Shillong).                      |              |                       |                                     |          |                                                     |
|                        | Port Blair                                                                                    | NE<br>E      | iPg<br>iSg            | 15 26 35<br>26 47                   | 110      | Slight.                                             |
|                        | Visakhapatnam                                                                                 | E<br>N<br>NE | iP<br>eP<br>iS        | 15 29 02<br>31 11                   | 1270     | Moderate. First<br>ground movement<br>towards East. |
|                        | Calcutta                                                                                      | E            | e                     | 15 29 05                            |          | Slight.                                             |
|                        | Madras                                                                                        | E            | iP<br>PP<br>PPP<br>Lq | 15 29 12<br>29 24<br>29 29<br>31 25 | 1390     | Slight. Initial<br>ground motion<br>towards West.   |



| DATE                   | STATION        | COMPT                       | PHASE                                          | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                          |
|------------------------|----------------|-----------------------------|------------------------------------------------|-------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------|
| <u>November, 1962.</u> |                |                             |                                                |                                                                         |                 |                                                                   |
| 28                     | Madras(Contd.) | E                           | iS<br>SS<br>Lr<br>M                            | 15 31 33<br>31 45<br>32 02<br>33 03                                     |                 |                                                                   |
|                        | Shillong       | ZNE<br>E                    | iP<br>iS                                       | 15 29 37<br>32 34                                                       | 1770            | Slight,compression.                                               |
|                        | Bokaro         | NE                          | iP<br>i<br>iS<br>e                             | 15 29 37<br>32 18<br>32 32<br>33 53                                     | 1740            | Slight.                                                           |
|                        | Cha tra        | ZNE<br>NE                   | iP<br>eS                                       | 15 30 07<br>33 25                                                       | 1990            | Rarefaction.                                                      |
|                        | Poona          | ZE<br><br>E<br>Z<br>ZE<br>Z | iP<br>i<br>PP<br>PPP<br>iS<br>Lq<br>SS<br>Lr   | 15 30 41<br>30 45<br>31 05<br>31 15<br>34 38<br>34 56<br>35 15<br>36 10 | 2410            | Slight,compression.<br>Initial ground move-<br>ment towards West. |
|                        | Bombay         | ZE<br>ZNE<br>NE<br>E        | eP<br>eS<br>LQ<br>S <sup>o</sup>               | 15 30 52<br>34 53<br>35 26<br>35 35                                     | 2480            | Slight.                                                           |
|                        | Delhi          | ZE<br>Z<br><br>ZE           | iP<br>i<br>PP<br>i<br>iS                       | 15 31 12<br>31 15<br>31 40<br>32 11<br>35 21                            | 2590            | Slight,rarefaction.<br>Initial ground mo-<br>tion towards East.   |
|                        | Dehra Dun      | Z<br><br>ZN<br>ZNE<br>Z     | iP<br>PP<br>PPP<br>eS<br>Lq<br>SS<br>SSS<br>Lr | 15 31 21<br>31 53<br>32 04<br>35 36<br>36 09<br>36 25<br>36 40<br>37 13 | 2670            | Slight,rarefaction.                                               |
|                        | Hyderabad      | N                           | M                                              | 15 33 11                                                                |                 | Period = 12 secs.<br>u = 3.                                       |
| 28                     | Delhi          | E                           | i<br>i                                         | 15 35 33<br>37 06                                                       |                 | Slight.                                                           |
| 28                     | Poona          | Z                           | eP                                             | 15 44 52                                                                |                 | Slight,distant.                                                   |
| 28                     | Cha tra        | Z                           | iPg<br>Sg                                      | 17 11 15<br>11 27                                                       | 100             | Feeblr,rarefaction.                                               |
|                        | Delhi          | Z                           | iP<br>i                                        | 17 16 16<br>16 30                                                       |                 | Slight,compression.                                               |

| DATE                   | STATION                                                                                  | COMPT   | PHASE      | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|------------------------------------------------------------------------------------------|---------|------------|----------------------|-----------------|----------------------------------|
| <u>November, 1962.</u> |                                                                                          |         |            |                      |                 |                                  |
| 28                     | Chatra                                                                                   | Z       | eP         | 21 15 20             |                 | Feeble, near.                    |
|                        | Delhi                                                                                    | Z       | iP<br>i    | 21 16 06<br>16 10    |                 | Slight, compression.             |
| 29                     | Shillong                                                                                 | Z       | iPg<br>iSg | 00 15 37<br>15 47    | 90              | Slight.                          |
| 29                     | Dehra Dun                                                                                | Z       | eP         | 04 11 19             |                 | Slight.                          |
|                        | Delhi                                                                                    | Z       | iP<br>iS   | 04 11 35<br>13 59    | 1410            | Slight, compression.             |
|                        | Chatra                                                                                   | Z       | iP         | 04 12 50             |                 | Feeble, distant,<br>rarefaction. |
| 29                     | Delhi                                                                                    | Z       | iP         | 06 43 17             |                 | Slight, compression.             |
| 29                     | Delhi                                                                                    | Z       | iP         | 07 50 19             |                 | Slight, rarefaction.             |
| 29                     | Delhi                                                                                    | Z       | ePg<br>iSg | 10 01 33<br>01 35    | 20              | Tremor.                          |
| 29                     | Shillong                                                                                 | Z       | iP         | 13 24 11             |                 | Slight, distant,<br>rarefaction. |
| 29                     | Shillong                                                                                 | Z       | iP         | 17 33 42             |                 | Slight, rarefaction.             |
| 29                     | Port Blair                                                                               | E       | e<br>i     | 18 25 02<br>29 40    |                 | Slight.                          |
| 29                     | Shillong                                                                                 | Z       | eP         | 18 40 48             |                 | Slight.                          |
|                        | Chatra                                                                                   | Z       | eP         | 18 41 11             |                 | Feeble, distant.                 |
| 29                     | Shillong                                                                                 | Z       | iP         | 19 19 17             |                 | Slight, distant,<br>compression. |
| 29                     | Shillong                                                                                 | Z<br>E  | iP<br>e    | 19 26 04<br>29 34    |                 | Slight, distant,<br>compression. |
|                        | Calcutta                                                                                 | E       | i          | 19 29 38             |                 | Slight.                          |
|                        | Visakhapatnam                                                                            | E       | eP<br>iS   | 19 30 29<br>32 01    | 890             | Slight.                          |
|                        | Bombay                                                                                   | E       | eP<br>e    | 19 31 16<br>32 14    |                 | Slight.                          |
|                        |                                                                                          | N<br>NE | e<br>M     | 32 32<br>20 05 -     |                 |                                  |
|                        | Delhi                                                                                    | Z       | eP<br>eS   | 22 54 39<br>56 46    | 1240            | Slight, rarefaction.             |
| 29                     | Epc:- 38.4° N 70.4° E (Hindukush).<br>h = about 179 km.<br>-H= 22 h 52 m 06.9 s (USCGS). |         |            |                      |                 |                                  |
|                        | Chatra                                                                                   | Z       | eP         | 22 56 06             |                 | Feeble, distant.                 |

| DATE                   | STATION                                                                                                         | COMPT          | PHASE                  | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                                            |
|------------------------|-----------------------------------------------------------------------------------------------------------------|----------------|------------------------|----------------------------------------------|-----------------|-----------------------------------------------------|
| <u>November, 1962.</u> |                                                                                                                 |                |                        |                                              |                 |                                                     |
| 29                     | Shillong                                                                                                        | Z              | iP                     | 22 56 06                                     |                 | Feeble, distant.                                    |
| 29                     | Shillong                                                                                                        | Z              | iP<br>iS               | 23 16 46<br>17 14                            | 240             | Slight, rarefaction.                                |
| 30                     | Chatra                                                                                                          | Z              | eP                     | 00 12 10                                     |                 | Feeble.                                             |
|                        | Shillong                                                                                                        | Z              | eP                     | 00 17 41                                     |                 | Slight.                                             |
| 30                     | Shillong                                                                                                        | ZNE<br>E<br>NE | iP<br>PPP<br>iS<br>SSS | 16 02 45<br>02 58<br>03 13<br>03 33          | 240             | Slight. Initial ground movement towards West. Felt. |
|                        | Chatra                                                                                                          | NE             | eP<br>eS               | 16 03 53<br>05 03                            | 660             | Slight.                                             |
|                        | Bokaro                                                                                                          | NE             | iP<br>e<br>i<br>i<br>e | 16 04 11<br>05 12<br>05 24<br>05 38<br>05 58 |                 | Slight.                                             |
|                        | Calcutta                                                                                                        | E              | i                      | 16 04 40                                     |                 | Slight.                                             |
| 30                     | Epc:- $24.2^{\circ}$ N $94.5^{\circ}$ E, Burma.<br>h = about 175 km.<br>-H= 16 h 02 m 13.6 s (USCGS).           |                |                        |                                              |                 |                                                     |
|                        | Dehra Dun                                                                                                       | Z              | iP<br>e                | 16 05 47<br>08 31                            |                 | Feeble, rarefaction.                                |
|                        | Delhi                                                                                                           | Z              | iP<br>eS               | 16 05 47<br>08 29                            | 1610            | Slight, compression.                                |
|                        | Poona                                                                                                           | Z              | iP<br>i<br>iS<br>i     | 16 06 35<br>06 57<br>10 19<br>11 12          |                 | Slight, distant, rarefaction.                       |
|                        | Bombay                                                                                                          | W<br>N<br>NE   | eS<br>e<br>e           | 16 10 20<br>12 37<br>14 04                   |                 | Slight.                                             |
| 30                     | Shillong                                                                                                        | Z              | iP                     | 16 40 46                                     |                 | Slight.                                             |
| 30                     | Epc:- $3.2^{\circ}$ N $127.1^{\circ}$ E, Mollucca Passage.<br>h = about 58 km.<br>-H= 16 h 53 m 24.6 s (USCGS). |                |                        |                                              |                 |                                                     |
| 30                     | Shillong                                                                                                        | Z              | iP                     | 17 00 57                                     |                 | Slight.                                             |
|                        | Delhi                                                                                                           | Z              | eP                     | 17 02 41                                     |                 | Slight, rarefaction.                                |
|                        | Dehra Dun                                                                                                       | Z              | iP                     | 17 02 45                                     |                 | Slight.                                             |
|                        | Poona                                                                                                           | Z              | iP                     | 17 02 46                                     |                 | Slight, distant, rarefaction.                       |
| 30                     | Delhi                                                                                                           | Z              | iP                     | 21 33 45                                     |                 | Slight, compression.                                |

| DATE                   | STATION   | COMPT  | PHASE               | G. M. T.<br>h. m. s.                | △<br>km. | REMARKS.                      |
|------------------------|-----------|--------|---------------------|-------------------------------------|----------|-------------------------------|
| <u>November, 1962.</u> |           |        |                     |                                     |          |                               |
| 30                     | Madras    | E      | eP<br>PP<br>iS<br>M | 21 45 40<br>45 45<br>46 08<br>46 15 | 240      | Feeble.                       |
|                        | Poona     | Z      | eP                  | 21 48 42                            |          | Slight, near.                 |
| 30                     | Delhi     | Z      | eP                  | 22 10 37                            |          | Slight, distant, compression. |
|                        | Bombay    | N<br>N | e<br>e              | 22 14 02<br>17 09                   |          | Slight.                       |
| 30                     | Delhi     | Z      | iP                  | 23 19 19                            |          | Slight, rarefaction.          |
| 30                     | Dehra Dun | Z      | iP                  | 23 19 22                            |          | Slight.                       |
| 30                     | Poona     | Z      | iP                  | 23 19 25                            |          | Slight, distant, compression. |

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**Earthquake Reports**  
 ( Non-Instrumental )

The following is the list of earthquakes that were reported by the voluntary observers, from different stations, during the month of November, 1962 A.D.

| Place                      | Date | Time in G.M.T. | Duration of shock in secs. | Number of shocks. | Intensity in R.F.Scale. | Remarks.                                                                                                                                                                                                 |
|----------------------------|------|----------------|----------------------------|-------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shillong                   | 8    | 14 30          | 5                          | 1                 | III                     | Slight, sound.                                                                                                                                                                                           |
| Shillong                   | 12   | 14 44          | 5                          | 1                 | IV                      | Slight, rattling sound.                                                                                                                                                                                  |
| Mayabander (Port Blair)    | 16   | 21 10          | 5                          | 1                 | VII                     | -                                                                                                                                                                                                        |
| Diglipur (near Port Blair) | 16   | 21 10          | 31                         | 1                 | VII                     | *After shock at 21-20, 21-25, 21-30, 22-40, 22-50 and 23-15 GMT in all 17 shocks upto the morning of 19th. All buildings shocked with cracks in some of them. No large scale damage or casulty reported. |
| Shillong                   | 20   | 21 40          | 5                          | 1                 | III                     | Slight, sound.                                                                                                                                                                                           |
| Shillong                   | 25   | 12 50<br>13 37 | 5<br>5                     | 1<br>1            | V<br>III                | -<br>-                                                                                                                                                                                                   |
| Shillong                   | 30   | 16 03          | 6                          | 1                 | V                       | Rattling sound before and during quake.                                                                                                                                                                  |

MICROSEISMIC - 55 - TABULATION

| Date                      | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date            | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. |
|---------------------------|----------|-----|------------------------|---------------------|-----------------|----------|-----|------------------------|---------------------|
| Station : Visakhapatnam . |          |     |                        |                     | November, 1962. |          |     |                        |                     |
| 01                        | 00       | 2   | 0.4                    | 3.9                 | 13              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.4                    | 3.6                 |                 | 06       | 2   | 0.4                    | 6.5                 |
|                           | 12       | 2   | 0.4                    | 3.5                 |                 | 12       | D   | -                      | -                   |
|                           | 18       | ... | -                      | -                   |                 | 18       | D   | -                      | -                   |
| 02                        | 00       | 2   | 0.3                    | 3.5                 | 14              | 00       | D   | -                      | -                   |
|                           | 06       | 2   | 0.3                    | 4.0                 |                 | 06       | D   | -                      | -                   |
|                           | 12       | 2   | 0.4                    | 4.2                 |                 | 12       | D   | -                      | -                   |
|                           | 18       | 2   | 0.3                    | 4.5                 |                 | 18       | D   | -                      | -                   |
| 03                        | 00       | 2   | 0.3                    | 3.6                 | 15              | 00       | D   | -                      | -                   |
|                           | 06       | 2   | 0.5                    | 5.3                 |                 | 06       | 2   | 0.4                    | 5.2                 |
|                           | 12       | 2   | 0.4                    | 5.7                 |                 | 12       | D   | -                      | -                   |
|                           | 18       | 2   | 0.3                    | 4.0                 |                 | 18       | D   | -                      | -                   |
| 04                        | 00       | 0,0 | -                      | -                   | 16              | 00       | D   | -                      | -                   |
|                           | 06       | 2   | 0.4                    | 4.4                 |                 | 06       | 2   | 0.5                    | 6.6                 |
|                           | 12       | 2   | 0.4                    | 5.1                 |                 | 12       | 2   | 0.5                    | 6.1                 |
|                           | 18       | 0,0 | -                      | -                   |                 | 18       | 2   | 0.6                    | 6.3                 |
| 05                        | 00       | ... | -                      | -                   | 17              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.3                    | 5.1                 |                 | 06       | 2   | 0.4                    | 5.6                 |
|                           | 12       | 2   | 0.4                    | 4.6                 |                 | 12       | 2   | 0.4                    | 5.2                 |
|                           | 18       | 2   | 0.4                    | 4.8                 |                 | 18       | 0,0 | -                      | -                   |
| 06                        | 00       | 0,0 | -                      | -                   | 18              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.3                    | 4.9                 |                 | 06       | 2   | 0.3                    | 5.0                 |
|                           | 12       | 2   | 0.3                    | 4.7                 |                 | 12       | 2   | 0.4                    | 5.1                 |
|                           | 18       | 0,0 | -                      | -                   |                 | 18       | 0,0 | -                      | -                   |
| 07                        | 00       | 0,0 | -                      | -                   | 19              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.3                    | 3.7                 |                 | 06       | 2   | 0.3                    | 5.8                 |
|                           | 12       | 2   | 0.3                    | 4.6                 |                 | 12       | 2   | 0.3                    | 5.5                 |
|                           | 18       | 2   | 0.2                    | 2.6                 |                 | 18       | 0,0 | -                      | -                   |
| 08                        | 00       | ... | -                      | -                   | 20              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.2                    | 3.3                 |                 | 06       | 2   | 0.3                    | 5.2                 |
|                           | 12       | 2   | 0.3                    | 4.7                 |                 | 12       | 2   | 0.3                    | 5.2                 |
|                           | 18       | 0,0 | -                      | -                   |                 | 18       | 0,0 | -                      | -                   |
| 09                        | 00       | 0,0 | -                      | -                   | 21              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.3                    | 5.3                 |                 | 06       | 2   | 0.3                    | 6.0                 |
|                           | 12       | 2   | 0.3                    | 4.7                 |                 | 12       | 2   | 0.3                    | 5.7                 |
|                           | 18       | 2   | 0.3                    | 5.0                 |                 | 18       | 0,0 | -                      | -                   |
| 10                        | 00       | 0,0 | -                      | -                   | 22              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.3                    | 5.2                 |                 | 06       | 3   | 0.2                    | 2.3                 |
|                           | 12       | 2   | 0.4                    | 5.2                 |                 | 12       | 3   | 0.3                    | 2.5                 |
|                           | 18       | 2   | 0.3                    | 4.9                 |                 | 18       | 3   | 0.2                    | 2.7                 |
| 11                        | 00       | 0,0 | -                      | -                   | 23              | 00       | 3   | 0.2                    | 2.5                 |
|                           | 06       | 2   | 0.4                    | 5.5                 |                 | 06       | 3   | 0.2                    | 2.8                 |
|                           | 12       | ... | -                      | -                   |                 | 12       | 3   | 0.3                    | 4.0                 |
|                           | 18       | 2   | 0.3                    | 4.8                 |                 | 18       | 3   | 0.3                    | 3.3                 |
| 12                        | 00       | 0,0 | -                      | -                   | 24              | 00       | 0,0 | -                      | -                   |
|                           | 06       | 2   | 0.4                    | 5.3                 |                 | 06       | 3   | 0.3                    | 3.3                 |
|                           | 12       | 2   | 0.3                    | 5.4                 |                 | 12       | 3   | 0.3                    | 4.0                 |
|                           | 18       | 2   | 0.3                    | 4.0                 |                 | 18       | 3   | 0.3                    | 3.8                 |

| Date                           | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date            | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |                  |
|--------------------------------|----------|-----|------------------------|---------------------|-----------------|----------|---|------------------------|---------------------|------------------|
| Station: Visakhapatnam(Contd.) |          |     |                        |                     | November, 1962. |          |   |                        |                     | Component : E-W. |
| 25                             | 00       | D   | -                      | -                   | 04              | 00       | 3 | 0.5                    | 5.1                 |                  |
|                                | 06       | D   | -                      | -                   |                 |          |   | 0.4                    | 2.4                 |                  |
|                                | 12       | 1   | 0.3                    | 2.2                 |                 | 06       | 3 | 0.4                    | 2.2                 |                  |
|                                | 18       | 1   | 0.3                    | 2.9                 |                 |          |   | 0.4                    | 2.2                 |                  |
| 26                             | 00       | 1   | 0.2                    | 2.5                 |                 | 12       | 3 | 0.5                    | 6.1                 |                  |
|                                | 06       | ... | -                      | -                   |                 |          |   | 0.4                    | 1.5                 |                  |
|                                | 12       | 1   | 0.2                    | 2.2                 |                 | 18       | 3 | 0.5                    | 6.0                 |                  |
|                                | 18       | 1   | 0.3                    | 2.9                 |                 |          |   | 0.3                    | 1.5                 |                  |
| 27                             | 00       | 1   | 0.2                    | 3.0                 | 05              | 00       | . | .                      | .                   |                  |
|                                | 06       | 1   | 0.3                    | 3.0                 |                 | 06       | 3 | 0.5                    | 5.9                 |                  |
|                                | 12       | 1   | 0.3                    | 3.2                 |                 |          |   | 0.3                    | 1.8                 |                  |
|                                | 18       | 1   | 0.5                    | 3.4                 |                 | 12       | 3 | 0.5                    | 5.2                 |                  |
| 28                             | 00       | 1   | 0.4                    | 3.7                 |                 |          |   | 0.3                    | 2.0                 |                  |
|                                | 06       | 1   | 0.4                    | 3.4                 |                 | 18       | 3 | 0.4                    | 5.1                 |                  |
|                                | 12       | 1   | 0.5                    | 3.3                 | 06              | 00       | 3 | 0.4                    | 5.6                 |                  |
|                                | 18       | 1   | 0.7                    | 3.2                 |                 |          |   | 0.4                    | 1.9                 |                  |
| 29                             | 00       | 1   | 0.8                    | 3.2                 |                 | 06       | 3 | 0.4                    | 5.6                 |                  |
|                                | 06       | 1   | 1.1                    | 3.3                 |                 |          |   | 0.4                    | 1.8                 |                  |
|                                | 12       | 1   | 1.1                    | 3.5                 |                 | 12       | 3 | 0.3                    | 5.3                 |                  |
|                                | 18       | 1   | 1.0                    | 3.5                 |                 |          |   | 0.5                    | 1.7                 |                  |
| 30                             | 00       | 1   | 0.7                    | 3.1                 |                 | 18       | 3 | 0.4                    | 5.4                 |                  |
|                                | 06       | 1   | 0.5                    | 2.9                 | 07              | 00       | 3 | 0.4                    | 5.8                 |                  |
|                                | 12       | D   | -                      | -                   |                 |          |   | 0.3                    | 1.8                 |                  |
|                                | 18       | D   | -                      | -                   |                 | 06       | 3 | 0.4                    | 5.6                 |                  |
| .....                          |          |     |                        |                     |                 |          |   | 0.3                    | 2.5                 |                  |
| Station: Colaba(Bombay)        |          |     |                        |                     |                 | 12       | 3 | 0.4                    | 5.6                 |                  |
|                                |          |     |                        |                     |                 |          |   | 0.3                    | 2.7                 |                  |
| 01                             | 00       | 1   | 0.9                    | 3.2                 |                 | 18       | 3 | 0.4                    | 4.9                 |                  |
|                                | 06       | 1   | 1.0                    | 3.0                 |                 |          |   | 0.3                    | 1.6                 |                  |
|                                | 12       | 1   | 1.1                    | 2.9                 | 08              | 00       | 4 | 0.3                    | 5.2                 |                  |
|                                | 18       | 3   | 0.6                    | 3.0                 |                 |          |   | 0.3                    | 1.8                 |                  |
| 02                             | 00       | 3   | 0.9                    | 3.3                 |                 | 06       | 3 | 0.4                    | 5.2                 |                  |
|                                | 06       | 0   | 0.4                    | 1.8                 |                 |          |   | 0.3                    | 3.0                 |                  |
|                                | 12       | 3   | 0.9                    | 3.5                 |                 | 12       | 3 | 0.4                    | 5.7                 |                  |
|                                | 18       | 3   | 0.8                    | 3.4                 |                 |          |   | 0.3                    | 1.8                 |                  |
| 03                             | 00       | 3   | 0.7                    | 3.4                 |                 | 18       | 3 | 0.3                    | 5.8                 |                  |
|                                | 06       | 3   | 0.5                    | 3.4                 | 09              | 00       | 3 | 0.4                    | 5.5                 |                  |
|                                | 12       | 3   | 0.5                    | 3.5                 |                 |          |   | 0.3                    | 2.2                 |                  |
|                                | 18       | 3   | 0.4                    | 4.2                 |                 | 06       | 3 | 0.4                    | 4.9                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 |          |   | 0.3                    | 1.6                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 | 12       | 2 | 0.5                    | 5.0                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 | 18       | 2 | 0.4                    | 5.8                 |                  |
|                                |          |     | 0.4                    | 2.6                 | 10              | 00       | 2 | 0.5                    | 5.4                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 |          |   | 0.6                    | 5.1                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 | 06       | 2 | 0.5                    | 5.3                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 | 12       | 2 | 0.5                    | 5.3                 |                  |
|                                |          |     | 0.4                    | 2.6                 |                 | 18       | 2 | 0.6                    | 5.5                 |                  |

| Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. | Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|

November, 1962.

Station: Colaba (Bombay)  
(Contd.)

Component: E-W.

|    |    |   |     |     |    |    |   |     |     |
|----|----|---|-----|-----|----|----|---|-----|-----|
| 11 | 00 | 2 | 0.5 | 5.8 | 19 | 12 | 3 | 0.4 | 4.8 |
|    | 06 | 2 | 0.6 | 5.8 |    |    |   | 0.3 | 2.5 |
|    | 12 | . | -   | .   |    | 18 | 3 | 0.4 | 4.7 |
|    | 18 | 2 | 0.6 | 5.6 |    |    |   | 0.3 | 3.0 |
| 12 | 00 | . | .   | .   | 20 | 00 | 3 | 0.5 | 5.1 |
|    | 06 | 2 | 0.6 | 6.1 |    |    |   | 0.3 | 2.5 |
|    | 12 | 2 | 0.6 | 6.4 |    | 06 | 3 | 0.6 | 5.1 |
|    | 18 | 2 | 0.6 | 5.7 |    |    |   | 0.3 | 2.2 |
| 13 | 00 | 2 | 0.6 | 6.1 |    | 12 | 3 | 0.5 | 3.7 |
|    | 06 | 2 | 0.6 | 5.7 |    |    |   | 0.5 | 2.5 |
|    | 12 | 2 | 0.7 | 5.3 |    | 18 | 3 | 0.6 | 3.6 |
|    | 18 | 2 | 0.6 | 6.1 |    |    |   | 0.5 | 2.5 |
| 14 | 00 | 2 | 0.6 | 5.6 | 21 | 00 | 3 | 0.6 | 3.7 |
|    | 06 | 2 | 0.6 | 5.3 |    |    |   | 0.4 | 2.5 |
|    | 12 | 3 | 0.6 | 5.5 |    | 06 | 3 | 0.6 | 3.5 |
|    | 18 | 3 | 0.3 | 1.8 |    |    |   | 0.4 | 2.5 |
|    |    |   | 0.6 | 5.3 |    | 12 | 3 | 0.5 | 3.9 |
|    |    |   | 0.3 | 1.6 |    |    |   | 0.5 | 2.3 |
| 15 | 00 | 3 | 0.5 | 5.3 |    | 18 | 3 | 0.6 | 3.4 |
|    |    |   | 0.4 | 2.3 |    |    |   | 0.5 | 2.0 |
|    | 06 | 3 | 0.6 | 5.2 | 22 | 00 | 3 | 0.5 | 3.3 |
|    |    |   | 0.4 | 2.0 |    |    |   | 0.4 | 2.3 |
|    |    |   | 0.5 | 5.1 |    | 06 | 3 | 0.5 | 3.3 |
|    |    |   | 0.4 | 2.5 |    |    |   | 0.4 | 1.6 |
|    | 18 | 3 | 0.5 | 5.1 |    | 12 | 3 | 0.5 | 3.4 |
|    |    |   | 0.4 | 2.0 |    |    |   | 0.4 | 2.0 |
|    |    |   |     |     |    | 18 | 3 | 0.5 | 3.3 |
|    |    |   |     |     |    |    |   | 0.5 | 2.0 |
| 16 | 00 | 1 | 1.1 | 6.6 | 23 | 00 | 3 | 0.5 | 3.3 |
|    | 06 | 1 | 0.7 | 6.2 |    |    |   | 0.4 | 1.7 |
|    | 12 | 1 | 0.8 | 6.7 |    | 06 | 3 | 0.5 | 3.4 |
|    | 18 | 1 | 0.9 | 7.2 |    |    |   | 0.5 | 1.9 |
| 17 | 00 | 1 | 0.8 | 6.3 |    | 12 | 3 | 0.5 | 3.7 |
|    | 06 | 1 | 0.5 | 5.4 |    |    |   | 0.4 | 1.8 |
|    | 12 | 1 | 0.6 | 5.8 |    | 18 | 3 | 0.5 | 3.3 |
|    | 18 | 1 | 0.6 | 5.3 |    |    |   | 0.5 | 2.0 |
| 18 | 00 | 1 | 0.5 | 5.4 | 24 | 00 | 3 | 0.5 | 3.5 |
|    | 06 | 3 | 0.5 | 5.1 |    |    |   | 0.3 | 1.7 |
|    |    |   | 0.3 | 2.5 |    | 06 | 3 | 0.4 | 3.7 |
|    | 12 | 3 | 0.3 | 5.0 |    |    |   | 0.4 | 2.2 |
|    |    |   | 0.3 | 2.6 |    | 12 | 3 | 0.4 | 3.7 |
|    | 18 | 3 | 0.3 | 5.0 |    |    |   | 0.5 | 2.2 |
|    |    |   | 0.3 | 3.0 |    | 18 | 3 | 0.4 | 3.8 |
|    |    |   |     |     |    |    |   | 0.4 | 1.8 |
| 19 | 00 | 3 | 0.5 | 5.3 | 25 | 00 | 3 | 0.5 | 3.7 |
|    |    |   | 0.3 | 3.0 |    |    |   | 0.4 | 2.0 |
|    | 06 | 3 | 0.5 | 5.3 |    | 06 | 3 | 0.5 | 3.5 |
|    |    |   | 0.3 | 3.0 |    |    |   | 0.4 | 1.7 |
|    |    |   |     |     |    | 12 | 3 | 0.6 | 3.6 |
|    |    |   |     |     |    |    |   | 0.5 | 2.2 |

| Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. | Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|

November, 1962.

Station: Colaba(Bombay)  
(Contd.)

Component: E-W.

|    |    |   |            |            |    |                      |                        |                          |                          |
|----|----|---|------------|------------|----|----------------------|------------------------|--------------------------|--------------------------|
| 25 | 18 | 3 | 0.4<br>0.6 | 3.9<br>1.8 | 04 | 00<br>06<br>12<br>18 | 0..<br>...<br>3<br>0.. | -<br>-<br>0.4<br>-       | -<br>-<br>2.5<br>-       |
| 26 | 00 | 3 | 0.5<br>0.4 | 3.7<br>1.6 | 05 | 00<br>06<br>12<br>18 | 0..<br>3<br>3<br>2     | -<br>0.8<br>0.6<br>0.4   | -<br>4.3<br>5.5<br>5.2   |
| 27 | 06 | 3 | .          | .          | 06 | 00<br>06<br>12<br>18 | 3<br>2<br>2<br>2       | 0.4<br>0.3<br>0.3<br>0.2 | 5.0<br>4.8<br>4.6<br>5.4 |
| 28 | 12 | 3 | 0.4<br>0.3 | 3.7<br>1.7 | 07 | 00<br>06<br>12<br>18 | 2<br>2<br>2<br>2       | 0.3<br>0.2<br>0.3<br>0.4 | 5.0<br>6.0<br>5.5<br>5.4 |
| 29 | 18 | 3 | 0.5<br>0.4 | 3.9<br>1.5 | 08 | 00<br>06<br>12<br>18 | 2<br>2<br>2<br>2       | 0.3<br>0.3<br>0.4<br>0.4 | 4.9<br>5.0<br>5.0<br>5.2 |
| 30 | 00 | 1 | 0.8        | 4.0        | 09 | 00<br>06<br>12<br>18 | 3<br>3<br>1<br>1       | 0.4<br>0.5<br>0.5<br>0.3 | 5.2<br>5.5<br>4.9<br>4.3 |
|    | 06 | 1 | 0.9        | 3.8        | 10 | 00<br>06<br>12<br>18 | 0,0<br>3<br>1<br>2     | -<br>0.5<br>0.6<br>0.2   | -<br>3.7<br>4.8<br>4.0   |
|    | 12 | 1 | 0.8        | 4.0        | 11 | 00<br>06<br>12<br>18 | 0..<br>...<br>3<br>0.. | -<br>-<br>0.4<br>-       | -<br>-<br>2.8<br>-       |
|    | 18 | 1 | 0.9        | 4.0        | 12 | 00<br>06<br>12<br>18 | 0..<br>0..<br>3<br>0.. | -<br>-<br>0.2<br>-       | -<br>-<br>3.5<br>-       |
|    | 00 | 1 | 1.0        | 3.8        | 13 | 00<br>06<br>12<br>18 | 0..<br>3<br>3<br>0..   | -<br>-<br>-<br>-         | -<br>-<br>-<br>-         |
|    | 06 | 1 | 1.0        | 3.8        | 14 | 00<br>06<br>12<br>18 | ..<br>3<br>1<br>3      | -<br>0.3<br>0.2<br>0.4   | -<br>4.7<br>5.1<br>5.0   |
|    | 12 | 1 | 1.5        | 3.8        |    |                      |                        |                          |                          |
|    | 18 | 1 | 0.9        | 3.7        |    |                      |                        |                          |                          |
|    | 00 | - | .          | .          |    |                      |                        |                          |                          |
|    | 06 | 1 | 0.7        | 3.5        |    |                      |                        |                          |                          |
|    | 12 | 3 | 0.6<br>0.4 | 3.9<br>1.6 |    |                      |                        |                          |                          |
|    | 18 | 1 | 0.6<br>0.6 | 4.0<br>2.0 |    |                      |                        |                          |                          |

.....

Station : Shillong.

|    |    |     |     |     |    |                      |                        |                    |                    |
|----|----|-----|-----|-----|----|----------------------|------------------------|--------------------|--------------------|
| 01 | 00 | 2   | 0.5 | 5.3 | 12 | 00<br>06<br>12<br>18 | 0..<br>...<br>3<br>0.. | -<br>-<br>0.2<br>- | -<br>-<br>3.5<br>- |
|    | 06 | 3   | 0.4 | 5.5 |    |                      |                        |                    |                    |
|    | 12 | 2   | 0.3 | 5.5 |    |                      |                        |                    |                    |
|    | 18 | 2   | 0.3 | 5.5 |    |                      |                        |                    |                    |
| 02 | 00 | 3   | 0.2 | 5.3 |    |                      |                        |                    |                    |
|    | 06 | 3   | 0.3 | 3.0 |    |                      |                        |                    |                    |
|    | 12 | 0,0 | -   | -   |    |                      |                        |                    |                    |
|    | 18 | 0.. | -   | -   |    |                      |                        |                    |                    |
| 03 | 00 | 3   | 0.2 | 6.0 |    |                      |                        |                    |                    |
|    | 06 | 0,0 | -   | -   |    |                      |                        |                    |                    |
|    | 12 | 3   | 0.4 | 2.5 |    |                      |                        |                    |                    |
|    | 18 | 2   | 0.2 | 5.3 |    |                      |                        |                    |                    |





- 60 -

| Date                    | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. | Date            | Hour GMT | K   | Mean amplitude in m.m. | Mean period in sec. |
|-------------------------|----------|-----|------------------------|---------------------|-----------------|----------|-----|------------------------|---------------------|
| <u>November, 1962.</u>  |          |     |                        |                     |                 |          |     |                        |                     |
| Station: Bokaro(Contd.) |          |     |                        |                     | Component: E-W. |          |     |                        |                     |
| 06                      | 00       | 3   | 0.4                    | 5.0                 | 17              | 00       | 3   | 0.5                    | 5.5                 |
|                         | 06       | ... | -                      | -                   |                 | 06       | 3   | 0.5                    | 5.0                 |
|                         | 12       | ... | -                      | -                   |                 | 12       | 3   | 0.4                    | 5.0                 |
|                         | 18       | 3   | 0.3                    | 5.0                 |                 | 18       | 3   | 0.4                    | 5.0                 |
| 07                      | 00       | 0,0 | -                      | -                   | 18              | 00       | 3   | 0.4                    | 5.0                 |
|                         | 06       | 2   | 0.2                    | 5.0                 |                 | 06       | 1   | 0.4                    | 4.2                 |
|                         | 12       | 2   | 0.2                    | 5.0                 |                 | 12       | 3   | 0.3                    | 4.2                 |
|                         | 18       | 3   | 0.3                    | 5.0                 |                 | 18       | 3   | 0.3                    | 4.5                 |
| 08                      | 00       | 3   | 0.3                    | 5.0                 | 19              | 00       | 3   | 0.3                    | 4.8                 |
|                         | 06       | 3   | 0.2                    | 5.0                 |                 | 06       | 3   | 0.4                    | 5.0                 |
|                         | 12       | 3   | 0.3                    | 4.0                 |                 | 12       | 3   | 0.4                    | 4.8                 |
|                         | 18       | 3   | 0.2                    | 4.6                 |                 | 18       | 3   | 0.4                    | 4.2                 |
| 09                      | 00       | 3   | 0.2                    | 4.0                 | 20              | 00       | 3   | 0.4                    | 4.4                 |
|                         | 06       | 3   | 0.3                    | 4.2                 |                 | 06       | 3   | 0.2                    | 4.4                 |
|                         | 12       | 1   | 0.6                    | 4.4                 |                 | 12       | 3   | 0.2                    | 4.2                 |
|                         | 18       | 1   | 0.5                    | 4.2                 |                 | 18       | 3   | 0.2                    | 4.2                 |
| 10                      | 00       | 3   | 0.5                    | 4.5                 | 21              | 00       | 3   | 0.3                    | 4.8                 |
|                         | 06       | 1   | 0.8                    | 4.8                 |                 | 06       | 2   | 0.2                    | 4.0                 |
|                         | 12       | 1   | 0.8                    | 4.8                 |                 | 12       | 3   | 0.2                    | 4.0                 |
|                         | 18       | 1   | 0.8                    | 5.0                 |                 | 18       | 3   | 0.2                    | 4.0                 |
| 11                      | 00       | 3   | 0.8                    | 5.0                 | 22              | 00       | 2   | 0.2                    | 4.0                 |
|                         | 06       | 3   | 0.7                    | 5.0                 |                 | 06       | 3   | 0.2                    | 4.0                 |
|                         | 12       | ... | -                      | -                   |                 | 12       | 3   | 0.2                    | 3.8                 |
|                         | 18       | 3   | 0.3                    | 4.6                 |                 | 18       | 3   | 0.3                    | 4.0                 |
| 12                      | 00       | 3   | 0.2                    | 4.6                 | 23              | 00       | 3   | 0.3                    | 4.1                 |
|                         | 06       | 3   | 0.3                    | 5.0                 |                 | 06       | 3   | 0.3                    | 4.6                 |
|                         | 12       | -   | 0.4                    | 5.0                 |                 | 12       | 3   | 0.3                    | 4.7                 |
|                         | 18       | 3   | 0.5                    | 5.2                 |                 | 18       | 3   | 0.3                    | 5.0                 |
| 13                      | 00       | 3   | 0.3                    | 4.5                 | 24              | 00       | 3   | 0.3                    | 5.0                 |
|                         | 06       | 3   | 0.4                    | 5.0                 |                 | 06       | 2   | 0.2                    | 5.2                 |
|                         | 12       | 3   | 0.4                    | 4.8                 |                 | 12       | 3   | 0.3                    | 4.7                 |
|                         | 18       | 3   | 0.4                    | 4.5                 |                 | 18       | 2   | 0.2                    | 4.0                 |
| 14                      | 00       | 3   | 0.4                    | 4.6                 | 25              | 00       | 3   | 0.3                    | 5.0                 |
|                         | 06       | 3   | 0.4                    | 4.6                 |                 | 06       | 2   | 0.2                    | 5.4                 |
|                         | 12       | ... | -                      | -                   |                 | 12       | 2   | 0.2                    | 4.0                 |
|                         | 18       | ... | -                      | -                   |                 | 18       | 2   | 0.2                    | 4.0                 |
| 15                      | 00       | ... | -                      | -                   | 26              | 00       | 3   | 0.2                    | 4.0                 |
|                         | 06       | 3   | 0.5                    | 5.0                 |                 | 06       | ... | -                      | -                   |
|                         | 12       | 3   | 0.4                    | 5.0                 |                 | 12       | 3   | 0.2                    | 3.4                 |
|                         | 18       | 1   | 0.5                    | 5.2                 |                 | 18       | 2   | 0.2                    | 4.0                 |
| 16                      | 00       | 1   | 0.6                    | 5.5                 | 27              | 00       | 2   | 0.1                    | 3.0                 |
|                         | 06       | 3   | 0.4                    | 5.8                 |                 | 06       | 0,0 | -                      | -                   |
|                         | 12       | 3   | 0.7                    | 5.8                 |                 | 12       | 3   | 0.3                    | 3.0                 |
|                         | 18       | 3   | 0.7                    | 5.8                 |                 | 18       | 3   | 0.4                    | 4.0                 |

| Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. | Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|

November, 1962.

Station: Bokaro(Contd.)

Component: E-W.

|    |    |     |     |     |    |     |     |     |     |
|----|----|-----|-----|-----|----|-----|-----|-----|-----|
| 28 | 00 | 3   | 0.4 | 4.0 | 05 | 06  | 3   | 0.2 | 2.8 |
|    | 06 | 3   | 0.4 | 4.0 |    | 12  | 3   | 0.2 | 2.7 |
|    | 12 | 3   | 0.4 | 3.8 |    | 18  | 3   | 0.2 | 2.7 |
|    | 18 | 3   | 0.3 | 4.0 |    | 06  | 00  | 3   | 0.2 |
| 29 | 00 | 3   | 0.3 | 3.8 | 03 |     | 3   | 0.2 | 2.9 |
|    | 06 | 3   | 0.3 | 3.8 | 06 |     | 3   | 0.2 | 2.8 |
|    | 12 | 3   | 0.4 | 4.0 | 12 |     | 3   | 0.3 | 2.8 |
|    | 18 | ... | -   | -   | 18 |     | 3   | 0.2 | 1.9 |
| 30 | 00 | ... | -   | -   | 18 |     | 3   | 0.4 | 2.9 |
|    | 06 | 3   | 0.3 | 3.8 | 3  | 0.2 | 2.0 |     |     |
|    | 12 | 3   | 0.3 | 4.0 | 3  | 0.1 | 1.3 |     |     |
|    | 18 | 3   | 0.3 | 4.0 | 07 | 00  | 3   | 0.4 | 3.0 |

.....

Station : Madras.

|    |     |             |     |     |    |     |     |     |     |
|----|-----|-------------|-----|-----|----|-----|-----|-----|-----|
| 01 | 00  | 1           | 0.7 | 4.0 | 08 | 00  | 3   | 0.3 | 3.1 |
|    |     | 1           | 0.5 | 3.0 |    | 03  | 3   | 0.1 | 1.7 |
|    | 03  | 1           | 0.7 | 3.8 |    | 03  | 3   | 0.3 | 2.8 |
|    |     | 1           | 0.6 | 3.0 |    | 06  | 3   | 0.1 | 1.4 |
|    | 06  | 1           | 0.7 | 3.9 |    | 06  | 3   | 0.2 | 2.5 |
|    |     | 1           | 0.5 | 2.9 |    | 12  | 3   | 0.3 | 2.7 |
| 12 | 1   | 0.6         | 4.0 | 18  | 3  | 0.1 | 1.5 |     |     |
|    | 3   | 0.4         | 2.8 | 09  | 00 | 3   | 0.3 | 2.8 |     |
|    | ... | Earthquake. |     |     | 03 | 3   | 0.3 | 2.9 |     |
| 06 | 3   | 0.4         | 3.3 |     | 06 | 3   | 0.1 | 1.5 |     |
| 02 | 00  | 1           | 0.5 | 3.8 | 06 | 3   | 0.2 | 2.5 |     |
|    |     | 3           | 0.3 | 2.7 | 12 | 3   | 0.3 | 2.7 |     |
|    | 03  | 3           | 0.4 | 3.3 | 18 | 3   | 0.1 | 1.5 |     |
|    |     | 3           | 0.4 | 3.3 | 10 | 00  | 2   | 0.3 | 4.7 |
|    | 12  | 0.3         | 3.2 | 03  |    | 3   | 0.2 | 2.8 |     |
|    | 18  | 3           | 0.3 | 3.3 |    | 06  | 3   | 0.3 | 4.7 |
| 03 | 00  | 3           | 0.2 | 2.8 | 06 | 3   | 0.2 | 2.9 |     |
|    |     | 3           | 0.1 | 1.7 | 12 | 3   | 0.1 | 1.6 |     |
|    | 03  | 3           | 0.3 | 3.0 | 18 | 3   | 0.2 | 2.6 |     |
|    |     | 3           | 0.3 | 2.0 | 18 | 2   | 0.4 | 4.7 |     |
|    | 06  | 3           | 0.1 | 1.7 | 3  | 0.2 | 2.7 |     |     |
|    |     | 3           | 0.2 | 2.6 | 04 | 00  | 3   | 0.3 | 4.7 |
| 3  | 0.1 | 1.8         | 03  | 3   |    | 0.2 | 2.8 |     |     |
| 3  | 0.2 | 2.5         | 06  | 3   |    | 0.3 | 4.7 |     |     |
| 3  | 0.2 | 2.5         | 06  | 3   |    | 0.2 | 2.9 |     |     |
| 3  | 0.2 | 2.3         | 12  | 2   |    | 0.4 | 5.0 |     |     |
| 3  | 0.2 | 2.3         | 18  | 3   |    | 0.2 | 2.9 |     |     |
| 04 | 00  | 3           | 0.1 | 2.1 | 18 | 2   | 0.5 | 5.9 |     |
|    | 03  | 3           | 0.1 | 2.0 | 3  | 0.2 | 2.4 |     |     |
|    | 06  | 3           | 0.1 | 2.0 | 05 | 00  | 3   | 0.2 | 2.7 |
| 12 | 3   | 0.2         | 2.5 | 03  |    | 3   | 0.2 | 2.7 |     |
| 18 | 3   | 0.2         | 2.5 |     |    |     |     |     |     |

| Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. | Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. |
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|
|------|----------|---|------------------------|---------------------|------|----------|---|------------------------|---------------------|

November, 1962.

Station : Madras (Contd.)

Component : E-W.

|    |    |   |     |     |    |    |   |     |     |
|----|----|---|-----|-----|----|----|---|-----|-----|
| 11 | 00 | 3 | 0.2 | 2.5 | 16 | 12 | 2 | 0.7 | 6.5 |
|    | 03 | 3 | 0.2 | 2.5 |    |    | 3 | 0.2 | 2.0 |
|    | 06 | 3 | 0.2 | 2.6 |    | 18 | 2 | 0.8 | 7.1 |
|    | 12 | 3 | 0.2 | 2.6 |    |    | 3 | 0.2 | 2.1 |
|    | 18 | 3 | 0.4 | 5.5 |    |    |   |     |     |
|    |    | 3 | 0.2 | 2.4 | 17 | 00 | 2 | 0.7 | 6.7 |
|    |    |   |     |     |    |    | 3 | 0.2 | 2.3 |
| 12 | 00 | 2 | 0.4 | 5.9 |    | 03 | 2 | 0.4 | 5.7 |
|    |    | 3 | 0.2 | 2.5 |    |    | 3 | 0.2 | 2.3 |
|    | 03 | 2 | 0.4 | 6.5 |    | 06 | 3 | 0.2 | 2.2 |
|    |    | 3 | 0.2 | 2.5 |    | 12 | 3 | 0.2 | 2.4 |
|    | 06 | 2 | 0.4 | 6.4 |    | 18 | 3 | 0.2 | 2.3 |
|    | 12 | 2 | 0.4 | 6.0 |    |    |   |     |     |
|    |    | 3 | 0.2 | 2.3 | 18 | 00 | 3 | 0.2 | 2.3 |
|    | 18 | 2 | 0.4 | 6.5 |    | 03 | 3 | 0.2 | 2.2 |
|    |    | 3 | 0.2 | 2.0 |    | 06 | 3 | 0.2 | 2.3 |
|    |    |   |     |     |    | 12 | 3 | 0.2 | 2.4 |
| 13 | 00 | 2 | 0.5 | 6.3 |    | 18 | 3 | 0.2 | 2.3 |
|    |    | 3 | 0.1 | 1.9 |    |    |   |     |     |
|    | 03 | 2 | 0.4 | 5.7 | 19 | 00 | 3 | 0.2 | 2.3 |
|    |    | 3 | 0.2 | 2.1 |    | 03 | 3 | 0.2 | 2.3 |
|    | 06 | 2 | 0.3 | 5.3 |    | 06 | 3 | 0.2 | 2.3 |
|    |    | 3 | 0.1 | 1.9 |    | 12 | 3 | 0.2 | 2.4 |
|    | 12 | 2 | 0.4 | 5.8 |    | 18 | 3 | 0.2 | 2.5 |
|    |    | 3 | 0.1 | 2.1 |    |    |   |     |     |
|    | 18 | 2 | 0.4 | 5.9 | 20 | 00 | 3 | 0.2 | 2.7 |
|    |    | 3 | 0.1 | 2.0 |    | 03 | 3 | 0.2 | 2.6 |
|    |    |   |     |     |    | 06 | 3 | 0.3 | 2.6 |
| 14 | 00 | 2 | 0.5 | 5.5 |    | 12 | 3 | 0.3 | 2.6 |
|    |    | 3 | 0.1 | 1.4 |    | 18 | 3 | 0.3 | 2.6 |
|    | 03 | 2 | 0.4 | 5.3 |    |    |   |     |     |
|    |    | 3 | 0.1 | 1.4 | 21 | 00 | 3 | 0.4 | 2.8 |
|    | 06 | 2 | 0.4 | 5.5 |    | 03 | 1 | 0.4 | 2.9 |
|    |    | 3 | 0.1 | 1.5 |    | 06 | 1 | 0.3 | 2.8 |
|    | 12 | 2 | 0.4 | 5.9 |    | 12 | 1 | 0.4 | 2.9 |
|    |    | 3 | 0.1 | 1.7 |    | 18 | 3 | 0.4 | 2.9 |
|    | 18 | 2 | 0.5 | 6.1 |    |    |   |     |     |
|    |    | 3 | 0.1 | 1.9 | 22 | 00 | 1 | 0.4 | 3.0 |
|    |    |   |     |     |    | 03 | 1 | 0.4 | 2.8 |
| 15 | 00 | 2 | 0.5 | 5.6 |    | 06 | 1 | 0.4 | 2.8 |
|    |    | 3 | 0.1 | 2.0 |    | 12 | 1 | 0.4 | 2.8 |
|    | 03 | 2 | 0.4 | 5.6 |    | 18 | 1 | 0.4 | 2.9 |
|    |    | 3 | 0.1 | 1.3 |    |    |   |     |     |
|    | 06 | 2 | 0.4 | 5.5 | 23 | 00 | 1 | 0.5 | 3.1 |
|    |    | 3 | 0.1 | 1.6 |    | 03 | 1 | 0.5 | 3.0 |
|    | 12 | 2 | 0.5 | 5.4 |    | 06 | 1 | 0.5 | 2.9 |
|    |    | 3 | 0.2 | 2.2 |    | 12 | 1 | 0.5 | 2.9 |
|    | 18 | 2 | 0.5 | 5.5 |    | 18 | 1 | 0.5 | 2.9 |
|    |    | 3 | 0.2 | 2.3 |    |    |   |     |     |
|    |    |   |     |     | 24 | 00 | 1 | 0.5 | 3.1 |
| 16 | 00 | 2 | 0.6 | 6.4 |    | 03 | 1 | 0.5 | 2.9 |
|    | 03 | 2 | 0.7 | 7.0 |    | 06 | 1 | 0.5 | 3.0 |
|    |    | 3 | 0.1 | 1.7 |    | 12 | 1 | 0.4 | 2.8 |
|    | 06 | 2 | 0.6 | 6.5 |    |    | 3 | 0.3 | 2.1 |
|    |    | 3 | 0.1 | 1.4 |    | 18 | 1 | 0.5 | 2.8 |
|    |    |   |     |     |    |    | 1 | 0.3 | 2.3 |

| Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in sec. | Date | Hour | K | Mean amplitude in micron. | Mean period in sec. |
|------|----------|---|------------------------|---------------------|------|------|---|---------------------------|---------------------|
|------|----------|---|------------------------|---------------------|------|------|---|---------------------------|---------------------|

November, 1962.

Station : Madras(Contd.)

Component: E-W.

|    |    |   |     |     |
|----|----|---|-----|-----|
| 25 | 00 | 1 | 0.5 | 2.8 |
|    | 03 | 1 | 0.5 | 2.8 |
|    | 06 | 1 | 0.5 | 2.9 |
|    | 12 | 1 | 0.5 | 2.8 |
|    | 18 | 1 | 0.6 | 2.9 |

|    |    |     |             |     |
|----|----|-----|-------------|-----|
| 26 | 00 | 1   | 0.7         | 2.9 |
|    | 03 | 1   | 0.7         | 2.8 |
|    | 06 | ... | Earthquake. |     |
|    | 12 | 1   | 0.7         | 2.9 |
|    | 15 | 1   | 0.7         | 3.1 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 27 | 00 | 1 | 0.7 | 2.9 |
|    | 03 | 1 | 0.7 | 3.0 |
|    | 06 | 1 | 0.7 | 2.9 |
|    | 12 | 1 | 0.8 | 3.6 |
|    | 18 | 1 | 1.1 | 4.0 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 28 | 00 | 1 | 1.4 | 4.1 |
|    | 03 | 1 | 1.4 | 3.8 |
|    | 06 | 1 | 1.3 | 4.1 |
|    |    | 1 | 0.9 | 3.0 |
|    | 12 | 1 | 1.2 | 4.0 |
|    |    | 1 | 0.9 | 2.9 |
|    | 18 | 1 | 1.3 | 4.1 |
|    |    | 1 | 1.1 | 2.9 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 29 | 00 | 1 | 1.5 | 4.2 |
|    |    | 1 | 1.3 | 3.1 |
|    | 03 | 1 | 1.5 | 4.2 |
|    |    | 1 | 1.4 | 3.1 |
|    | 06 | 1 | 1.7 | 3.9 |
|    |    | 1 | 1.5 | 3.1 |
|    | 09 | 1 | 2.2 | 3.6 |
|    | 12 | 1 | 2.6 | 3.9 |
|    | 15 | 1 | 1.9 | 3.8 |
|    | 18 | 1 | 1.1 | 3.5 |

|    |    |   |     |     |
|----|----|---|-----|-----|
| 30 | 00 | 1 | 1.0 | 3.4 |
|    | 03 | 1 | 1.0 | 3.8 |
|    | 06 | 1 | 0.9 | 3.7 |
|    | 12 | 1 | 0.7 | 3.5 |
|    | 18 | 1 | 0.6 | 3.4 |

Station : Port Blair.

|    |    |     |     |   |
|----|----|-----|-----|---|
| 01 | 00 | 1   | 0.8 | 7 |
|    | 06 | 1   | 1.2 | 3 |
|    | 12 | 1   | 0.8 | 3 |
|    | 18 | ... | -   | - |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 02 | 00 | 1   | 0.4 | 3 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.8 | 7 |
|    | 18 | 1   | 0.4 | 7 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 03 | 00 | 1   | 0.4 | 7 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.8 | 7 |
|    | 18 | 1   | 0.8 | 7 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 04 | 00 | 1   | 0.8 | 7 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.8 | 6 |
|    | 18 | 1   | 0.4 | 7 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 05 | 00 | 1   | 0.4 | 7 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.4 | 6 |
|    | 18 | 1   | 0.4 | 7 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 06 | 00 | 1   | 0.4 | 7 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.4 | 7 |
|    | 18 | 1   | 0.4 | 7 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 07 | 00 | 1   | 0.4 | 7 |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.2 | 7 |
|    | 18 | 1   | 0.2 | 7 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 08 | 00 | 0,0 | -   | - |
|    | 06 | ... | -   | - |
|    | 12 | 1   | 0.2 | 6 |
|    | 18 | 1   | 0.2 | 6 |

|    |    |   |     |   |
|----|----|---|-----|---|
| 09 | 00 | 1 | 0.2 | 7 |
|    | 06 | 1 | 0.2 | 7 |
|    | 12 | 1 | 0.4 | 6 |
|    | 18 | 1 | 0.2 | 5 |

|    |    |     |     |   |
|----|----|-----|-----|---|
| 10 | 00 | 1   | 0.2 | 5 |
|    | 06 | ... | -   | - |
|    | 12 | ... | -   | - |
|    | 18 | ... | -   | - |

.....

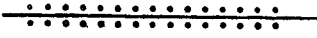
| Date | Hour GMT | K | Mean amplitude in micron. | Mean period in sec. | Date | Hour GMT | K | Mean amplitude in micron. | Mean period in sec. |
|------|----------|---|---------------------------|---------------------|------|----------|---|---------------------------|---------------------|
|------|----------|---|---------------------------|---------------------|------|----------|---|---------------------------|---------------------|

November, 1962.

Station: Port Blair (Contd.)

Component: E-W.

|    |    |     |     |   |    |    |     |     |   |
|----|----|-----|-----|---|----|----|-----|-----|---|
| 11 | 00 | ... | -   | - | 22 | 00 | 0,0 | -   | - |
|    | 06 | ... | -   | - |    | 06 | 0,0 | -   | - |
|    | 12 | ... | -   | - |    | 12 | ... | -   | - |
|    | 18 | ... | -   | - |    | 18 | 0,0 | -   | - |
| 12 | 00 | ... | -   | - | 23 | 00 | 0,0 | -   | - |
|    | 06 | ... | -   | - |    | 06 | 0,0 | -   | - |
|    | 12 | 1   | 1.2 | 7 |    | 12 | 0,0 | -   | - |
|    | 18 | 1   | 0.8 | 7 |    | 18 | 0,0 | -   | - |
| 13 | 00 | 1   | 0.8 | 7 | 24 | 00 | 0,0 | -   | - |
|    | 06 | ... | -   | - |    | 06 | 1   | 0.4 | 7 |
|    | 12 | 1   | 0.8 | 7 |    | 12 | 1   | 0.4 | 7 |
|    | 18 | 1   | 0.4 | 7 |    | 18 | 1   | 0.4 | 7 |
| 14 | 00 | 1   | 0.8 | 7 | 25 | 00 | 1   | 0.4 | 7 |
|    | 06 | ... | -   | - |    | 06 | 1   | 0.8 | 7 |
|    | 12 | 1   | 0.4 | 7 |    | 12 | 1   | 1.2 | 7 |
|    | 18 | 1   | 0.8 | 7 |    | 18 | 1   | 0.4 | 7 |
| 15 | 00 | 1   | 0.8 | 7 | 26 | 00 | 1   | 0.4 | 7 |
|    | 06 | ... | -   | - |    | 06 | ... | -   | - |
|    | 12 | 1   | 0.8 | 7 |    | 12 | 1   | 0.4 | 7 |
|    | 18 | 1   | 0.4 | 7 |    | 18 | 2   | 0.8 | 3 |
| 16 | 00 | 1   | 0.4 | 7 | 27 | 00 | 2   | 0.8 | 3 |
|    | 06 | ... | -   | - |    | 06 | 1   | 1.6 | 3 |
|    | 12 | 1   | 0.8 | 7 |    | 12 | 1   | 2.0 | 3 |
|    | 18 | ... | -   | - |    | 18 | 1   | 2.0 | 3 |
| 17 | 00 | ... | -   | - | 28 | 00 | 1   | 2.0 | 3 |
|    | 06 | 1   | 0.8 | 6 |    | 06 | 1   | 1.2 | 3 |
|    | 12 |     | 0.4 | 6 |    | 12 | 1   | 0.2 | 3 |
|    | 18 | 1   | 0.2 | 7 |    | 18 | 1   | 0.8 | 3 |
| 18 | 00 | 1   | 0.4 | 6 | 29 | 00 | 1   | 0.4 | 3 |
|    | 06 | ... | -   | - |    | 06 | 1   | 0.2 | 3 |
|    | 12 | 1   | 0.2 | 6 |    | 12 | 1   | 0.2 | 4 |
|    | 18 | 1   | 0.2 | 6 |    | 18 | 1   | 0.2 | 4 |
| 19 | 00 | 1   | 0.4 | 6 | 30 | 00 | 1   | 0.2 | 3 |
|    | 06 | ... | -   | - |    | 06 | 1   | 0.8 | 4 |
|    | 12 | ... | -   | - |    | 12 | 1   | 0.8 | 5 |
|    | 18 | 1   | 0.4 | 7 |    | 18 | 1   | 0.4 | 5 |
| 20 | 00 | 1   | 0.2 | 6 |    |    |     |     |   |
|    | 06 | ... | -   | - |    |    |     |     |   |
|    | 12 | 1   | 0.4 | 7 |    |    |     |     |   |
|    | 18 | 1   | 0.2 | 5 |    |    |     |     |   |
| 21 | 00 | 1   | 0.4 | 7 |    |    |     |     |   |
|    | 06 | ... | -   | - |    |    |     |     |   |
|    | 12 | 1   | 0.2 | 7 |    |    |     |     |   |
|    | 18 | 1   | 0.2 | 7 |    |    |     |     |   |



MAR 3 1965



# SEISMOLOGICAL BULLETIN

DEC 1962

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

PUBLISHED UNDER THE DIRECTION OF  
SHRI P. R. KRISHNA RAO  
DIRECTOR GENERAL OF OBSERVATORIES

### List of Seismograph Stations with their Instruments and Constants

| Station     | Latitude | Longitude | Height<br>a. s. l.<br>(Metres) | Lithographic<br>foundation                | Instrument           | Comp          | Period<br>in<br>secs | Strain<br>Magnifi-<br>cation | Damping<br>ratio | Paper<br>speed<br>mm/min |    |
|-------------|----------|-----------|--------------------------------|-------------------------------------------|----------------------|---------------|----------------------|------------------------------|------------------|--------------------------|----|
| Agra        |          |           |                                |                                           | Columbia Long Period | E             | To = 15              | Tg = 100                     |                  | 15                       |    |
|             |          |           |                                |                                           | - do -               | N             | To = 15              | Tg = 85                      |                  | 15                       |    |
|             |          |           |                                |                                           | - do -               | Z             | To = 15              | Tg = 70                      |                  | 15                       |    |
| Bombay      | 18.54°N  | 72.40°E   | 6                              | Deccan Trap                               | Milne-Shaw           | N             | 12                   | 350                          | 13:1             | 16                       |    |
|             |          |           |                                |                                           | Milne-Shaw           | E             | 12                   | 350                          | 23:1             | 8                        |    |
|             |          |           |                                |                                           | Sprengnether         | E             | To =                 | Tg = 7 secs                  |                  | 30                       |    |
| Bokero      | 23.50°N  | 85.40°E   |                                | Rock                                      | Milne-Shaw           | N             | 12                   | 250                          | 20:1             | 15                       |    |
|             |          |           |                                |                                           | Milne-Shaw           | E             | 12                   | 250                          | 20:1             | 15                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | E             | 0.8                  | 950                          | h = 0.8          | 60                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | N             | 0.8                  | 1000                         | h = 0.8          | 60                       |    |
| Calcutta    | 22.32°N  | 88.22°E   | (1) 7                          | Alluvium                                  | Milne-Shaw           | E             | 12                   | 250                          | 20:1             | 8                        |    |
|             |          |           |                                |                                           | (2) 6 Omori-Ewing    | Wood-Anderson | N                    | 2                            | 870              | Critical                 | 30 |
|             |          |           |                                |                                           | Omori-Ewing          | N             | 16                   | 32                           | -                | 25.4                     |    |
|             |          |           |                                |                                           | Omori-Ewing          | E             | 21                   | 30                           | -                | 25.4                     |    |
| Chatra      | 25.50°N  | 87.10°E   | 161                            | Sand Stone                                | Milne-Shaw           | E             | 12                   | 250                          | 20:1             | 15                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | N             | 1                    | 1000                         | 30:1             | 60                       |    |
|             |          |           |                                |                                           | Benloff              | Z             | To = 0               | Tg = 0.45 secs               | Critical         | 60                       |    |
|             |          |           |                                |                                           | Wenner-Accelerograph | ZNE           | -                    | -                            | -                | -                        |    |
| Colombo     | 06.54°N  | 79.52°E   | 7                              | Beach Sand                                | Milne-Shaw           | E             | 12                   | 250                          | 20:1             | -                        |    |
| Dehra Dun   | 30.10°N  | 78.02°E   | 662                            | Gravel                                    | Wood-Anderson        | N             | 0.8                  | 950                          | Critical         | 60                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | E             | 0.8                  | 850                          | Critical         | 60                       |    |
|             |          |           |                                |                                           | Milne-Shaw           | N             | 12                   | 250                          | 20:1             | 8                        |    |
|             |          |           |                                |                                           | Milne-Shaw           | E             | 12                   | 250                          | 20:1             | 8                        |    |
| Hyderabad   | 17.95°N  | 78.27°E   | 535                            | Granite                                   | Milne-Shaw           | E             | 12                   | 250                          | 20:1             | 8                        |    |
|             |          |           |                                |                                           | Milne-Shaw           | N             | 12                   | 250                          | 20:1             | 8                        |    |
| Kodaikanal  | 10.14°N  | 77.28°E   | 234                            | Rock                                      | Milne-Shaw           | E             | 10                   | 250                          | 20:1             | 8                        |    |
| Madras      | 13.00°N  | 80.11°E   | 15                             | -                                         | Sprengnether         | E             | To =                 | Tg = 7.2 secs                | Critical         | 30                       |    |
| New Delhi   | 28.34°N  | 77.12°E   | 297                            | Massive Quartzite                         |                      |               |                      |                              |                  |                          |    |
| Poona       | 18.32°N  | 73.51°E   | 550                            | Deccan Trap                               | Sprengnether         | Z             | To =                 | Tg = 1.4                     | Critical         | 30                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | E             | 4                    | 1000                         | 20:1             | 14                       |    |
| Port Blair  | 11.40°N  | 92.43°E   |                                |                                           | Milne-Shaw           | N             | 12                   | 280                          | 20:1             | 8                        |    |
|             |          |           |                                |                                           | Wood-Anderson        | N             | 2                    | 1000                         | 20:1             | 30                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | E             | 0.8                  | 1000                         | 65:1             | 30                       |    |
|             |          |           |                                |                                           | Milne-Shaw           | N             | 12                   | 350                          | 20:1             | 8                        |    |
| Shore       |          |           |                                |                                           | Wood-Anderson        | N             | 0.8                  | 980                          | Critical         | 30                       |    |
|             |          |           |                                |                                           |                      |               |                      |                              |                  |                          |    |
| Shillong    | 25.34°N  | 91.53°E   | 1600                           | Quartzite Sand Stone (Shillong Quartzite) | Wood-Anderson        | N             | 0.8                  | 1000                         | h = 0.8          | 30                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | E             | 0.8                  | 1000                         | h = 0.8          | 30                       |    |
|             |          |           |                                |                                           | Milne-Shaw           | N             | 12                   | 250                          | 20:1             | 8                        |    |
|             |          |           |                                |                                           | Benloff              | Z             | To = 1.0             | Tg = 18                      |                  | 40                       |    |
| Tocklai     | 28.45°N  | 94.45°E   |                                | Alluvium                                  | Sprengnether         | E             | To =                 | Tg = 4.3                     | Critical         | 30                       |    |
|             |          |           |                                |                                           | Wenner Accelerograph | ZNE           | -                    | -                            | -                | -                        |    |
| Vizianagram | 18.07°N  | 83.27°E   |                                |                                           | Wood-Anderson        | E             | 0.8                  | 970                          | h = 0.8          | 60                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | E             | 0.8                  | 1000                         | h = 0.8          | 30                       |    |
|             |          |           |                                |                                           | Wood-Anderson        | N             | 2                    | 1000                         | 20:1             | 30                       |    |



- 3 -

| DATE                   | STATION                                                                                                     | COMPT        | PHASE         | G. M. T.<br>h. m. s.      | $\Delta$<br>km. | REMARKS.                              |
|------------------------|-------------------------------------------------------------------------------------------------------------|--------------|---------------|---------------------------|-----------------|---------------------------------------|
| <u>December, 1962.</u> |                                                                                                             |              |               |                           |                 |                                       |
| 01                     | Epc:- 52.4° N 170.1° W, Fox Islands, Aleutian Islands.<br>h = about 38 km.<br>-H= 01 h 50 m 20.4 s (USCGS). |              |               |                           |                 |                                       |
|                        | Dehra Dun                                                                                                   | Z            | eP            | 02 02 20                  |                 | Slight.                               |
|                        | Bombay                                                                                                      | N<br>NE<br>N | eP<br>eS<br>M | 02 03 18<br>14 14<br>46 - | 10110           | Slight.                               |
|                        | Poona                                                                                                       | Z            | iP            | 02 02 19                  |                 | Slight, compression.                  |
| 01                     | Delhi                                                                                                       | Z            | iP            | 04 35 36                  |                 | Slight, compression.                  |
| 01                     | Shillong                                                                                                    | Z            | eP            | 07 58 55                  |                 | Slight.                               |
| 01                     | Bokaro                                                                                                      | NE           | iP            | 08 11 32                  |                 | Slight.                               |
| 01                     | Dehra Dun                                                                                                   | Z            | eP            | 13 52 33                  |                 | Tremor.                               |
| 02                     | Shillong                                                                                                    | Z            | iP            | 00 08 56                  |                 | Slight, distant,<br>rarefaction.      |
| 02                     | Delhi                                                                                                       | Z            | iP            | 02 17 14                  |                 | Slight, rarefaction.                  |
| 02                     | Epc:- 9.9° S 159.9° E, Soloman Islands, Felt: Honiara.<br>h = about 34 km.<br>-H= 05 h 30 m 53.8 s (USCGS). |              |               |                           |                 |                                       |
| 02                     | Shillong                                                                                                    | Z            | iP            | 05 42 33                  |                 | Slight, distant,<br>rarefaction.      |
| 02                     | Shillong                                                                                                    | Z            | iP            | 08 00 54                  |                 | Slight, very distant,<br>compression. |
| 02                     | Epc:- 13.5° N 146.0° E, Mariana Islands.<br>h = about 67 km.<br>-H= 09 h 49 m 48.4 s (USCGS).               |              |               |                           |                 |                                       |
|                        | Shillong                                                                                                    | Z            | iP            | 09 58 55                  |                 | Slight, distant,<br>compression.      |
|                        | Chatra                                                                                                      | Z            | iP            | 09 59 01                  |                 | Slight, distant,<br>rarefaction.      |
|                        | Delhi                                                                                                       | Z            | eP            | 10 00 25                  |                 | Slight, compression.                  |
| 02                     | Delhi                                                                                                       | Z            | eP            | 11 47 43                  |                 | Slight.                               |
| 02                     | Chatra                                                                                                      | Z            | eP<br>iS      | 14 42 08<br>42 25         | 130             | Slight.                               |
|                        | Shillong                                                                                                    | Z            | eP            | 14 42 11                  |                 | Slight, distant.                      |
|                        | Delhi                                                                                                       | Z<br>Z       | eP<br>i       | 14 42 58<br>43 03         |                 | Slight, rarefaction.                  |
| 02                     | Shillong                                                                                                    | Z            | eP            | 16 09 11                  |                 | Slight, distant.                      |


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| DATE                   | STATION                                                                                           | COMPT | PHASE                                  | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                         |
|------------------------|---------------------------------------------------------------------------------------------------|-------|----------------------------------------|----------------------------------------------------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                                   |       |                                        |                                                                |                 |                                  |
| 02                     | Port Blair                                                                                        | NE    | ePg<br>iSg                             | 16 30 14<br>30 21                                              | 55              | Slight.                          |
| 02                     | Shillong                                                                                          | Z     | iP                                     | 17 38 35                                                       |                 | Slight, distant,<br>compression. |
| 02                     | Delhi                                                                                             | Z     | eP<br>i                                | 17 49 03<br>50 39                                              |                 | Slight, compression.             |
| 02                     | Debra Dun                                                                                         | Z     | iP<br>PP<br>Lq<br>iS<br>SS<br>Lr<br>S* | 18 21 51<br>22 04<br>23 23<br>23 33<br>23 44<br>23 47<br>23 55 | 934             | Slight, compression.             |
|                        | Delhi                                                                                             | Z     | iP<br>i                                | 18 22 07<br>23 35                                              |                 | Slight, compression.             |
| 02                     | Chatra                                                                                            | Z     | iP                                     | 18 23 53                                                       |                 | Slight, distant,<br>compression. |
| 02                     | Shillong                                                                                          | Z     | eP                                     | 18 24 25                                                       |                 | Slight, distant.                 |
| 02                     | Shillong                                                                                          | Z     | eP                                     | 18 45 12                                                       |                 | Slight, distant.                 |
| 02                     | Shillong                                                                                          | Z     | iP<br>Sg                               | 20 30 00<br>30 16                                              | 130             | Slight, compression.             |
| 02                     | Delhi                                                                                             | Z     | eP                                     | 22 17 28                                                       |                 | Slight, compression.             |
| 02                     | Dehra Dun                                                                                         | Z     | eP                                     | 22 17 35                                                       |                 | Slight.                          |
| 02                     | Epc:- 35.8° N 50.1° E, Iran, Felt : Tehran.<br>h = about 36 km.<br>-H= 22 h 21 m 29.5 s (USCGS) . |       |                                        |                                                                |                 |                                  |
| 02                     | Delhi                                                                                             | Z     | eP                                     | 22 26 43                                                       |                 | Slight, compression.             |
| 02                     | Dehra Dun                                                                                         | ZE    | eP                                     | 22 26 45                                                       |                 | Slight.                          |
|                        | Chatra                                                                                            | Z     | iP                                     | 22 28 00                                                       |                 | Slight, distant,<br>rarefaction. |
| 02                     | Shillong                                                                                          | Z     | iP                                     | 22 28 37                                                       |                 | Slight, distant,<br>compression. |
| 02                     | Shillong                                                                                          | Z     | iP                                     | 22 44 35                                                       |                 | Slight, distant,<br>compression. |
| 02                     | Chatra                                                                                            | Z     | iP                                     | 22 45 02                                                       |                 | Compression.                     |
| 02                     | Delhi                                                                                             | Z     | iP                                     | 22 45 57                                                       |                 | Slight, compression.             |
| 02                     | Epc:- 35.5° N 30.1° E, Iran, Felt : Tehran.<br>h = about 33 km.<br>-H= 23 h 36 m 23.7 s (USCGS).  |       |                                        |                                                                |                 |                                  |

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| DATE                   | STATION                                                                                                             | COMPT | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|------------------------|---------------------------------------------------------------------------------------------------------------------|-------|--------------|----------------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                                                     |       |              |                            |                 |                                  |
| 02                     | Delhi                                                                                                               | Z     | eP           | 23 41 40                   |                 | Slight, compression.             |
|                        | Shillong                                                                                                            | Z     | eP           | 23 43 34                   |                 | Slight, distant.                 |
| 02                     | Chatra                                                                                                              | Z     | eP<br>iS     | 23 59 41<br>00 00 17       | 320             | Slight.                          |
| 03                     | Shillong                                                                                                            | Z     | iP           | 16 47 11                   |                 | Slight, distant,<br>compression. |
| 03                     | Delhi                                                                                                               | Z     | eP<br>i      | 19 24 37<br>25 14          |                 | Slight, rarefaction.             |
| 03                     | Shillong                                                                                                            | Z     | iP           | 20 03 47                   |                 | Slight, distant,<br>rarefaction. |
| 04                     | Dehra Dun                                                                                                           | Z     | e            | 04 03 00                   |                 | Slight.                          |
| 04                     | Epc:- 36.9° N 141.0° E, Off coast of Honshu, Japan.<br>h = about 77 km.<br>-H= 06 h 15 m 35.6 s (USCGS).            |       |              |                            |                 |                                  |
|                        | Shillong                                                                                                            | Z     | eP           | 06 23 29                   |                 | Slight, distant.                 |
|                        | Chatra                                                                                                              | Z     | iP           | 06 23 57                   |                 | Slight, distant,<br>rarefaction. |
|                        | Delhi                                                                                                               | Z     | eP           | 06 24 49                   |                 | Slight, rarefaction.             |
| 04                     | Delhi                                                                                                               | Z     | iP<br>i      | 07 42 08<br>42 13          |                 | Slight, compression.             |
| 04                     | Shillong                                                                                                            | Z     | iP<br>i<br>e | 07 42 12<br>42 13<br>42 48 |                 | Slight, compression.             |
|                        | Chatra                                                                                                              | Z     | eP           | 07 43 32                   |                 | Slight, distant.                 |
|                        | Delhi                                                                                                               | Z     | iP           | 07 45 20                   |                 | Slight, compression.             |
| 04                     | Shillong                                                                                                            | Z     | iP           | 08 15 56                   |                 | Slight, distant,<br>compression. |
| 04                     | Shillong                                                                                                            | Z     | iPg<br>Sg    | 08 29 57<br>30 06          | 80              | Slight, compression.             |
| 04                     | Epc:- 6.1° S 149.9° E, New Britain Island, Felt: at Kandriana.<br>h = about 83 km.<br>-H= 10 h 34 m 27.5 s (USCGS). |       |              |                            |                 |                                  |
|                        | Shillong                                                                                                            | Z     | eP           | 10 44 58                   |                 | Slight, distant.                 |
|                        | Delhi                                                                                                               | Z     | iP           | 10 46 18                   |                 | Slight, rarefaction.             |
| 04                     | Shillong                                                                                                            | Z     | eP           | 16 45 10                   |                 | Slight, local.                   |
| 04                     | Shillong                                                                                                            | Z     | iP           | 17 03 17                   |                 | Slight, distant,<br>rarefaction. |

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| DATE                   | STATION                                                                                                         | COMPT | PHASE         | G. M. T.<br>h. m. s.       | <br>km. | REMARKS.                        |
|------------------------|-----------------------------------------------------------------------------------------------------------------|-------|---------------|----------------------------|------------------------------------------------------------------------------------------|---------------------------------|
| <u>December, 1962.</u> |                                                                                                                 |       |               |                            |                                                                                          |                                 |
| 04                     | Delhi                                                                                                           | Z     | eP            | 17 40 28                   |                                                                                          | Slight, compression.            |
| 04                     | Shillong                                                                                                        | Z     | iP            | 18 02 07                   |                                                                                          | Slight, distant, compression.   |
| 04                     | Shillong                                                                                                        | Z     | iP<br>Sg      | 18 36 10<br>36 26          | 130                                                                                      | Slight, compression.            |
| 04                     | Epc:- $44.6^{\circ}$ N $147.9^{\circ}$ E, Kurile Islands.<br>h = about 171 km.<br>-H= 18 h 46 m 01.5 s (USCGS). |       |               |                            |                                                                                          |                                 |
|                        | Shillong                                                                                                        | Z     | iP            | 18 54 30                   |                                                                                          | Slight, distant, rarefaction.   |
|                        | Delhi                                                                                                           | Z     | iP            | 18 55 33                   |                                                                                          | Slight, compression.            |
| 04                     | Shillong                                                                                                        | Z     | e             | 19 32 22                   |                                                                                          | Slight, near.                   |
| 04                     | Shillong                                                                                                        | Z     | iP            | 19 37 44                   |                                                                                          | Slight, distant, rarefaction.   |
| 04                     | Delhi                                                                                                           | Z     | iP<br>i       | 19 39 25<br>39 27          |                                                                                          | Slight, rarefaction.            |
| 04                     | Dehra Dun                                                                                                       | Z     | eP            | 19 39 26                   |                                                                                          | Slight.                         |
| 04                     | Shillong                                                                                                        | Z     | e             | 20 34 57                   |                                                                                          | Slight.                         |
| 04                     | Shillong                                                                                                        | Z     | eP<br>iS      | 20 39 58<br>40 21          | 200                                                                                      | Slight.                         |
| 05                     | Delhi                                                                                                           | Z     | iP<br>iS      | 00 08 13<br>09 56          | 1000                                                                                     | Slight, rarefaction.            |
| 05                     | Epc:- $15\frac{1}{2}^{\circ}$ N $92\frac{1}{2}^{\circ}$ E, In the Bay of Bengal.<br>-H= 00 h 19 m 15 s.         |       |               |                            |                                                                                          |                                 |
| 05                     | Shillong                                                                                                        | Z     | iP<br>iS      | 00 21 45<br>23 41          | 1130                                                                                     | Slight, compression.            |
|                        | Tocklai                                                                                                         | E     | eP<br>e<br>e  | 00 22 01<br>22 34<br>22 44 |                                                                                          | Slight.                         |
|                        | Chatra                                                                                                          | Z     | iP            | 00 22 15                   |                                                                                          | Slight, distant, compression.   |
|                        | Bokaro                                                                                                          | E     | eP<br>eS<br>M | 00 22 50<br>25 22<br>26 52 | 1500                                                                                     | Slight, other phases not clear. |
|                        | Delhi                                                                                                           | Z     | iP<br>i       | 00 23 42<br>23 46          |                                                                                          | Slight, compression.            |
|                        | Calcutta                                                                                                        | E     | e<br>i        | 00 25 06<br>27 03          |                                                                                          | Slight.                         |

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| DATE                   | STATION                                                                                      | COMPT | PHASE           | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                        |
|------------------------|----------------------------------------------------------------------------------------------|-------|-----------------|----------------------------|-----------------|---------------------------------|
| <u>December, 1962.</u> |                                                                                              |       |                 |                            |                 |                                 |
| 05                     | Shillong                                                                                     | Z     | iP<br>Sg        | 00 35 36<br>35 48          | 110             | Slight.                         |
| 05                     | Shillong                                                                                     | Z     | iP              | 00 44 08                   |                 | Slight,distant,<br>compression. |
| 05                     | Delhi                                                                                        | Z     | iP              | 01 17 03                   |                 | Slight,rarefaction.             |
| 05                     | Delhi                                                                                        | NE    | iP              | 08 16 22                   |                 | Slight,local.                   |
| 05                     | Delhi                                                                                        | NE    | iP              | 08 39 00                   |                 | Slight,local.                   |
| 05                     | Delhi                                                                                        | NE    | iP              | 09 12 29                   |                 | Slight,local.                   |
| 05                     | Delhi                                                                                        | NE    | iP              | 09 36 48                   |                 | Slight,local.                   |
| 05                     | Delhi                                                                                        | Z     | eP              | 11 57 57                   |                 | Slight,rarefaction.             |
| 05                     | Shillong                                                                                     | Z     | eP              | 14 09 55                   |                 | Slight,distant.                 |
| 05                     | Shillong                                                                                     | Z     | eP              | 16 16 16                   |                 | Slight,distant.                 |
| 05                     | Delhi                                                                                        | Z     | ePg<br>iSg<br>i | 18 19 02<br>19 07<br>19 08 | 45              | Slight,rarefaction.             |
| 05                     | Delhi                                                                                        | Z     | iPg<br>iSg<br>i | 18 24 35<br>24 40<br>24 41 | 45              | Slight,rarefaction.             |
| 05                     | Delhi                                                                                        | Z     | iPg<br>iSg      | 20 49 31<br>49 43          | 100             | Slight,rarefaction .            |
| 05                     | Shillong                                                                                     | Z     | eP              | 21 10 14                   |                 | Slight,distant.                 |
| 06                     | Shillong                                                                                     | Z     | iP              | 00 37 19                   |                 | Slight,distant.                 |
| 06                     | Delhi                                                                                        | Z     | iP              | 02 22 56                   |                 | Slight,compression.             |
| 06                     | Delhi                                                                                        | Z     | iP              | 02 37 00                   |                 | Slight,compression.             |
| 06                     | Delhi                                                                                        | Z     | iP<br>i         | 04 04 51<br>04 54          |                 | Slight,rarefaction.             |
| 06                     | Epc:- 49.0° N 154.3° E, Kurile Islands.<br>h = about 85 km.<br>-H= 04 h 04 m 09.8 s (USCGS). |       |                 |                            |                 |                                 |
|                        | Shillong                                                                                     | Z     | iP              | 04 13 23                   |                 | Slight,rarefaction.             |
|                        | Delhi                                                                                        | Z     | iP              | 04 14 50                   |                 | Slight,rarefaction.             |
|                        | Poona                                                                                        | Z     | iP              | 04 15 16                   |                 | Slight,compression.             |
| 06                     | Shillong                                                                                     | Z     | eP<br>eS        | 04 47 58<br>48 53          | 510             | Slight.                         |

| DATE                   | STATION                                                                                    | COMPT    | PHASE         | G. M. T.                   | $\Delta$ | REMARKS.                                                           |
|------------------------|--------------------------------------------------------------------------------------------|----------|---------------|----------------------------|----------|--------------------------------------------------------------------|
|                        |                                                                                            |          |               | h. m. s.                   | km.      |                                                                    |
| <u>December, 1962.</u> |                                                                                            |          |               |                            |          |                                                                    |
| 06                     | Bokaro                                                                                     | NE       | iPg<br>Sg     | 04 48 11<br>48 20          | 70       | Slight.                                                            |
| 06                     | Delhi                                                                                      | Z        | iP            | 07 04 08                   |          | Slight, rarefaction.                                               |
| 06                     | Bokaro                                                                                     | NE       | iP            | 08 01 23                   |          | Slight, local.                                                     |
| 06                     | Bokaro                                                                                     | NE       | iP            | 08 16 47                   |          | Slight, local.                                                     |
| 06                     | Madras                                                                                     | E        | eP<br>eS<br>M | 08 34 35<br>35 01<br>35 06 | 220      | Slight.                                                            |
| 06                     | Bokaro                                                                                     | NE       | iP            | 08 55 01                   |          | Slight, local.                                                     |
| 06                     | Delhi                                                                                      | Z        | iP            | 15 49 28                   |          | Slight, rarefaction.                                               |
| 06                     | Shillong                                                                                   | Z        | eP            | 18 03 57                   |          | Slight, distant.                                                   |
| 06                     | Shillong                                                                                   | Z        | ePg           | 18 41 53                   |          | Slight, near.                                                      |
| 07                     | Delhi                                                                                      | Z        | eP            | 06 02 01                   |          | Slight.                                                            |
| 07                     | Bokaro                                                                                     | NE       | e             | 06 49 33                   |          | Slight.                                                            |
| 07                     | Bokaro                                                                                     | NE       | iP            | 08 33 48                   |          | Slight, local.                                                     |
| 07                     | Bokaro                                                                                     | NE       | iP            | 08 42 39                   |          | Slight, local.                                                     |
| 07                     | Chatra                                                                                     | Z        | eP<br>eS      | 08 48 47<br>49 13          | 220      | Slight.                                                            |
| 07                     | Bokaro                                                                                     | NE       | iP            | 09 22 21                   |          | Slight, local.                                                     |
| 07                     | Epc:- 38.0° N 106.3° E, Central China.<br>h= about 33 km.<br>-H= 09 h 36 m 01.5 s (USCGS). |          |               |                            |          |                                                                    |
|                        | Shillong                                                                                   | ZNE<br>E | iP<br>iS      | 09 40 02<br>43 31          | 2110     | Slight, compression.                                               |
|                        | Chatra                                                                                     | ZNE      | iP            | 09 40 29                   |          | Slight, distant,<br>compression.                                   |
| 07                     | Bokaro                                                                                     | NE       | iP<br>iS<br>M | 09 41 01<br>45 06<br>48 31 | 2530     | Slight.                                                            |
|                        | Delhi                                                                                      | Z        | iP            | 09 41 29                   |          | Slight, compression.                                               |
|                        | Poona                                                                                      | ZN       | iP            | 09 42 50                   |          | Slight, compression.<br>Initial ground move-<br>ment towards East. |
|                        | Calcutta                                                                                   | E        | e             | 09 44 53                   |          | Slight.                                                            |

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| DATE                   | STATION                                                                                                                                                 | COMPT     | PHASE                                         | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                         |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------|-------------------------------------------------------------------------|-----------------|--------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                                                         |           |                                               |                                                                         |                 |                                                  |
| 07                     | Bombay                                                                                                                                                  | NE        | e<br>e                                        | 09 56 01<br>57 33                                                       |                 | Slight.                                          |
| 07                     | Delhi                                                                                                                                                   | Z         | eP<br>iS                                      | 09 57 04<br>58 48                                                       | 1020            | Slight, compression.                             |
| 07                     | Delhi                                                                                                                                                   | Z<br>Z    | eP<br>i<br>iS                                 | 10 58 45<br>58 56<br>11 00 34                                           | 1060            | Slight, rarefaction.                             |
| 07                     | Epc:- $29.2^{\circ}$ N $139.2^{\circ}$ E, Bonin Islands region.<br>h = about 411 km.<br>-H= 14 h 03 m 37.0 s (USCGS).<br>Mag. $6\frac{3}{4}$ -7 (Berk). |           |                                               |                                                                         |                 |                                                  |
|                        | Shillong                                                                                                                                                | ZNE       | iP<br>PP<br>PP<br>PPP<br>sP<br>iS<br>SS       | 14 10 51<br>12 06<br>12 11<br>12 51<br>12 57<br>16 36<br>19 56          | 4670            | Rarefaction. Initial ground motion towards East. |
|                        | Chatra                                                                                                                                                  | ZNE<br>NE | iP<br>iS<br>i<br>i                            | 14 11 21<br>16 49<br>20 28<br>21 13                                     | 4280            | Rarefaction.                                     |
|                        | Calcutta                                                                                                                                                | E         | iP<br>i<br>PP<br>sP<br>iS                     | 14 11 25<br>12 25<br>12 49<br>13 31<br>17 42                            | 5170            |                                                  |
| 07                     | Port Blair                                                                                                                                              | N         | iP<br>PP<br>sP<br>i<br>iS                     | 14 11 30<br>12 55<br>13 36<br>16 50<br>17 46                            | 5160            | Initial ground movement North.                   |
|                        | Bokaro                                                                                                                                                  | E         | iP<br>pP<br>PP<br>sP<br>PPP<br>iS<br>sS<br>SS | 14 11 37<br>13 00<br>13 35<br>13 45<br>14 46<br>18 02<br>20 30<br>22 51 | 5335            | Initial ground motion towards East.              |
|                        | Visakhapatnam                                                                                                                                           | NE        | iP<br>pP<br>iPP<br>iPPP<br>iS<br>iPS<br>iPPS  | 14 12 11<br>13 37<br>14 01<br>14 58<br>19 05<br>19 13<br>19 26          | 5253            | First ground movement North East.                |

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| DATE                   | STATION                   | COMPT | PHASE | G. M. T. | △<br>km. | REMARKS.                         |
|------------------------|---------------------------|-------|-------|----------|----------|----------------------------------|
|                        |                           |       |       | h. m. s. |          |                                  |
| <u>December, 1962.</u> |                           |       |       |          |          |                                  |
| 07                     | Visakhapatnam<br>(Contd.) | NE    | iScS  | 14 21 50 |          |                                  |
|                        |                           |       | eSS   | 22 41    |          |                                  |
|                        |                           |       | eSSS  | 23 57    |          |                                  |
|                        |                           |       | eLr   | 26 09    |          | Period = 10.5 secs.              |
|                        |                           |       | eM    | 30 05    |          | Amp. = 2.5 m.m.                  |
|                        | Delhi                     | ZNE   | iP    | 14 12 19 | 5960     | First ground motion              |
|                        |                           | E     | pP    | 13 43    |          | North-East.                      |
|                        |                           |       | sP    | 14 29    |          | Rarefaction.                     |
|                        |                           | ZE    | iS    | 19 20    |          |                                  |
|                        |                           |       | i     | 21 16    |          |                                  |
|                        |                           | ZNE   | i     | 22 18    |          |                                  |
|                        | Sehore                    | E     | iP    | 14 12 34 |          |                                  |
|                        |                           |       | i     | 12 43    |          |                                  |
|                        | Hyderabad                 | E     | iP    | 14 12 41 | 6290     |                                  |
|                        |                           |       | ipP   | 14 07    |          |                                  |
|                        |                           |       | isP   | 14 50    |          |                                  |
|                        |                           |       | iS    | 20 01    |          |                                  |
|                        |                           |       | SS    | 24 18    |          |                                  |
|                        | Madras                    | E     | iP    | 14 12 43 | 6340     | Initial ground move-             |
|                        |                           |       | i     | 12 55    |          | ment towards East.               |
|                        |                           |       | ipP   | 14 09    |          |                                  |
|                        |                           |       | isP   | 14 53    |          |                                  |
|                        |                           |       | iS    | 20 04    |          |                                  |
|                        |                           |       | i     | 21 42    |          |                                  |
|                        | Poona                     | ZNE   | iP    | 14 13 04 | 6670     | Rarefaction. Initial             |
|                        |                           | NEZ   | ipP   | 14 32    |          | ground movement                  |
|                        |                           | N     | PP    | 15 24    |          | towards North, East.             |
|                        |                           | NE    | iS    | 20 47    |          |                                  |
|                        |                           | N     | i     | 22 08    |          |                                  |
|                        |                           |       | ScS   | 22 27    |          |                                  |
|                        |                           |       | i     | 23 21    |          |                                  |
|                        |                           |       | Lq    | 27 07    |          |                                  |
|                        |                           |       | Lr    | 29 35    |          |                                  |
|                        | Bombay                    | ZE    | iP    | 14 13 09 | 6760     |                                  |
|                        |                           |       | ipP   | 14 38    |          |                                  |
|                        |                           |       | isP   | 15 22    |          |                                  |
|                        |                           |       | eS    | 20 53    |          |                                  |
|                        |                           | E     | i     | 22 16    |          |                                  |
|                        |                           |       | i     | 23 15    |          |                                  |
| 07                     | Shillong                  | Z     | ePg   | 18 43 05 |          | Slight, near.                    |
| 07                     | Shillong                  | Z     | iP    | 23 00 51 |          | Slight, distant,<br>rarefaction. |
| 08                     | Chatra                    | Z     | iP    | 00 01 32 |          | Slight, distant,<br>rarefaction. |
| 08                     | Shillong                  | Z     | eP    | 04 09 22 | 200      | Slight.                          |
|                        |                           |       | Sg    | 09 49    |          |                                  |
| 08                     | Delhi                     | Z     | iP    | 08 06 29 |          | Slight, rarefaction.             |
|                        |                           |       | i     | 07 30    |          |                                  |




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|    |                                                                                                                                        |                            |                                    |                                              |  |                                                                  |
|----|----------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------|----------------------------------------------|--|------------------------------------------------------------------|
| 08 | Epc:- 36.5° N 55.0° E, Northern Iran, Felt : Snahrud.<br>n = about 33 km.<br>-H= 09 h 02 m 54.4 s (USCGS)                              |                            |                                    |                                              |  |                                                                  |
| 08 | Poona                                                                                                                                  | Z                          | iP                                 | 09 08 17                                     |  | Slight,compression.                                              |
|    | Cnatra                                                                                                                                 | Z                          | iP                                 | 09 08 55                                     |  | Slight,distant,<br>rarefaction.                                  |
|    | Shillong                                                                                                                               | Z                          | eP                                 | 09 09 31                                     |  | Slight.                                                          |
|    | Bombay                                                                                                                                 | E                          | e                                  | 09 12 38                                     |  | Slight.                                                          |
| 08 | Shillong                                                                                                                               | Z                          | iP                                 | 12 09 08                                     |  | Slight,distant.                                                  |
| 08 | Chatra                                                                                                                                 | Z                          | eP                                 | 13 32 06                                     |  | Slight,near.                                                     |
| 08 | Delhi                                                                                                                                  | Z                          | eP                                 | 15 07 07                                     |  | Slight.                                                          |
| 08 | Delhi                                                                                                                                  | Z                          | iP                                 | 16 51 50                                     |  | Slight,compression.                                              |
| 08 | Epc:- 23.6° S 69.4° W, Near coast of Northern Chile.<br>h = about 100 km.<br>-H= 18 h 00 m 41.1 s (USCGS).                             |                            |                                    |                                              |  |                                                                  |
|    | Poona                                                                                                                                  | Z                          | iP                                 | 18 20 07                                     |  | Slight,compression.                                              |
|    | Delni                                                                                                                                  | Z                          | eP                                 | 18 20 14                                     |  | Slight,compression.                                              |
| 08 | Delhi                                                                                                                                  | Z                          | eP                                 | 18 36 29                                     |  | Slight,compression.                                              |
| 08 | Poona                                                                                                                                  | Z                          | iP                                 | 18 37 35                                     |  | Slight,rarefaction.                                              |
| 08 | Delni                                                                                                                                  | Z                          | eP                                 | 18 50 18                                     |  | Slight, distant,<br>compression.                                 |
| 08 | Delhi                                                                                                                                  | Z                          | iP                                 | 20 39 17                                     |  | Slight,compression.                                              |
| 08 | Epc:- 25.8° S 63.4° W, Salta-Santiago Del Estero Province border,<br>Argentina.<br>h = about 620 km.<br>-H= 21 h 27 m 22.28 s (USCGS). |                            |                                    |                                              |  |                                                                  |
|    | Poona                                                                                                                                  | Z                          | iPKP<br>ipPKP                      | 21 45 37<br>48 09                            |  | Moderate,compression.                                            |
|    | Bombay                                                                                                                                 | ZNE<br>Z<br>NE<br>ZNE<br>E | ePKP<br>ePPKP<br>ePKS<br>e<br>eSKS | 21 45 42<br>48 03<br>49 19<br>51 38<br>52 35 |  | Seems to be a mixture<br>of two shocks of<br>moderate intensity. |
|    | Madras                                                                                                                                 | E                          | iPKP<br>PKS<br>e<br>e              | 21 45 46<br>49 06<br>49 26<br>49 39          |  | Moderate.Initial<br>ground motion<br>towards West.               |

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| DATE                   | STATION       | COMPT | PHASE | G. M. T.<br>h. m. s. | <br>km. | REMARKS.                                                        |  |
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| <u>December, 1962.</u> |               |       |       |                      |                                                                                          |                                                                 |  |
| 08                     | Hyderabad     | NE    | iPKP  | 21 45 49             |                                                                                          | Moderate.<br><br>Period 18 secs.<br>$n = 6.$                    |  |
|                        |               | E     | e     | 48 33                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 50 58                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 56 03                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 57 44                |                                                                                          |                                                                 |  |
|                        |               | NE    | e     | 22 02 44             |                                                                                          |                                                                 |  |
|                        |               | E     | e     | 03 34                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 07 32                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 24 04                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 33 55                |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        | Delhi         | ZNE   | iPKP  | 21 45 50             |                                                                                          | Moderate, compression.<br>Initial ground<br>motion North, West. |  |
|                        |               | NE    | i     | 45 57                |                                                                                          |                                                                 |  |
|                        |               | ZNE   | iPPKP | 48 10                |                                                                                          |                                                                 |  |
|                        |               | ZE    | PKS   | 49 03                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 51 20                |                                                                                          |                                                                 |  |
|                        |               |       | PPS   | 20 16                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 07 39                |                                                                                          |                                                                 |  |
|                        |               | Z     | e     | 12 58                |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        | Visakhapatnam | NE    | iPKP  | 21 46 02             |                                                                                          | Moderate, distant.<br>Initial ground move-<br>ment North, East. |  |
|                        |               |       | i     | 47 30                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 51 45                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 54 28                |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        | Chatra        | ZNE   | iPKP  | 21 46 05             |                                                                                          | Moderate,<br>rarefaction.                                       |  |
|                        |               |       | iS    | 56 00                |                                                                                          |                                                                 |  |
|                        | Bokaro        | E     | iPKP  | 21 46 05             |                                                                                          | Slight.                                                         |  |
|                        |               |       | e     | 51 50                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 52 01                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 55 10                |                                                                                          |                                                                 |  |
|                        |               |       | SKKS  | 55 35                |                                                                                          |                                                                 |  |
|                        |               |       | e     | 22 00 25             |                                                                                          |                                                                 |  |
| 08                     | Port Blair    | NE    | iPKP  | 21 46 08             |                                                                                          | Moderate, distant.<br>Initial ground move-<br>ment North, East. |  |
|                        |               | N     | i     | 46 14                |                                                                                          |                                                                 |  |
|                        |               | E     | i     | 46 32                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 47 24                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 48 26                |                                                                                          |                                                                 |  |
|                        |               |       | iPKS  | 49 34                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 51 04                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 51 51                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 52 04                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 55 08                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 22 01 30             |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        |               |       |       |                      |                                                                                          |                                                                 |  |
|                        | Calcutta      | E     | iPKP  | 21 46 09             |                                                                                          | Slight.                                                         |  |
|                        |               |       | i     | 49 54                |                                                                                          |                                                                 |  |
|                        |               |       | i     | 52 17                |                                                                                          |                                                                 |  |
|                        | Tocklai       | E     | ePKP  | 21 46 28             |                                                                                          | Slight.                                                         |  |
|                        | Kodaikanal    | E     | iPKP  | 21 46 34             |                                                                                          | Slight, distant.                                                |  |
|                        |               |       | i     | 21 50 22             |                                                                                          |                                                                 |  |
|                        |               |       | i     | 51 52                |                                                                                          |                                                                 |  |

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| DATE                   | STATION                                                                                                                              | COMPT | PHASE                         | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                         |
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| <u>December, 1962.</u> |                                                                                                                                      |       |                               |                                                                |                 |                                  |
| 08                     | Shillong                                                                                                                             | E     | ePKP<br>e<br>e<br>e<br>e<br>e | 21 46 44<br>46 48<br>48 28<br>50 18<br>54 44<br>55 14<br>55 34 |                 | Slight, distant.                 |
|                        | Madras                                                                                                                               | E     | iPKP<br>e<br>e                | 21 46 59<br>51 06<br>52 44                                     |                 | Slight.                          |
| 08                     | Poona                                                                                                                                | Z     | iP                            | 21 57 00                                                       |                 | Slight, rarefaction.             |
| 08                     | Epc:- $50.5^{\circ}$ N $176.8^{\circ}$ W, Andrean of Islands, Aleutian Islands.<br>h = about 33 km.<br>-H= 22 h 55 m 01.2 s (USCGS). |       |                               |                                                                |                 |                                  |
|                        | Chatra                                                                                                                               | ZNE   | iP<br>iS                      | 23 06 22<br>16 01                                              | 8360            | Slight, rarefaction.             |
|                        | Delhi                                                                                                                                | Z     | eP                            | 23 06 55                                                       |                 | Slight, compression.             |
|                        | Bokaro                                                                                                                               | E     | iP<br>iS                      | 23 07 02<br>16 35                                              | 8240            | Slight.                          |
|                        | Poona                                                                                                                                | Z     | iP                            | 23 07 48                                                       |                 | Slight, rarefaction.             |
|                        | Bombay                                                                                                                               | E     | eP<br>eS                      | 23 07 48<br>18 21                                              | 9540            | Slight.                          |
| 09                     | Shillong                                                                                                                             | Z     | eP<br>iS                      | 04 46 00<br>46 23                                              | 200             | Slight.                          |
| 09                     | Shillong                                                                                                                             | Z     | iP<br>S                       | 05 16 16<br>16 37                                              | 160             | Slight.                          |
| 09                     | Delhi                                                                                                                                | Z     | eP                            | 09 20 06                                                       |                 | Slight, compression.             |
| 09                     | Epc:- $43.5^{\circ}$ N $147.3^{\circ}$ E, Kurile Islands region.<br>h = about 34 km.<br>-H= 10 h 10 m 39.5 s (USCGS).                |       |                               |                                                                |                 |                                  |
|                        | Shillong                                                                                                                             | Z     | eP                            | 10 26 17                                                       |                 | Slight.                          |
|                        | Delhi                                                                                                                                | Z     | iP                            | 10 27 22                                                       |                 | Slight, compression.             |
| 09                     | Shillong                                                                                                                             | Z     | iP<br>S                       | 12 04 58<br>05 37                                              | 350             | Slight, compression.             |
| 09                     | Shillong                                                                                                                             | Z     | iP                            | 13 28 49                                                       |                 | Slight, distant,<br>compression. |
| 09                     | Epc:- $4.7^{\circ}$ S $153.7^{\circ}$ E, New Britain region.<br>h = about 117 km.<br>-H= 14 h 27 m 04.1 s (USCGS).                   |       |                               |                                                                |                 |                                  |

| DATE                   | STATION                                                                                   | COMPT | PHASE                      | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                      |
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| <u>December, 1962.</u> |                                                                                           |       |                            |                                              |                 |                               |
| 09                     | Shillong                                                                                  | Z     | iP                         | 14 37 49                                     |                 | Slight, distant, compression. |
|                        | Chatra                                                                                    | Z     | iP<br>e                    | 14 38 17<br>59 53                            |                 | Rarefaction.                  |
| 09                     | Delhi                                                                                     | Z     | iP<br>i                    | 14 39 04<br>39 33                            |                 | Slight, compression.          |
| 09                     | Poona                                                                                     | Z     | eP<br>i                    | 14 39 14<br>39 42                            |                 | Slight.                       |
| 09                     | Shillong                                                                                  | Z     | iP                         | 15 09 15                                     |                 | Slight, distant, compression. |
| 09                     | Epc:- 7.1° S 129.1° E, Banda Sea.<br>h = about 194 km.<br>-H= 17 h 37 m 46.9 s (USCGS).   |       |                            |                                              |                 |                               |
|                        | Shillong                                                                                  | Z     | iP                         | 17 46 13                                     |                 | Slight, distant, compression. |
|                        | Chatra                                                                                    | Z     | eP                         | 17 46 44                                     |                 | Slight, distant.              |
|                        | Delhi                                                                                     | Z     | iP<br>e<br>i               | 17 47 42<br>48 21<br>48 27                   |                 | Slight, compression.          |
| 09                     | Chatra                                                                                    | ZNE   | iPg<br>Sg                  | 20 58 59<br>59 12                            | 110             | Slight.                       |
| 09                     | Delhi                                                                                     | Z     | iP                         | 21 12 18                                     |                 | Slight, compression.          |
| 09                     | Delhi                                                                                     | Z     | eP                         | 21 26 13                                     |                 | Slight, compression.          |
| 09                     | Delhi                                                                                     | Z     | iPg<br>i<br>i<br>iSg       | 23 03 31<br>03 54<br>03 55<br>03 56          |                 | Slight, compression.          |
| 10                     | Shillong                                                                                  | Z     | iP                         | 01 09 28                                     |                 | Slight, distant, compression. |
| 10                     | Delhi                                                                                     | Z     | iP                         | 01 16 04                                     |                 | Tremor, compression.          |
| 10                     | Delhi                                                                                     | Z     | iP                         | 04 47 31                                     |                 | Tremor, rarefaction.          |
| 10                     | Dehra Dun                                                                                 | Z     | iP                         | 05 04 23                                     |                 | Slight, rarefaction.          |
| 10                     | Epc:- 28.3° S 62.7° E, Indian Ocean.<br>h = about 33 km.<br>-H= 04 h 56 m 19.4 s (USCGS). |       |                            |                                              |                 |                               |
|                        | Madras                                                                                    | E     | eP<br>PP<br>iS<br>Lq<br>LR | 05 04 32<br>06 15<br>11 10<br>14 47<br>16 38 | 4890            | Slight.                       |

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| DATE | STATION                                                                                                 | COMPT          | PHASE         | G. M. T.<br>h. m. s.      | $\Delta$<br>km. | REMARKS.                         |
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| 10   | Bombay                                                                                                  | ZNE<br>NE<br>E | eP<br>eS<br>M | 05 04 32<br>11 55<br>23 - | 4890            | Slight.                          |
|      | Poona                                                                                                   | Z              | iP            | 05 04 57                  |                 | Slight, rarefaction.             |
|      | Delhi                                                                                                   | Z              | iP            | 05 06 11                  |                 | Slight, rarefaction.             |
|      | Chatra                                                                                                  | Z              | iP            | 05 06 22                  |                 | Slight, distant,<br>rarefaction. |
| 10   | Delhi                                                                                                   | Z              | eP<br>e       | 06 24 29<br>24 33         |                 | Slight, rarefaction.             |
| 10   | Bokaro                                                                                                  | NE             | eP            | 08 10 14                  |                 | Slight.                          |
| 10   | Bokaro                                                                                                  | NE             | iP            | 08 15 21                  |                 | Slight, local.                   |
| 10   | Bokaro                                                                                                  | NE             | iP            | 09 03 40                  |                 | Slight, local.                   |
| 10   | Delhi                                                                                                   | Z              | iP            | 09 10 55                  |                 | Tremor, compression.             |
| 10   | Bokaro                                                                                                  | NE             | iP            | 09 39 24                  |                 | Slight.                          |
| 10   | Delhi                                                                                                   | Z              | iP<br>iS      | 12 36 04<br>37 42         | 960             | Slight, compression.             |
| 10   | Poona                                                                                                   | Z              | iP            | 13 11 24                  |                 | Slight, rarefaction.             |
| 10   | Delhi                                                                                                   | Z              | iP<br>i       | 17 54 12<br>54 41         |                 | Slight, rarefaction.             |
| 10   | Delhi                                                                                                   | Z              | iP            | 18 51 03                  |                 | Slight, compression.             |
| 10   | Chatra                                                                                                  | Z              | eP<br>i       | 22 56 22<br>56 41         | 130             | Slight.                          |
| 10   | Epc:- 8.0° S 108.6° E, Near South coast of Java .<br>h = about 193 km.<br>-H= 23 h 04 m 42.0 s (USCGS). |                |               |                           |                 |                                  |
|      | Delhi                                                                                                   | Z              | iP<br>i       | 23 12 57<br>14 28         |                 | Slight, rarefaction.             |
|      | Poona                                                                                                   | Z              | iP            | 23 12 27                  |                 | Slight, compression.             |
|      | Chatra                                                                                                  | Z              | eP            | 23 13 50                  |                 | Slight, distant,<br>rarefaction. |
| 11   | Chatra                                                                                                  | Z              | iP            | 00 10 19                  |                 | Slight, distant,<br>rarefaction. |
| 11   | Shillong                                                                                                | Z              | iP            | 05 06 25                  |                 | Slight, distant,<br>rarefaction. |
| 11   | Shillong                                                                                                | Z              | eP            | 06 23 05                  |                 | Slight, distant.                 |

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| DATE                   | STATION                                                                                                          | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                        |
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| <u>December, 1962.</u> |                                                                                                                  |       |       |                      |                 |                                                 |
| 11                     | Bombay                                                                                                           | ZE    | iP    | 10 21 06             | 9090            | Moderate.                                       |
|                        |                                                                                                                  |       | e     | 21 34                |                 |                                                 |
|                        |                                                                                                                  | E     | PP    | 24 21                |                 |                                                 |
|                        |                                                                                                                  |       | iS    | 31 19                |                 |                                                 |
|                        |                                                                                                                  |       | e     | 31 52                |                 |                                                 |
| 11                     | Bokaro                                                                                                           | NE    | e     | 10 23 24             |                 | Slight, local.                                  |
| 11                     | Shillong                                                                                                         | Z     | eP    | 11 38 44             | 360             | Slight.                                         |
|                        |                                                                                                                  |       | eS    | 39 24                |                 |                                                 |
| 11                     | Shillong                                                                                                         | Z     | eP    | 11 43 42             |                 | Slight, distant.                                |
| 11                     | Delhi                                                                                                            | Z     | iP    | 13 01 35             |                 | Slight, rarefaction.                            |
| 11                     | Shillong                                                                                                         | Z     | iP    | 16 19 20             |                 | Slight, distant,<br>rarefaction.                |
| 11                     | Shillong                                                                                                         | Z     | iP    | 21 55 22             |                 | Slight, distant,<br>rarefaction.                |
| 11                     | Bombay                                                                                                           | Z     | eP    | 23 02 22             | 2930            | Slight.                                         |
|                        |                                                                                                                  | ZNE   | e     | 02 34                |                 |                                                 |
|                        |                                                                                                                  | NE    | eS    | 06 54                |                 |                                                 |
|                        |                                                                                                                  |       | e     | 08 59                |                 |                                                 |
| 11                     | Shillong                                                                                                         | Z     | eP    | 23 11 34             |                 | Slight, distant.                                |
| 12                     | Delhi                                                                                                            | Z     | eP    | 07 32 02             |                 | Slight, rarefaction.                            |
| 12                     | Bokaro                                                                                                           | NE    | iP    | 08 45 13             |                 | Slight.                                         |
| 12                     | Epc:- 4.8 <sup>0</sup> S 153.8 <sup>0</sup> E, New Britain.<br>h = about 33 km.<br>-H= 10 h 08 m 48.5 s (USCGS). |       |       |                      |                 |                                                 |
|                        | Epc:- 7.0 <sup>0</sup> S 152.8 <sup>0</sup> E,<br>-H= 10 h 08 m 45 s (Shillong).                                 |       |       |                      |                 |                                                 |
| 12                     | Shillong                                                                                                         | Z     | iP    | 10 19 44             | 7460            | Slight, distant,<br>rarefaction.                |
|                        |                                                                                                                  | E     | iS    | 28 38                |                 |                                                 |
|                        | Calcutta                                                                                                         | E     | iP    | 10 19 52             | 7570            | Slight.                                         |
|                        |                                                                                                                  |       | iS    | 28 52                |                 |                                                 |
|                        | Chatra                                                                                                           | ZNE   | iP    | 10 20 01             | 7750            | Slight.                                         |
|                        |                                                                                                                  | NE    | i     | 26 22                |                 |                                                 |
|                        |                                                                                                                  |       | iS    | 29 14                |                 |                                                 |
|                        | Bokaro                                                                                                           | NE    | iP    | 10 20 06             | 7860            | Slight. Initial<br>ground motion South<br>East. |
|                        |                                                                                                                  |       | PP    | 22 49                |                 |                                                 |
|                        |                                                                                                                  |       | PPP   | 24 34                |                 |                                                 |
|                        |                                                                                                                  |       | iS    | 29 25                |                 |                                                 |
|                        |                                                                                                                  |       | PS    | 29 57                |                 |                                                 |
|                        |                                                                                                                  |       | LQ    | 30 51                |                 |                                                 |
|                        |                                                                                                                  |       | ScS   | 37 11                |                 |                                                 |

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| DATE                   | STATION                                                                                                 | COMPT  | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                                                                             |                                                                     |
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| <u>December, 1962.</u> |                                                                                                         |        |       |                      |                 |                                                                                                                      |                                                                     |
| 12                     | Visakhapatnam                                                                                           | E      | iP    | 10 20 21             | 8060            | Moderate. Initial ground motion East.                                                                                |                                                                     |
|                        |                                                                                                         |        | ePP   | 23 11                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | ePPP  | 24 55                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | iS    | 29 45                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | ePS   | 30 21                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | ePPS  | 30 37                |                 |                                                                                                                      |                                                                     |
|                        | Madras                                                                                                  | E      | eP    | 10 20 23             | 8300            | Moderate.                                                                                                            |                                                                     |
|                        |                                                                                                         |        | PcP   | 20 46                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | PP    | 23 11                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | e     | 23 58                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | iS    | 29 59                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | SKS   | 30 27                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | Ps/ScS |       | 30 34                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | e     | 34 19                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | Lq    | 40 01                |                 |                                                                                                                      |                                                                     |
|                        | Hyderabad                                                                                               | NE     | iP    | 10 20 36             | 8570            | Slight. Initial ground motion Southward West-wrd.<br><br>Period = 18 secs.<br>u = 4.<br>Period = 18 secs.<br>u' = 6. |                                                                     |
|                        |                                                                                                         | E      | PcP   | 20 57                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | NE     | iS    | 30 25                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | E      | PS    | 30 57                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | PPS   | 31 29                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | SS    | 34 39                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | LR    | 43 50                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | M     | 50 00                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | N      | M     | 50 18                |                 |                                                                                                                      |                                                                     |
|                        | Dehra Dun                                                                                               | ZNE    | iP    | 10 20 48             | 8870            |                                                                                                                      | Slight, distant, compression. Initial ground movement towards East. |
|                        |                                                                                                         | Z      | i     | 21 09                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | N      | PPP   | 25 43                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | NE     | iS    | 30 50                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | E      | PS    | 31 34                |                 |                                                                                                                      |                                                                     |
|                        | Delhi                                                                                                   | Z      | iP    | 10 20 50             | 8670            | Slight, rarefaction.                                                                                                 |                                                                     |
|                        |                                                                                                         | ZE     | iPcP  | 21 00                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | E      | iS    | 29 46                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | ScS   | 31 07                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         |        | PS    | 31 24                |                 |                                                                                                                      |                                                                     |
| 12                     | Poona                                                                                                   | ZE     | iP    | 10 21 00             | 8970            | Slight, compression. Initial ground movement West.                                                                   |                                                                     |
|                        |                                                                                                         | NE     | eS    | 31 08                |                 |                                                                                                                      |                                                                     |
|                        |                                                                                                         | Z      | i     | 31 30                |                 |                                                                                                                      |                                                                     |
| 12                     | Epc:- $4.6^{\circ}$ N $96.5^{\circ}$ E , Sumatra.<br>h = about 138 km.<br>-H= 22 h 56 m 45.8 s (USCGS). |        |       |                      |                 |                                                                                                                      |                                                                     |
|                        | Epc:- Could not be determined.<br>-H= 22 h 56 m 55 s (Shillong).                                        |        |       |                      |                 |                                                                                                                      |                                                                     |
|                        | Port Blair                                                                                              | NE     | eP    | 22 58 49             | 1070            | Slight.                                                                                                              |                                                                     |
|                        |                                                                                                         |        | eS    | 23 00 38             |                 |                                                                                                                      |                                                                     |

| DATE                   | STATION                                                                                                             | COMPT       | PHASE                             | G. M. T.<br>h. m. s.                                  | $\Delta$<br>km. | REMARKS.                                                                                                          |
|------------------------|---------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------------|-------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                     |             |                                   |                                                       |                 |                                                                                                                   |
| 12                     | Madras                                                                                                              | E           | eP<br>iPP<br>eS<br>eSS<br>LR<br>M | 28 00 51<br>01 03<br>03 58<br>04 13<br>05 03<br>06 40 | 2030            | Moderate.                                                                                                         |
|                        | Visakhapatnam                                                                                                       | E           | iP<br>iS                          | 23 00 56<br>04 28                                     | 2140            | Slight. Initial<br>ground motion East.                                                                            |
|                        | Bokaro                                                                                                              | NE          | iP<br>eS                          | 23 01 26<br>05 12                                     | 2040            | Slight.                                                                                                           |
|                        | Hyderabad                                                                                                           | NE          | eP<br>i<br>iS<br>LR<br>M          | 23 01 26<br>05 35<br>05 53<br>07 02<br>08 17          |                 | Slight.<br><br><br><br>Period = 9 secs.<br>Gr. dis. = $\mu = 2$ .<br>Period = 24 secs.<br>Gr. dis. = $\mu = 11$ . |
|                        |                                                                                                                     | N<br>E<br>N | LR<br>M<br>M                      | 07 02<br>08 17<br>08 23                               |                 |                                                                                                                   |
|                        | Shillong                                                                                                            | Z<br>E      | iP<br>iS                          | 23 01 33<br>05 32                                     | 2450            | Slight, compression.                                                                                              |
|                        | Chatra                                                                                                              | ZNE         | iP<br>iS                          | 23 10 49<br>06 05                                     | 2680            | Slight, rarefaction.                                                                                              |
| 12                     | Shillong                                                                                                            | Z           | iP                                | 23 38 46                                              |                 | Slight, compression.                                                                                              |
| 13                     | Epc:- 7.2 <sup>0</sup> N 93.1 <sup>0</sup> E, Nicobar Islands.<br>h = about 33 km.<br>-H= 00 h 25 m 02.5 s (USCGS). |             |                                   |                                                       |                 |                                                                                                                   |
|                        | Port Blair                                                                                                          | NE<br>E     | eP<br>e<br>i                      | 00 25 56<br>27 03<br>28 27                            |                 | Slight.                                                                                                           |
|                        | Madras                                                                                                              | E           | e                                 | 00 28 30                                              |                 |                                                                                                                   |
| 13                     | Shillong                                                                                                            | Z           | iP                                | 00 29 19                                              |                 | Slight, distant,<br>compression.                                                                                  |
| 13                     | Bokaro                                                                                                              | E           | eP<br>i                           | 00 29 28<br>32 32                                     |                 | Slight.                                                                                                           |
| 13                     | Chatra                                                                                                              | ZNE         | eP                                | 00 29 35                                              |                 | Slight, distant.                                                                                                  |
| 13                     | Poona                                                                                                               | Z           | iP                                | 00 30 01                                              |                 | Slight, rarefaction.                                                                                              |
| 13                     | Delhi                                                                                                               | Z           | iP                                | 00 30 50                                              |                 | Slight, compression.                                                                                              |
| 13                     | Delhi                                                                                                               | Z           | iP                                | 03 52 04                                              |                 | Slight, compression.                                                                                              |
| 13                     | Delhi                                                                                                               | Z           | eP                                | 03 54 54                                              |                 | Slight, rarefaction.                                                                                              |




| DATE                   | STATION                                                                                               | COMPT | PHASE        | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-------------------------------------------------------------------------------------------------------|-------|--------------|----------------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                                       |       |              |                            |                 |                                  |
| 13                     | Epc:- 63.3° N 149.7° W, South Central, Alaska.<br>h = about 47 km.<br>-H= 04 h 21 m 21.2 s (USCGS).   |       |              |                            |                 |                                  |
|                        | Dehra Dun                                                                                             | Z     | iP           | 04 33 28                   |                 | Slight, rarefaction.             |
|                        | Shillong                                                                                              | Z     | iP           | 04 33 31                   |                 | Slight, distant,<br>compression. |
|                        | Delhi                                                                                                 | Z     | iP<br>i<br>i | 04 33 32<br>33 38<br>34 16 |                 | Slight, compression.             |
| 13                     | Delhi                                                                                                 | Z     | eP<br>e<br>i | 04 38 59<br>39 09<br>39 16 |                 | Slight.                          |
| 13                     | Delhi                                                                                                 | Z     | iP<br>i      | 06 59 19<br>59 41          |                 | Slight, compression.             |
| 13                     | Delhi                                                                                                 | Z     | iP           | 08 25 35                   |                 | Slight, compression.             |
| 13                     | Delhi                                                                                                 | Z     | iP<br>i      | 08 52 29<br>52 37          |                 | Slight, rarefaction.             |
| 13                     | Delhi                                                                                                 | Z     | eP           | 08 56 22                   |                 | Slight, rarefaction.             |
| 13                     | Delhi                                                                                                 | Z     | iP<br>i      | 09 41 58<br>42 09          |                 | Slight, rarefaction.             |
| 13                     | Chatra                                                                                                | Z     | iP           | 10 33 27                   |                 | Slight, distant,<br>compression. |
| 13                     | Shillong                                                                                              | Z     | eP           | 10 47 13                   |                 | Slight, distant.                 |
| 13                     | Delhi                                                                                                 | Z     | eP           | 11 04 34                   |                 | Slight, rarefaction.             |
| 13                     | Delhi                                                                                                 | Z     | iP           | 11 33 00                   |                 | Slight, distant,<br>compression. |
| 13                     | Shillong                                                                                              | Z     | iP           | 13 06 49                   |                 | Slight, distant,<br>rarefaction. |
| 13                     | Epc:- 61.4° N 147.2° W, Kenal Peninsula, Alaska.<br>h = about 69 km.<br>-H= 14 h 57 m 27.9 s (USCGS). |       |              |                            |                 |                                  |
|                        | Chatra                                                                                                | Z     | iP           | 15 09 42                   |                 | Slight, rarefaction .            |
|                        | Dehra Dun                                                                                             | Z     | iP<br>i      | 15 09 43<br>09 54          |                 | Slight, rarefaction.             |
|                        | Shillong                                                                                              | Z     | iP           | 15 09 47                   |                 | Slight, rarefaction.             |
|                        | Delhi                                                                                                 | Z     | iP           | 15 09 48                   |                 | Slight, rarefaction.             |
| 13                     | Shillong                                                                                              | Z     | eP           | 15 34 24                   |                 | Slight, distant.                 |

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| DATE                   | STATION                                                                                                              | COMPT | PHASE     | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                      |
|------------------------|----------------------------------------------------------------------------------------------------------------------|-------|-----------|----------------------|-----------------|-------------------------------|
| <u>December, 1962.</u> |                                                                                                                      |       |           |                      |                 |                               |
| 13                     | Delhi                                                                                                                | Z     | eP        | 15 57 20             |                 | Slight, compression.          |
| 13                     | Epc:- $2.8^{\circ}$ N $127.9^{\circ}$ E, Baimahera region.<br>h = about 33 km<br>-H= 16 h 45 m 59.1 s (USCGS).       |       |           |                      |                 |                               |
|                        | Shillong                                                                                                             | Z     | iP        | 16 53 55             |                 | Slight.                       |
|                        | Delhi                                                                                                                | Z     | eP        | 16 55 25             |                 | Slight, compression.          |
| 13                     | Delhi                                                                                                                | Z     | eP        | 18 53 23             |                 | Slight, distant, compression. |
| 13                     | Shillong                                                                                                             | Z     | eP        | 21 22 04             |                 | Slight, distant.              |
| 13                     | Chatra                                                                                                               | Z     | eP        | 21 22 48             |                 | Slight, distant.              |
| 13                     | Epc:- $35.2^{\circ}$ N $28.3^{\circ}$ E, Dodecanese Islands.<br>h = about 39 km.<br>-H= 22 h 45 m 28.4 s (USCGS).    |       |           |                      |                 |                               |
| 13                     | Delhi                                                                                                                | Z     | iP        | 22 53 18             |                 | Slight, compression.          |
| 13                     | Chatra                                                                                                               | Z     | iP        | 22 54 28             |                 | Slight, distant, compression. |
| 13                     | Shillong                                                                                                             | Z     | iP        | 22 55 08             |                 | Slight, distant, compression. |
| 13                     | Calcutta                                                                                                             | E     | e         | 23 04 55             |                 | Slight.                       |
| 13                     | Epc:- $20.4^{\circ}$ N $122.0^{\circ}$ E, Batan Islands, P.I.,<br>h = about 147 km.<br>-H= 23 h 20 m 42.6 s (USCGS). |       |           |                      |                 |                               |
|                        | Shillong                                                                                                             | Z     | iP        | 23 26 31             |                 | Slight, distant.              |
|                        | Chatra                                                                                                               | Z     | iP        | 23 27 02             |                 | Slight, distant.              |
|                        | Dehra Dun                                                                                                            | Z     | eP        | 23 27 37             |                 | Tremor, rarefaction.          |
|                        | Delhi                                                                                                                | Z     | iP        | 23 28 14             |                 | Slight, compression.          |
| 14                     | Shillong                                                                                                             | Z     | ePg<br>Sg | 03 35 26<br>35 37    | 100             | Slight.                       |
| 14                     | Delhi                                                                                                                | Z     | iP        | 04 00 33             |                 | Slight, compression.          |
| 14                     | Delhi                                                                                                                | Z     | iP<br>i   | 04 03 17<br>03 23    |                 | Slight, compression.          |
| 14                     | Shillong                                                                                                             | Z     | iPg<br>Sg | 04 04 02<br>04 16    | 120             | Slight, compression.          |
| 14                     | Delhi                                                                                                                | Z     | iP        | 04 23 19             |                 | Slight, rarefaction.          |
| 14                     | Chatra                                                                                                               | Z     | iP<br>S   | 06 47 53<br>48 13    | 160             | Slight, rarefaction.          |
| 14                     | Bokaro                                                                                                               | NE    | iP        | 08 21 01             |                 | Slight.                       |

| DATE                   | STATION                                                                                                                        | COMPT  | PHASE     | G  | M  | T              | $\Delta$<br>km | REMARKS.                         |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------|-----------|----|----|----------------|----------------|----------------------------------|
|                        |                                                                                                                                |        |           | h  | m  | s              |                |                                  |
| <u>December, 1962.</u> |                                                                                                                                |        |           |    |    |                |                |                                  |
| 14                     | Epc:- $4\ 8^{\circ}$ S $153\ 8^{\circ}$ E, Solomon Islands.<br>h = about 117 km.<br>-H= 08 h 53 m 49.4 s (USCGS).              |        |           |    |    |                |                |                                  |
|                        | Shillong                                                                                                                       | Z      | iP        | 09 | 04 | 32             |                | Slight, distant,<br>compression. |
|                        | Delhi                                                                                                                          | Z      | iP<br>i   | 09 | 05 | 49<br>06 18    |                | Slight, compression              |
| 14                     | Chatra                                                                                                                         | Z      | eP        | 10 | 01 | 05             |                | Slight, distant.                 |
| 14                     | Chatra                                                                                                                         | Z      | iP        | 10 | 57 | 03             |                | Slight, rarefaction.             |
| 14                     | Delhi                                                                                                                          | Z      | iP        | 10 | 57 | 56             |                | Slight, rarefaction.             |
| 14                     | Delhi                                                                                                                          | Z      | iP        | 12 | 16 | 03             |                | Slight, rarefaction.             |
| 14                     | Shillong                                                                                                                       | Z      | iPg<br>Sg | 16 | 21 | 10<br>21 20    | 90             | Slight, rarefaction.             |
| 14                     | Epc:- $50.3^{\circ}$ N $90.6^{\circ}$ E, Outer Mongolia - U.S.S.R. Border.<br>h = about 33 km.<br>-H= 16 h 52 m 49.8 s (USCGS) |        |           |    |    |                |                |                                  |
|                        | Dehra Dun                                                                                                                      | Z<br>E | iP<br>e   | 16 | 57 | 45<br>17 01 47 |                | Slight, rarefaction              |
|                        | Chatra                                                                                                                         | Z      | iP        | 16 | 58 | 00             |                | Slight, compression              |
|                        | Delhi                                                                                                                          | Z      | iP        | 16 | 58 | 02             |                | Slight, compression.             |
|                        | Shillong                                                                                                                       | Z      | iP        | 16 | 58 | 10             |                | Slight, rarefaction              |
| 14                     | Bombay                                                                                                                         | E      | e         | 17 | 11 | 09             |                | Slight                           |
| 14                     | Epc:- $43.8^{\circ}$ N $148.3^{\circ}$ E, Kurile Islands.<br>h = about 125 km.<br>-H= 18 h 01 m 30.8 s (USCGS).                |        |           |    |    |                |                |                                  |
| 14                     | Shillong                                                                                                                       | Z      | iP        | 18 | 10 | 07             |                | Slight, compression.             |
| 14                     | Dehra Dun                                                                                                                      | Z      | iP        | 18 | 11 | 01             |                | Slight, rarefaction.             |
| 14                     | Delhi                                                                                                                          | Z      | iP        | 18 | 11 | 10             |                | Slight, compression.             |
| 14                     | Delhi                                                                                                                          | Z      | iP        | 18 | 12 | 00             |                | Slight, rarefaction.             |
| 14                     | Shillong                                                                                                                       | Z      | iP        | 21 | 06 | 41             |                | Slight, distant,<br>compression  |
| 14                     | Delhi                                                                                                                          | Z      | iP        | 21 | 07 | 58             |                | Slight, compression              |
| 14                     | Delhi                                                                                                                          | Z      | eP        | 21 | 47 | 24             |                | Slight, rarefaction.             |
| 14                     | Dehra Dun                                                                                                                      | Z      | iP<br>i   | 21 | 47 | 04<br>47 31    |                | Slight, compression              |

| DATE                   | STATION                                                                                 | COMPT | PHASE           | G. M. T.<br>h. m. s.       |  km. | REMARKS.                         |
|------------------------|-----------------------------------------------------------------------------------------|-------|-----------------|----------------------------|---------------------------------------------------------------------------------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                         |       |                 |                            |                                                                                       |                                  |
| 15                     | Shillong                                                                                | Z     | i               | 01 00 06                   |                                                                                       | Slight, distant.                 |
| 15                     | Port Blair                                                                              | NE    | i               | 03 30 29                   |                                                                                       | Slight, near.                    |
| 15                     | Delhi                                                                                   | Z     | iP<br>i         | 03 58 04<br>58 07          |                                                                                       | Slight, rarefaction.             |
| 15                     | Delhi                                                                                   | Z     | iPg<br>i<br>iSg | 07 17 00<br>17 01<br>17 03 | 20                                                                                    | Slight, compression.             |
| 15                     | Shillong                                                                                | Z     | iP<br>Sg        | 08 14 03<br>14 18          | 130                                                                                   | Slight, rarefaction.             |
| 15                     | Chatra                                                                                  | Z     | ePg<br>eSg      | 10 07 10<br>07 22          | 100                                                                                   | Slight.                          |
| 15                     | Delhi                                                                                   | Z     | eP              | 14 34 33                   |                                                                                       | Slight, compression.             |
| 15                     | Delhi                                                                                   | Z     | iP              | 14 50 45                   |                                                                                       | Slight, rarefaction.             |
| 15                     | Shillong                                                                                | Z     | eP              | 17 52 35                   |                                                                                       | Slight, distant.                 |
| 15                     | Shillong                                                                                | Z     | eP              | 19 08 32                   |                                                                                       | Slight, distant.                 |
| 15                     | Shillong                                                                                | Z     | eP<br>Sg        | 22 02 50<br>03 02          | 110                                                                                   | Slight.                          |
| 16                     | Shillong                                                                                | Z     | eP              | 00 22 03                   |                                                                                       | Slight, distant.                 |
| 16                     | Shillong                                                                                | Z     | iP<br>Sg        | 00 45 29<br>45 55          | 200                                                                                   | Slight, rarefaction.             |
| 16                     | Shillong                                                                                | Z     | iP              | 06 11 08                   |                                                                                       | Slight, distant,<br>compression. |
| 16                     | Epc:- 36.2° N 71.3° E, Hindukush.<br>h = about 145 km.<br>-H= 06 h 34 m 15.6 s (USCGS). |       |                 |                            |                                                                                       |                                  |
| 16                     | Dehra Dun                                                                               | Z     | iP              | 06 36 09                   |                                                                                       | Slight, rarefaction.             |
| 16                     | Delhi                                                                                   | Z     | iP<br>i<br>iS   | 06 36 18<br>36 20<br>37 55 | 950                                                                                   | Slight, compression.             |
| 16                     | Chatra                                                                                  | Z     | iP<br>iS        | 06 37 54<br>40 45          | 1700                                                                                  | Slight, compression.             |
| 16                     | Shillong                                                                                | Z     | iP              | 06 38 44                   |                                                                                       | Slight, distant,<br>rarefaction. |
| 16                     | Poona                                                                                   | Z     | eP              | 06 42 03                   |                                                                                       | Slight.                          |
| 16                     | Shillong                                                                                | Z     | eP              | 11 21 56                   |                                                                                       | Slight, distant.                 |
| 16                     | Delhi                                                                                   | Z     | iP              | 11 23 18                   |                                                                                       | Slight, compression.             |

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| DATE                   | STATION                                                                                   | COMPT    | PHASE                                                    | G. M. T.<br>h. m. s.                                                                      | $\Delta$<br>km. | REMARKS.                                                                  |
|------------------------|-------------------------------------------------------------------------------------------|----------|----------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                           |          |                                                          |                                                                                           |                 |                                                                           |
| 16                     | Chatra                                                                                    | Z        | iP<br>iS                                                 | 17 55 03<br>55 24                                                                         | 170             | Slight.                                                                   |
| 16                     | Shillong                                                                                  | Z        | iP<br>Sg                                                 | 19 35 33<br>35 53                                                                         | 220             | Slight, compression.                                                      |
| 16                     | Chatra                                                                                    | Z        | eP<br>iS                                                 | 19 36 22<br>37 16                                                                         | 500             | Slight.                                                                   |
| 16                     | Shillong                                                                                  | Z        | ePg<br>Sg                                                | 21 33 34<br>33 42                                                                         | 90              | Slight.                                                                   |
| 16                     | Shillong                                                                                  | Z        | eP<br>Sg                                                 | 23 58 45<br>59 10                                                                         | 190             | Slight.                                                                   |
| 17                     | Epc:- 4.2° S 127.6° E, Ceram.<br>h = about 33 km.<br>-H= 02 h 15 m 49.7 s (USCGS).        |          |                                                          |                                                                                           |                 |                                                                           |
|                        | Shillong                                                                                  | Z        | iP                                                       | 02 24 08                                                                                  |                 | Slight, distant,<br>compression.                                          |
|                        | Delhi                                                                                     | Z        | iP                                                       | 02 24 39                                                                                  |                 | Slight, rarefaction.                                                      |
| 17                     | Epc:- 04.0° N 118.0° E.<br>-H= 11 h 00 m 15 s (Shillong).                                 |          |                                                          |                                                                                           |                 |                                                                           |
|                        | Epc:- 2.1° N 122.9° E, Celebes Sea.<br>h = about 393 km.<br>-H= 11 h 00 m 16.0 s (USCGS). |          |                                                          |                                                                                           |                 |                                                                           |
| 17                     | Tocklai                                                                                   | E        | eP                                                       | 11 06 51                                                                                  |                 | Slight.                                                                   |
|                        | Shillong                                                                                  | ZNE<br>E | iP<br>iS                                                 | 11 07 01<br>12 22                                                                         | 3710            | Slight, distant,<br>compression.                                          |
|                        | Calcutta                                                                                  | E        | iP<br>i<br>iS                                            | 11 07 14<br>09 14<br>12 48                                                                | 3930            | Slight.                                                                   |
|                        | Bokaro                                                                                    | NE       | iP<br>PP<br>PPP<br>PcP<br>i<br>S<br>ScP<br>SSS<br>i<br>M | 11 07 32<br>08 58<br>09 21<br>09 46<br>13 09<br>13 21<br>13 36<br>16 30<br>16 54<br>21 09 | 4160            | Slight.                                                                   |
|                        | Chatra                                                                                    | ZNE      | iP<br>iS                                                 | 11 07 35<br>13 31                                                                         | 4260            | Moderate, compression.<br>Initial ground moti-<br>on towards North, West. |
| 17                     | Visakhapatnam                                                                             | E        | iP<br>ePPP<br>iS<br>iSSS                                 | 11 07 38<br>08 30<br>13 30<br>16 47                                                       | 4210            | Moderate. Initial<br>ground motion toward-<br>s West.                     |

| DATE                   | STATION                                                                                               | COMPT                    | PHASE                                   | G. M. T.<br>h. m. s.                                           | △<br>km. | REMARKS                                                                              |
|------------------------|-------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------|----------------------------------------------------------------|----------|--------------------------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                       |                          |                                         |                                                                |          |                                                                                      |
| 17                     | Madras                                                                                                | E                        | iP<br>PPP<br>iS<br>LQ<br>SSS<br>LR<br>M | 11 07 46<br>09 40<br>13 44<br>16 31<br>16 52<br>18 36<br>21 31 | 4300     | Moderate. Initial ground motion towards East.<br>0 = 11 h 00 m, 19 s.                |
|                        | Hyderabad                                                                                             | NE<br>N                  | eP<br>iS<br>SS<br>SSS<br>LR<br>M        | 11 08 06<br>14 22<br>17 12<br>18 00<br>20 23<br>22 36          | 4600     | Slight. Initial ground motion Northward-westward.<br><br>Period = 15 secs.<br>n = 4. |
|                        | Sehore                                                                                                | E                        | iP<br>eS                                | 11 08 27<br>15 01                                              | 4910     | Slight.                                                                              |
|                        | Poona                                                                                                 | ZE<br>ZNE                | iP<br>iS                                | 11 08 38<br>15 21                                              | 5080     | Slight, compression. Initial ground motion towards West.                             |
|                        | Delhi                                                                                                 | Z                        | iP<br>i<br>iS                           | 11 08 39<br>10 41<br>15 22                                     | 5080     | North west, compression.                                                             |
|                        | Dehra Dun                                                                                             | ZNE<br>NE<br>E<br>N      | iP<br>iS<br>i<br>i                      | 11 08 40<br>15 24<br>16 05<br>17 45                            | 5550     | Slight, compression. Initial ground motion towards South-East.                       |
|                        | Bombay                                                                                                | ZNE<br>E<br>E<br>NE<br>E | iP<br>iP<br>PP<br>iS<br>iS<br>ScS       | 11 08 46<br>08 50<br>10 51<br>13 35<br>15 40<br>18 19          | 5780     | Slight.                                                                              |
| 17                     | Chatra                                                                                                | ZNE                      | iP<br>iS                                | 11 15 51<br>16 11                                              | 160      | Slight, rarefaction.                                                                 |
| 17                     | Chatra                                                                                                | ZNE                      | iPg<br>Sg                               | 11 46 35<br>46 54                                              | 150      | Slight.                                                                              |
| 17                     | Shillong                                                                                              | Z                        | eP                                      | 12 37 18                                                       |          | Slight.                                                                              |
| 17                     | Epc:- 38.0° N 106.1° E, Ningsia Province, China.<br>h = about 33 km.<br>-H= 17 h 25 m 40.8 s (USCGS). |                          |                                         |                                                                |          |                                                                                      |
|                        | Shillong                                                                                              | Z<br>E                   | iP<br>iS                                | 17 29 39<br>32 58                                              | 2000     | Slight, compression.                                                                 |
|                        | Chatra                                                                                                | Z                        | iP<br>eS                                | 17 30 07<br>33 52                                              | 2280     | Slight, compression.                                                                 |

| DATE                   | STATION                                                                                                                    | COMPT    | PHASE                   | G. M. T.<br>h. m. s.                         | $\Delta$<br>km. | REMARKS.                                                            |
|------------------------|----------------------------------------------------------------------------------------------------------------------------|----------|-------------------------|----------------------------------------------|-----------------|---------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                            |          |                         |                                              |                 |                                                                     |
| 17                     | Bokaro                                                                                                                     | E        | eP<br>iS<br>e<br>e<br>e | 17 30 37<br>34 42<br>34 47<br>37 57<br>48 24 |                 | Slight.                                                             |
| 17                     | Dehra Dun                                                                                                                  | Z<br>NE  | eP<br>eS                | 17 31 06<br>35 20                            |                 | Slight.                                                             |
|                        | Delhi                                                                                                                      | Z        | iP                      | 17 31 10                                     |                 | Slight, rarefaction.                                                |
|                        | Poona                                                                                                                      | Z        | iP                      | 17 32 25                                     |                 | Slight, rarefaction.                                                |
|                        | Bombay                                                                                                                     | E        | e<br>e                  | 17 37 59<br>41 44                            | 2280            | Slight.                                                             |
| 17                     | Hyderabad                                                                                                                  | N<br>E   | M<br>M                  | 18 42 50<br>42 56                            |                 | Period = 9 secs.<br>$\mu = 3$ .<br>Period = 10 secs.<br>$\mu = 2$ . |
| 17                     | Delhi                                                                                                                      | Z        | iP                      | 19 25 44                                     |                 | Tremor, compression, local.                                         |
| 17                     | Shillong                                                                                                                   | Z        | eP                      | 20 03 34                                     |                 | Slight.                                                             |
| 17                     | Shillong                                                                                                                   | Z        | eP                      | 21 41 13                                     |                 | Slight, distant.                                                    |
| 17                     | Shillong                                                                                                                   | Z        | eP<br>Sg                | 22 52 36<br>52 58                            | 170             | Slight.                                                             |
| 18                     | Delhi                                                                                                                      | Z        | iP<br>iS                | 00 54 22<br>54 43                            | 180             | Slight, rarefaction.                                                |
| 18                     | Epc:- 39.8° N 71.4° E, Kirghir, S.S.R.,<br>h = about 77 km.<br>-H= 02 h 06 m 09.2 s (USCGS).                               |          |                         |                                              |                 |                                                                     |
|                        | Dehra Dun                                                                                                                  | Z<br>ZNE | e<br>i                  | 02 08 43<br>10 43                            |                 | Tremor.                                                             |
|                        | Delhi                                                                                                                      | Z        | iP<br>iS                | 02 08 57<br>11 08                            | 1290            | Slight, rarefaction.                                                |
| 18                     | Poona                                                                                                                      | Z        | eP                      | 02 15 43                                     |                 | Slight.                                                             |
| 18                     | Bombay                                                                                                                     | E        | e<br>e                  | 02 16 32<br>17 13                            |                 | Slight.                                                             |
| 18                     | Delhi                                                                                                                      | Z        | iP                      | 02 20 34                                     |                 | Slight, rarefaction.                                                |
| 18                     | Epc:- 21.6° N 143.1° E, Mariana Islands region.<br>h = about 306 km.<br>-H= 02 h 54 m 47.1 s (USCGS).<br>Mag .: 5.0 (CGS). |          |                         |                                              |                 |                                                                     |
|                        | Shillong                                                                                                                   | Z        | iP                      | 03 02 49                                     |                 | Slight, distant, compression.                                       |

| DATE                   | STATION                                                                                                            | COMPT | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|--------------------------------------------------------------------------------------------------------------------|-------|----------|----------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                                                    |       |          |                      |                 |                                  |
| 18                     | Chatra                                                                                                             | Z     | iP<br>e  | 03 03 19<br>04 32    |                 | Slight, compression.             |
|                        | Delhi                                                                                                              | Z     | iP       | 03 04 18             |                 | Slight, compression.             |
| 18                     | Epc:- 23.8° N 93.9° E, India-Burma border region.<br>h = about 124 km.<br>-H= 03 h 51 m 00.2 s (USCGS).            |       |          |                      |                 |                                  |
|                        | Shillong                                                                                                           | Z     | eP<br>iS | 03 51 42<br>52 13    | 280             | Slight, compression.             |
| 18                     | Shillong                                                                                                           | Z     | iP<br>Sg | 04 36 43<br>37 23    | 280             | Slight.                          |
| 18                     | Delhi                                                                                                              | Z     | iP<br>i  | 02 28 51<br>28 56    |                 | Slight, compression.             |
| 18                     | Shillong                                                                                                           | Z     | eP       | 07 30 35             |                 | Slight, distant.                 |
| 18                     | Shillong                                                                                                           | Z     | eP       | 11 37 49             |                 | Slight, near.                    |
| 18                     | Shillong                                                                                                           | Z     | iP       | 12 45 03             |                 | Slight, distant,<br>compression. |
| 18                     | Dehra Dun                                                                                                          | Z     | iP<br>i  | 14 52 23<br>54 10    |                 | Slight, rarefaction.             |
| 18                     | Delhi                                                                                                              | Z     | iP<br>iS | 14 52 34<br>54 10    | 930             | Slight, compression.             |
| 18                     | Chatra                                                                                                             | Z     | iP       | 14 54 07             |                 | Slight, distant,<br>compression. |
| 18                     | Shillong                                                                                                           | Z     | iP       | 14 54 52             |                 | Slight, distant,<br>rarefaction. |
| 19                     | Shillong                                                                                                           | Z     | eP<br>Sg | 21 47 55<br>46 28    | 230             | Slight.                          |
| 19                     | Bokaro                                                                                                             | NE    | iP       | 08 18 39             |                 | Slight, local.                   |
| 19                     | Bokaro                                                                                                             | NE    | iP       | 08 46 58             |                 | Slight.                          |
| 19                     | Shillong                                                                                                           | Z     | iP<br>Sg | 08 49 21<br>49 34    | 120             | Slight, compression.             |
| 19                     | Bokaro                                                                                                             | NE    | iP       | 09 00 19             |                 | Slight, local.                   |
| 19                     | Epc:- 4.7° S 154.0° E, Soloman Islands, Felt: Rahaul, Metlik.<br>h = about 98 km.<br>-H= 12 h 56 m 19.7 s (USCGS). |       |          |                      |                 |                                  |
|                        | Shillong                                                                                                           | Z     | iP       | 13 07 05             |                 | Slight.                          |
|                        | Chatra                                                                                                             | Z     | iP       | 13 07 54             |                 | Slight, distant,<br>compression. |



| DATE                   | STATION                                                                                                                | COMPT     | PHASE                                      | G. M. T.<br>h. m. s.                                           | $\Delta$<br>km. | REMARKS.                                              |
|------------------------|------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------|----------------------------------------------------------------|-----------------|-------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                        |           |                                            |                                                                |                 |                                                       |
| 19                     | Dehra Dun                                                                                                              | Z         | iP<br>i                                    | 13 08 21<br>08 50                                              |                 | Tremor, compression.<br>Slight.                       |
|                        | Delhi                                                                                                                  | Z         | iP<br>i                                    | 13 08 23<br>08 51                                              |                 | Slight, compression.                                  |
|                        | Poona                                                                                                                  | Z         | iP<br>i                                    | 13 08 31<br>09 00                                              |                 | Slight, compression.                                  |
|                        | Bombay                                                                                                                 | ZE<br>E   | eP<br>eS<br>PS                             | 13 08 35<br>18 49<br>19 30                                     | 9110            | Slight.                                               |
| 19                     | Shillong                                                                                                               | Z         | iP<br>Sg                                   | 22 59 01<br>59 21                                              | 150             | Slight, rarefaction.                                  |
| 19                     | Shillong                                                                                                               | Z         | eP<br>Sg                                   | 23 00 26<br>00 51                                              | 190             | Slight.                                               |
| 20                     | Chatra                                                                                                                 | ZNE<br>NE | iP<br>eS<br>i                              | 00 52 52<br>58 42<br>01 02 33                                  | 4180            | Moderate, compression.                                |
| 20                     | Delhi                                                                                                                  | Z         | iP                                         | 02 10 47                                                       |                 | Slight, compression.                                  |
| 20                     | Delhi                                                                                                                  | Z         | iP                                         | 04 47 44                                                       |                 | Tremor, rarefaction.                                  |
| 20                     | Shillong                                                                                                               | Z         | eP<br>S                                    | 06 50 52<br>51 22                                              | 260             | Slight.                                               |
| 20                     | Bckaro                                                                                                                 | NE        | iP                                         | 09 08 55                                                       |                 | Slight, local.                                        |
| 20                     | Shillong                                                                                                               | Z         | iP<br>iS                                   | 11 57 41<br>58 13                                              | 280             | Slight, rarefaction.                                  |
| 20                     | Shillong                                                                                                               | Z         | iP                                         | 19 41 17                                                       |                 | Slight, distant,<br>compression.                      |
| 20                     | Shillong                                                                                                               | Z         | iP                                         | 21 09 28                                                       |                 | Slight, distant,<br>rarefaction.                      |
| 21                     | Shillong                                                                                                               | Z         | iP                                         | 00 02 20                                                       |                 | Slight, distant,<br>compression.                      |
| 21                     | Epc:- $9.0^{\circ}$ S $112.4^{\circ}$ E, Near South coast of Java.<br>h = about 64 km.<br>-H= 00h 44 m 19.7 s (USCGS). |           |                                            |                                                                |                 |                                                       |
|                        | Epc:- $08^{\circ}$ S 112 E,<br>-H= 00 h 44 m 19 s (Shillong)                                                           |           |                                            |                                                                |                 |                                                       |
|                        | Port Blair                                                                                                             | E         | iP<br>PP<br>PPP<br>iS<br>SS<br>SSS<br>LR/M | 00 50 08<br>50 54<br>51 06<br>54 47<br>56 02<br>58 17<br>59 08 | 3990            | Moderate. Initial<br>ground motion towa-<br>rds East. |

| DATE                   | STATION       | COMPT                        | PHASE                                                   | G. M. T.<br>h. m. s.                                                                         | $\Delta$<br>km. | REMARKS.                                                                                                                     |
|------------------------|---------------|------------------------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------|
| <u>December, 1962.</u> |               |                              |                                                         |                                                                                              |                 |                                                                                                                              |
| 21                     | Madras        | E                            | iP<br>e<br>PP<br>PPP<br>iS<br>LQ<br>LR<br>M             | 00 51 41<br>51 58<br>53 14<br>53 34<br>57 35<br>01 00 19<br>02 15<br>04 38                   | 4230            | Moderate. Initial ground motion towards East.                                                                                |
|                        | Visakhapatnam | NE<br>E<br>NE                | iP<br>ePPP<br>iS                                        | 00 51 43<br>53 41<br>57 39                                                                   | 4270            | Moderate. Initial ground movement South East.                                                                                |
|                        | Calcutta      | E                            | eP<br>iS<br>LQ<br>M                                     | 00 51 46<br>57 43<br>01 00 25<br>06 35                                                       | 4270            | Moderate.                                                                                                                    |
| 21                     | Shillong      | ZNE<br>E                     | iP<br>PP<br>PPP<br>iS<br>SSS                            | 00 51 49<br>53 13<br>53 45<br>57 49<br>01 01 09                                              | 4340            | Slight, moderate, rarefaction.                                                                                               |
|                        | Bokaro        | E                            | eP<br>i<br>PcP<br>PcS<br>iS<br>i<br>LQ<br>SSS<br>i<br>i | 00 52 08<br>52 23<br>54 06<br>57 48<br>58 19<br>59 41<br>01 01 39<br>01 58<br>02 25<br>02 49 | 4520            | Slight.                                                                                                                      |
|                        | Kodaikanal    | E                            | eP<br>eS<br>i                                           | 00 52 10<br>58 26<br>59 10                                                                   | 4040            | Slight.                                                                                                                      |
|                        | Hyderabad     | NE<br>E<br>NE<br>N<br>E<br>N | eP<br>e<br>iS<br>SS<br>LR<br>LR<br>M<br>M               | 00 52 14<br>53 31<br>58 30<br>01 01 28<br>04 28<br>04 31<br>06 38<br>07 13                   | 4600            | Moderate. Initial ground motion towards South East.<br>Period = 21 secs.<br>$\mu = 9$ .<br>Period = 21 secs.<br>$\mu = 18$ . |
|                        | Poona         | ZNE<br>N                     | iP<br>iS<br>SS<br>M                                     | 00 52 45<br>59 32<br>01 02 55<br>09 05                                                       | 5140            | Moderate, rarefaction. Initial ground motion on South East.                                                                  |

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| DATE                   | STATION                                                                                                                                            | COMPT | PHASE  | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|----------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                                                                                    |       |        |                      |                 |                                  |
| 21                     | Bombay                                                                                                                                             | ZNE   | iP     | 00 52 53             | 5210            | Moderate.                        |
|                        |                                                                                                                                                    |       | e      | 53 12                |                 |                                  |
|                        |                                                                                                                                                    | E     | PP     | 54 39                |                 |                                  |
|                        |                                                                                                                                                    |       | PcS    | 58 13                |                 |                                  |
|                        |                                                                                                                                                    | NE    | iS     | 59 44                |                 |                                  |
|                        |                                                                                                                                                    | E     | PS     | 59 55                |                 |                                  |
|                        |                                                                                                                                                    | E     | PPS    | 01 00 54             |                 |                                  |
|                        |                                                                                                                                                    | N     | M      | 12 40                |                 | Period = 24 secs.<br>$\mu = 8.$  |
|                        | Delhi                                                                                                                                              | ZNE   | iP     | 00 53 11             | 5460            | Moderate, rarefaction.           |
|                        |                                                                                                                                                    | ZE    | i      | 53 31                |                 | Initial ground moti-             |
|                        |                                                                                                                                                    | ZNE   | iS     | 01 00 16             |                 | on towards South-                |
|                        |                                                                                                                                                    | E     | i      | 00 55                |                 | East.                            |
|                        |                                                                                                                                                    |       | i      | 01 38                |                 |                                  |
|                        |                                                                                                                                                    |       | ScS    | 02 35                |                 |                                  |
|                        |                                                                                                                                                    | Z     | SS     | 03 50                |                 |                                  |
|                        |                                                                                                                                                    |       | i      | 04 19                |                 |                                  |
|                        |                                                                                                                                                    |       | LQ,SSS | 50 25                |                 |                                  |
|                        |                                                                                                                                                    |       | M      | - -                  |                 | Period = 22 secs.<br>$\mu = 31.$ |
| 21                     | Shillong                                                                                                                                           | Z     | iP     | 05 14 31             | 230             | Slight, compression.             |
|                        |                                                                                                                                                    |       | Sg     | 15 03                |                 |                                  |
| 21                     | Epc:- 52.5° N 168.7° W, Fox Islands, Aleutian Islands.<br>h = about 33 km.<br>-H = 06 h 27 m 49.1 s (USCGS).                                       |       |        |                      |                 |                                  |
|                        | Shillong                                                                                                                                           | Z     | iP     | 06 39 30             |                 | Slight, distant,<br>compression. |
|                        | Delhi                                                                                                                                              | Z     | iP     | 06 40 00             |                 | Slight, compression.             |
|                        |                                                                                                                                                    |       | e      | 43 52                |                 |                                  |
|                        | Poona                                                                                                                                              | Z     | iP     | 06 40 52             |                 | Slight, rarefaction.             |
|                        | Colaba                                                                                                                                             | Z     | eP     | 06 40 52             | 9830            | Slight.                          |
|                        |                                                                                                                                                    | E     | eS     | 51 57                |                 |                                  |
|                        |                                                                                                                                                    |       | ScS    | 51 47                |                 |                                  |
|                        |                                                                                                                                                    |       | e      | 51 47                |                 |                                  |
|                        |                                                                                                                                                    |       | M      | 07 27 -              |                 |                                  |
| 21                     | Port Blair                                                                                                                                         | E     | i      | 06 50 51             |                 |                                  |
| 21                     | Bokaro                                                                                                                                             | NE    | iP     | 07 04 30             |                 | Slight, local .                  |
| 21                     | Epc:- 52.4° N 168.5° W, Fox Islands, Aleutian Islands.<br>h = about 33 km.<br>-H = 08 h 42 m 48.3 s (USCGS).<br>Mag .: 6½(Berk), 6½(Pas), 6¾ (Pal) |       |        |                      |                 |                                  |
|                        | Epc: 33½° N 166° W.<br>-H = 08 h 42 m 40 s (Shillong).                                                                                             |       |        |                      |                 |                                  |

| DATE                   | STATION       | COMPT        | PHASE                                             | G. M. T.<br>h. m. s.                                                                | $\Delta$<br>km. | REMARKS                                                                                                                   |
|------------------------|---------------|--------------|---------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------|
| <u>December, 1962.</u> |               |              |                                                   |                                                                                     |                 |                                                                                                                           |
| 21                     | Shillong      | Z<br>E       | iP<br>PcP<br>iS<br>PS<br>PPS                      | 08 54 30<br>54 40<br>09 04 15<br>05 05<br>05 28                                     | 8420            | Compression.                                                                                                              |
|                        | Chatra        | Z            | iP<br>i<br>i                                      | 08 54 41<br>05 04<br>21 59                                                          | 9320            |                                                                                                                           |
|                        | Calcutta      | Z            | eP<br>iS                                          | 08 54 57<br>05 05                                                                   | 8990            |                                                                                                                           |
| 21                     | Bokaro        | NE<br>E      | iP<br>iS<br>i<br>PS                               | 08 55 00<br>09 05 07<br>05 35<br>05 58                                              | 8950            | Initial ground motion towards West.                                                                                       |
| 21                     | Delhi         | ZE<br>Z<br>E | iP<br>e<br>eS                                     | 08 55 01<br>09 02 17<br>05 10                                                       | 9000            | Moderate. Initial ground motion West, compression.                                                                        |
|                        | Visakhapatnam | NE           | iP<br>eS<br>i                                     | 08 55 30<br>09 05 59<br>06 09                                                       | 9220            | Moderate. Initial ground motion North-West.                                                                               |
| 21                     | Hyderabad     | NE<br>N      | iP<br>iS<br>SS<br>SSS<br>Lq<br>LR<br>LR<br>M<br>M | 08 55 45<br>09 06 12<br>11 39<br>14 36<br>18 09<br>22 18<br>23 19<br>29 39<br>29 51 | 9390            | Moderate. Initial ground motion South-West.<br><br>Period = 18 secs.<br>$\mu = 24$ .<br>Period = 15 secs.<br>$\mu = 10$ . |
|                        | Kodaikanal    | Z            | eP<br>iS<br>e<br>e                                | 08 55 48<br>09 06 15<br>08 24<br>14 28                                              | 9420            | Moderate, distant.                                                                                                        |
|                        | Port Blair    | E            | eP<br>PP<br>i<br>iS<br>PS<br>SS<br>SSS<br>LR<br>M | 08 55 29<br>58 59<br>09 00 29<br>08 10<br>07 10<br>11 44<br>15 25<br>23 25<br>30 48 | 9730            |                                                                                                                           |
|                        | Poona         | Z<br>N       | iP<br>PP<br>PPP<br>iS<br>SKS<br>SKKS<br>SS<br>SSS | 08 55 50<br>59 35<br>09 01 35<br>06 52<br>06 19<br>06 35<br>13 16<br>16 59          | 10270           |                                                                                                                           |


| DATE                   | STATION                                                                                                       | COMPT | PHASE   | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------------|-------|---------|----------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                               |       |         |                      |                 |                                                                                                                                                  |
| 21                     | Colaba                                                                                                        | ZNE   | eP      | 08 55 52             |                 |                                                                                                                                                  |
|                        |                                                                                                               | N     | e       | 09 06 23             |                 |                                                                                                                                                  |
|                        |                                                                                                               | NE    | eSKKS   | 06 35                |                 |                                                                                                                                                  |
|                        | Madras                                                                                                        | E     | eP      | 08 56 06             | 10360           |                                                                                                                                                  |
|                        |                                                                                                               |       | SKS     | 09 06 41             |                 |                                                                                                                                                  |
|                        |                                                                                                               |       | eS      | 07 12                |                 |                                                                                                                                                  |
|                        |                                                                                                               |       | PS      | 08 28                |                 |                                                                                                                                                  |
|                        |                                                                                                               |       | SS      | 13 34                |                 |                                                                                                                                                  |
|                        |                                                                                                               |       | SSS     | 17 04                |                 |                                                                                                                                                  |
| 21                     | Epc:- 52.4° N 168.5° W, Fox Islands, Aleutian Islands.<br>h = about 33 km.<br>-H= 09 h 00 m 41.4 s (USCGS).   |       |         |                      |                 |                                                                                                                                                  |
|                        | Shillong                                                                                                      | Z     | iP      | 09 12 24             |                 | Slight, compression.                                                                                                                             |
|                        | Bokaro                                                                                                        | NE    | iP<br>e | 09 12 52<br>22 13    |                 | Moderate.                                                                                                                                        |
|                        | Delhi                                                                                                         | Z     | iP      | 09 12 53             |                 | Slight, compression.                                                                                                                             |
|                        | Colaba                                                                                                        | Z     | eP      | 09 13 44             |                 |                                                                                                                                                  |
|                        | Poona                                                                                                         | Z     | iP      | 09 13 44             |                 | Slight, compression.                                                                                                                             |
| 21                     | Shillong                                                                                                      | Z     | eP      | 01 21 40             |                 | Slight, distant.                                                                                                                                 |
| 21                     | Epc:- 52.5° N, 168.5° W, Fox Islands Aleutian Islands,<br>- H = 09h. 10m. 01.6s., - h = 33 Km. (USCGS ).      |       |         |                      |                 |                                                                                                                                                  |
|                        | Delhi                                                                                                         | Z     | P       | 01 22 14             |                 | Slight, rarefaction.                                                                                                                             |
|                        | Poona                                                                                                         | Z     | iP      | 09 23 05             |                 | Slight, compression.                                                                                                                             |
|                        | Colaba                                                                                                        | Z     | eP      | 09 23 06             |                 | Overlapping of records<br>due to following and<br>preleading shock.                                                                              |
|                        | Madras                                                                                                        | Z     | e<br>e  | 09 24 25<br>33 45    | 7980            | Moderate.                                                                                                                                        |
|                        | Bokaro                                                                                                        | NE    | e       | 09 30 15             |                 | Slight.                                                                                                                                          |
| 21                     | Epc:- 42.4° N, 142.3° E, Near South coast of Hokkaido, Japan.<br>- H = 09h. 33m. 15.5s. - h = 27 km. (USCGS). |       |         |                      |                 |                                                                                                                                                  |
|                        | Shillong                                                                                                      | Z     | iP      | 04 41 24             |                 | Slight, rarefaction.                                                                                                                             |
|                        | Chatra                                                                                                        | Z     | iP      | 09 41 48             |                 | Slight, rarefaction.                                                                                                                             |
|                        | Delhi                                                                                                         | Z     | iP      | 09 42 34             |                 | Slight, rarefaction.                                                                                                                             |
|                        | Madras                                                                                                        | E     | iP      | 09 43 28             |                 | Slight, initial<br>ground motion towards<br>east, other phases could<br>not be identified due<br>to the surface waves of<br>the previous shocks. |

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| DATE                   | STATION                                                                                                           | COMPT | PHASE         | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS.                                          |
|------------------------|-------------------------------------------------------------------------------------------------------------------|-------|---------------|----------------------------|-----------------|---------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                   |       |               |                            |                 |                                                   |
| 21                     | Poona                                                                                                             | Z     | iP            | 09 43 34                   |                 | Slight, rarefaction.                              |
|                        | Bombay                                                                                                            | Z     | eP            | 09 43 38                   |                 | Overlapping of records in to the preceding shock. |
| 21                     | Delhi                                                                                                             | Z     | iP<br>i       | 10 02 02<br>03 01          |                 | Slight, rarefaction.                              |
|                        | Shillong                                                                                                          | Z     | iP            | 10 02 21                   |                 | Slight, distant, rarefaction.                     |
| 21                     | Poona                                                                                                             | Z     | e             | 10 05 15                   |                 | Slight, compression.                              |
| 21                     | Delhi                                                                                                             | Z     | iP            | 10 16 27                   |                 | Slight, compression.                              |
| 21                     | Shillong                                                                                                          | Z     | iP<br>Sg      | 01 44 17<br>44 35          | 150             | Slight, compression.                              |
| 21                     | Shillong                                                                                                          | Z     | iP            | 14 52 27                   |                 | Slight, distant, rarefaction.                     |
| 21                     | Shillong                                                                                                          | Z     | eP            | 15 22 07                   |                 | Slight, distant.                                  |
| 21                     | Shillong                                                                                                          | Z     | iP            | 15 39 47                   |                 | Slight, distant, compression.                     |
| 21                     | Delhi                                                                                                             | Z     | eP            | 15 53 37                   |                 | Slight, rarefaction.                              |
| 21                     | Epc:- $4.6^{\circ}$ S $153.8^{\circ}$ E, New Britain region.<br>h = about 95 km.<br>-H= 17 h 35 m 56.1 s (USCGS). |       |               |                            |                 |                                                   |
|                        | Delhi                                                                                                             | Z     | iP            | 17 47 57                   |                 | Slight, rarefaction.                              |
| 21                     | Epc:- $14.2^{\circ}$ N $51.7^{\circ}$ E, Gulf of Aden.<br>h = about 27 km.<br>-H= 17 h 47 m 30.8 s (USCGS).       |       |               |                            |                 |                                                   |
|                        | Bombay                                                                                                            | ZE    | eP<br>eS<br>e | 17 52 18<br>56 16<br>57 21 |                 | Slight.                                           |
|                        | Poona                                                                                                             | Z     | iP            | 17 52 21                   |                 | Slight, rarefaction.                              |
|                        | Delhi                                                                                                             | Z     | iP            | 17 53 19                   |                 | Slight, rarefaction.                              |
|                        | Shillong                                                                                                          | Z     | iP            | 17 54 58                   |                 | Slight, distant, rarefaction.                     |
| 21                     | Shillong                                                                                                          | Z     | iPg<br>Sg     | 17 56 37<br>56 52          | 130             | Slight, rarefaction.                              |
|                        | Chatra                                                                                                            | Z     | eP<br>eS      | 17 57 14<br>57 59          | 410             | Slight.                                           |

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| DATE                   | STATION                                         | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|-------------------------------------------------|-------|-------|----------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                 |       |       |                      |                 |                                  |
| 21                     | Hyderabad                                       | N     | M     | 17 57 25             |                 | Period = 15 secs.                |
|                        |                                                 | E     | M     | 57 33                |                 | $\mu = 4$<br>Period = 12 secs.   |
|                        | Madras                                          | E     | e     | 17 58 10             |                 | $\mu = 4.$                       |
| 21                     | Shillong                                        | Z     | eP    | 18 26 17             |                 | Slight, distant.                 |
| 21                     | Poona                                           | Z     | iP    | 18 29 03             |                 | Slight, compression.             |
| 21                     | Shillong                                        | Z     | eP    | 20 17 40             |                 | Slight, distant,<br>rarefaction. |
| 21                     | Delhi                                           | Z     | iP    | 21 47 25             |                 | Slight, compression.             |
|                        | Shillong                                        | Z     | eP    | 21 47 40             |                 | Slight, distant.                 |
|                        | Poona                                           | Z     | iP    | 21 47 41             |                 | Slight, rarefaction.             |
|                        | Bombay                                          | E     | eP    | 21 47 36             |                 | Slight.                          |
|                        |                                                 |       | e     | 51 17                |                 |                                  |
|                        |                                                 |       | M     | 23 05 -              |                 |                                  |
| 21                     | Shillong                                        | Z     | eP    | 22 53 08             |                 | Slight, distant.                 |
| 21                     | Shillong                                        | Z     | eP    | 23 20 39             |                 | Slight, distant.                 |
| 22                     | Epc:- 22.0° S 170.1° E, Loyalty Islands region. |       |       |                      |                 |                                  |
|                        | $h = 33$ km.                                    |       |       |                      |                 |                                  |
|                        | -H= 00 h 52 m 23.4 s (USCGS).                   |       |       |                      |                 |                                  |
|                        | Mag. = $6\frac{1}{2}$ - $6\frac{3}{4}$ (Pas).   |       |       |                      |                 |                                  |
|                        | Port Blair                                      | E     | eP    | 01 04 48             | 9190            |                                  |
|                        |                                                 |       | PP    | 07 58                |                 |                                  |
|                        |                                                 |       | PPP   | 09 51                |                 |                                  |
|                        |                                                 |       | iS    | 05 05                |                 |                                  |
|                        |                                                 |       | ScS   | 15 17                |                 |                                  |
|                        |                                                 |       | PS    | 15 51                |                 |                                  |
|                        |                                                 |       | PPS   | 16 13                |                 |                                  |
|                        |                                                 |       | SS    | 20 25                |                 |                                  |
|                        |                                                 |       | SSS   | 23 49                |                 |                                  |
|                        |                                                 |       | M     | 34 14                |                 |                                  |
|                        | Shillong                                        | Z     | iP    | 01 05 19             | 9710            | Compression.                     |
|                        | Chatra                                          | ZNE   | eP    | 01 05 34             | 9695            |                                  |
|                        |                                                 |       | eS    | 16 14                |                 |                                  |
|                        | Madras                                          | E     | eP    | 01 05 50             | 10340           |                                  |
|                        |                                                 |       | PP    | 09 19                |                 |                                  |
|                        |                                                 |       | e     | 16 24                |                 |                                  |
|                        |                                                 |       | eS    | 16 55                |                 |                                  |
|                        |                                                 |       | e     | 18 31                |                 |                                  |
|                        |                                                 |       | SS    | 22 01                |                 |                                  |
|                        |                                                 |       | SSS   | 25 35                |                 |                                  |

| DATE                   | STATION                                                                                                                                     | COMPT     | PHASE               | G. M. T.<br>h. m. s.                | <br>km. | REMARKS.                                                 |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------|-------------------------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                                             |           |                     |                                     |                                                                                          |                                                          |
| 22                     | Bokaro                                                                                                                                      | NE        | eP<br>PP<br>e<br>i  | 01 05 59<br>09 34<br>16 15<br>18 16 |                                                                                          |                                                          |
|                        | Poona                                                                                                                                       | Z         | P                   | 01 06 20                            |                                                                                          |                                                          |
|                        | Bombay                                                                                                                                      | E         | eP<br>eS            | 01 06 29<br>17 04                   | 9580                                                                                     |                                                          |
| 22                     | Delhi                                                                                                                                       | Z         | e                   | 01 09 43                            |                                                                                          | Compression.                                             |
| 22                     | Kodaikanal                                                                                                                                  | E         | e                   | 01 16 28                            |                                                                                          |                                                          |
| 22                     | Hyderabad                                                                                                                                   | NE        | e                   | 01 16 38                            |                                                                                          |                                                          |
| 22                     | Shillong                                                                                                                                    | Z         | iP                  | 01 41 43                            |                                                                                          | Slight, distant,<br>compression.                         |
| 22                     | Epc:- 9.2° S 112.4° E, Near South Coast of Java.<br>h = about 59 km.<br>-H= 01 h 59 m 50.3 s (USCGS).                                       |           |                     |                                     |                                                                                          |                                                          |
|                        | Madras                                                                                                                                      | E         | iP<br>iS<br>Lr<br>M | 02 07 12<br>13 05<br>17 31<br>20 09 | 4220                                                                                     | Moderate. Initial<br>ground motion<br>towards East.      |
|                        | Shillong                                                                                                                                    | Z         | iP                  | 02 07 19                            |                                                                                          | Slight, rarefaction.                                     |
|                        | Poona                                                                                                                                       | ZE        | iP<br>iS            | 02 08 17<br>15 02                   | 5110                                                                                     | Slight, rarefaction.<br>Initial ground<br>movement East. |
| 22                     | Delhi                                                                                                                                       | Z         | iS                  | 02 15 50                            |                                                                                          | Slight, compression.                                     |
| 22                     | Shillong                                                                                                                                    | Z         | iP                  | 02 38 05                            |                                                                                          | Slight, distant,<br>compression.                         |
| 22                     | Shillong                                                                                                                                    | Z         | iP                  | 09 32 23                            |                                                                                          | Slight, distant.                                         |
| 22                     | Shillong                                                                                                                                    | Z         | iP                  | 10 50 01                            |                                                                                          | Slight, distant,<br>compression.                         |
|                        | Shillong                                                                                                                                    | Z         | iP                  | 14 16 53                            |                                                                                          | Slight, distant,<br>compression.                         |
| 22                     | Shillong                                                                                                                                    | Z<br>E    | iP<br>iS            | 15 32 11<br>41 53                   | 8420                                                                                     | Slight, compression.                                     |
| 22                     | Epc:- 52.5° N 168.8° W, Fox Islands, Aleutian Islands.<br>h = about 47 km.<br>-H= 15 h 20 m 31.0 s (USCGS).<br>Mag.: 6 $\frac{1}{4}$ (Pas). |           |                     |                                     |                                                                                          |                                                          |
|                        | Chatra                                                                                                                                      | ZNE<br>NE | iP<br>iS            | 15 32 22<br>42 11                   | 8580                                                                                     | Compression.                                             |




| DATE                   | STATION    | COMPT     | PHASE                                                | G. M. T.<br>h. m. s.                                                                | $\Delta$<br>km. | REMARKS.                                                                |
|------------------------|------------|-----------|------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------|
| <u>December, 1962.</u> |            |           |                                                      |                                                                                     |                 |                                                                         |
| 22                     | Dehra Dun  | ZNE<br>NE | eP<br>eS                                             | 15 32 35<br>42 43                                                                   | 8980            | Compression.                                                            |
|                        | Delhi      | ZNE<br>Z  | iP<br>PcP<br>i<br>PP<br>PPP                          | 15 32 40<br>32 43<br>33 00<br>35 42<br>37 36                                        | 9090            | Initial ground motion South West.                                       |
|                        |            | ZE        | iS<br>ScS<br>PPS                                     | 42 53<br>42 57<br>43 53                                                             |                 |                                                                         |
|                        |            | Z         | SS<br>SSS<br>LQ<br>M                                 | 48 26<br>51 36<br>54 16<br>- -                                                      |                 | Period = 20 secs.<br>u = 42 m.m.                                        |
| 22                     | Port Blair | E         | iP<br>PP<br>PPP<br>iS<br>PS<br>PPS<br>SS<br>SSS<br>M | 15 33 11<br>36 17<br>38 09<br>43 31<br>44 24<br>44 50<br>48 48<br>52 28<br>16 05 47 | 9240            | Initial ground movement East.                                           |
|                        | Hyderabad  | E         | iP<br>iS<br>SS<br>LR<br>M                            | 15 33 23<br>43 48<br>48 16<br>59 25<br>16 05 49                                     | 9350            | Initial ground motion towards West.<br><br>Period = 18 secs.<br>u = 10. |
| 22                     | Poona      | Z<br>N    | iP<br>PP<br>eS<br>i<br>i<br>i                        | 15 33 32<br>37 11<br>44 03<br>44 19<br>44 34<br>50 54                               | 9490            | Compression.                                                            |
|                        | Madras     | E         | eP<br>eS<br>e<br>e                                   | 15 33 38<br>44 10<br>46 00<br>56 14                                                 | 9450            |                                                                         |
|                        | Kodaikanal | E         | iS                                                   | 15 44 28                                                                            |                 |                                                                         |
| 22                     | Chatra     | Z         | eP<br>eS                                             | 19 15 34<br>18 50                                                                   | 1920            | Slight.                                                                 |
| 22                     | Shillong   | Z         | eP                                                   | 19 15 46                                                                            |                 | Slight, distant.                                                        |
| 22                     | Dehra Dun  | NE        | e                                                    | 19 20 12                                                                            |                 | Tremor.                                                                 |
| 22                     | Bombay     | E         | e<br>e                                               | 19 26 43<br>27 54                                                                   |                 | Slight.                                                                 |
| 22                     | Chatra     | Z         | iP                                                   | 21 22 29                                                                            |                 | Slight, distant, compression.                                           |

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| DATE                  | STATION                                                                                        | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                             |
|-----------------------|------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|----------------------------------------------------------------------|
| <u>December, 1962</u> |                                                                                                |       |       |                      |                 |                                                                      |
| 22                    | Shillong                                                                                       | Z     | iP    | 23 38 50             |                 | Slight, distant,<br>compression.                                     |
| 23                    | Shillong                                                                                       | Z     | eP    | 00 15 12             |                 |                                                                      |
| 23                    | Chatra                                                                                         | Z     | iP    | 00 53 34             |                 | Slight, distant,<br>compression.                                     |
| 23                    | Shillong                                                                                       | Z     | eP    | 03 58 58             |                 | Slight, distant.                                                     |
| 23                    | Epc:- 37.9° N 73.1° E, Hindukush.<br>h = about 196 km.<br>-H= 06 h 28 m 07.0 s (USCGS).        |       |       |                      |                 |                                                                      |
|                       | Dehra Dun                                                                                      | ZN    | iP    | 06 30 06             | 900             | Slight. Initial<br>ground movement<br>towards North,<br>compression. |
|                       |                                                                                                | ZNE   | PP    | 30 13                |                 |                                                                      |
|                       |                                                                                                | Z     | PPP   | 30 20                |                 |                                                                      |
|                       |                                                                                                | ZN    | P*    | 30 26                |                 |                                                                      |
|                       |                                                                                                | Z     | Pg    | 30 46                |                 |                                                                      |
|                       |                                                                                                | Z     | LQ    | 31 29                |                 |                                                                      |
|                       |                                                                                                | ZNE   | iS    | 31 39                |                 |                                                                      |
|                       |                                                                                                | ZN    | SS    | 31 52                |                 |                                                                      |
|                       |                                                                                                |       | LR    | 31 50                |                 |                                                                      |
|                       |                                                                                                |       | SSS   | 32 03                |                 |                                                                      |
|                       |                                                                                                |       | S*    | 32 10                |                 |                                                                      |
|                       |                                                                                                |       | Sg,M  | 32 34                |                 |                                                                      |
|                       | Delhi                                                                                          | Z     | iP    | 06 30 17             |                 | Slight.                                                              |
|                       |                                                                                                | NE    | eP    | 30 17                |                 |                                                                      |
|                       |                                                                                                | E     | LQ    | 32 06                |                 |                                                                      |
|                       |                                                                                                | ZE    | iS    | 32 09                |                 |                                                                      |
| 23                    | Chatra                                                                                         | Z     | iP    | 06 31 40             |                 | Slight, rarefaction.                                                 |
|                       |                                                                                                |       | e     | 35 52                |                 |                                                                      |
|                       | Poona                                                                                          | Z     | eP    | 06 32 25             |                 | Slight.                                                              |
|                       | Bokaro                                                                                         | NE    | eP    | 06 32 27             |                 | Slight.                                                              |
|                       |                                                                                                |       | e     | 37 06                |                 |                                                                      |
|                       | Shillong                                                                                       | Z     | iP    | 06 32 28             |                 | Slight, compression.                                                 |
| 23                    | Bombay                                                                                         | E     | e     | 06 35 52             |                 | Slight.                                                              |
|                       |                                                                                                |       | e     | 35 32                |                 |                                                                      |
| 23                    | Delhi                                                                                          | Z     | eP    | 07 12 35             |                 | Slight.                                                              |
|                       | Dehra Dun                                                                                      | Z     | eP    | 07 12 51             |                 | Slight.                                                              |
|                       |                                                                                                |       | e     | 13 27                |                 |                                                                      |
|                       | Chatra                                                                                         | Z     | eP    | 07 14 43             | 1530            | Slight.                                                              |
|                       |                                                                                                |       | iS    | 17 18                |                 |                                                                      |
|                       | Shillong                                                                                       | Z     | eP    | 07 15 29             |                 | Slight, distant.                                                     |
| 23                    | Bokaro                                                                                         | NE    | e     | 07 17 11             |                 | Slight, near.                                                        |
| 23                    | Epc:- 26.7° N 116.4° E, Fukien Province, China.<br>h = 33 km.<br>-H= 08 h 20 m 09.2 s (USCGS). |       |       |                      |                 |                                                                      |

| DATE                   | STATION                                                                                                            | COMPT | PHASE       | G. M. T.<br>h. m. s.     | $\Delta$<br>km. | REMARKS.                                                                 |
|------------------------|--------------------------------------------------------------------------------------------------------------------|-------|-------------|--------------------------|-----------------|--------------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                    |       |             |                          |                 |                                                                          |
| 23                     | Shillong                                                                                                           | Z     | iP          | 08 25 03                 |                 | Slight, distant,<br>compression.                                         |
|                        | Chatra                                                                                                             | Z     | eP          | 08 25 42                 |                 | Slight, distant.                                                         |
|                        | Poona                                                                                                              | Z     | iP          | 08 27 21                 |                 | Slight, rarefaction.                                                     |
| 23                     | Epc:- 15.3° N 121.7° E, Near East coast of Luzon, Philippine.<br>h = about 52 km.<br>-H= 10 h 21 m 55.3 s (USCGS). |       |             |                          |                 |                                                                          |
| 23                     | Chatra                                                                                                             | Z     | eP          | 10 28 37                 |                 | Slight, distant.                                                         |
| 23                     | Port Blair                                                                                                         | E     | M           | 10 35 -                  |                 | Period = 15 secs.<br>$\mu = 2.$                                          |
| 23                     | Epc:- 32.5° N 168.9° W, Fox Islands, Aleutian Islands.<br>h = about 53 km.<br>-H= 10 h 48 m 14.1 s (USCGS).        |       |             |                          |                 |                                                                          |
|                        | Dehra Dun                                                                                                          | Z     | iP          | 11 00 15                 |                 | Slight, rarefaction.                                                     |
|                        | Delhi                                                                                                              | Z     | iP<br>e     | 11 00 21<br>00 24        |                 | Slight, distant,<br>compression.                                         |
| 23                     | Delhi                                                                                                              | Z     | eP          | 15 16 49                 |                 | Slight, compression.                                                     |
| 23                     | Chatra                                                                                                             | Z     | iP<br>iS    | 16 00 27<br>03 48        | 170             | Slight, compression.                                                     |
| 23                     | Delhi                                                                                                              | Z     | iPg<br>iSg  | 17 59 57<br>18 00 08     | 90              | Slight, compression.                                                     |
| 23                     | Poona                                                                                                              | Z     | eP          | 18 34 24                 |                 | Slight.                                                                  |
| 23                     | Madras                                                                                                             | E     | e           | 18 35 59                 |                 | Slight, near.                                                            |
| 24                     | Chatra                                                                                                             | Z     | eP          | 00 42 49                 |                 | Slight, distant.                                                         |
| 24                     | Bokaro                                                                                                             | NE    | iP          | 07 50 32                 |                 | Slight, local.                                                           |
| 24                     | Bokaro                                                                                                             | NE    | iP          | 08 45 57                 |                 | Slight, local.                                                           |
| 24                     | Epc:- 73.6° N 57.5° E, Novaya Semlya.<br>h = about 0 km.<br>-H= 11 h 11 m 42.0 s (USCGS).                          |       |             |                          |                 |                                                                          |
|                        | Delhi                                                                                                              | Z     | e<br>e<br>M | 11 20 12<br>26 38<br>- - |                 | Russian Nuclear<br>Explosion.<br>Period = 23 secs.<br>Amp. = 15.75 m. m. |
|                        | Chatra                                                                                                             | Z     | iP          | 11 20 36                 |                 | Slight, compression.                                                     |
| 24                     | Chatra                                                                                                             | Z     | iP          | 13 44 45                 |                 | Slight, distant,<br>compression.                                         |
| 24                     | Dehra Dun                                                                                                          | Z     | iP          | 17 18 59                 |                 | Slight, compression.                                                     |

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| DATE                   | STATION                                                                                            | COMPT | PHASE | G. M. T.<br>h. m. s. | <br>km. | REMARKS.                                                             |
|------------------------|----------------------------------------------------------------------------------------------------|-------|-------|----------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                    |       |       |                      |                                                                                          |                                                                      |
| 24                     | Chatra                                                                                             | Z     | eP    | 21 59 50             |                                                                                          | Slight,distant.                                                      |
| 24                     | Chatra                                                                                             | Z     | eP    | 22 50 34             |                                                                                          | Slight,distant.                                                      |
| 24                     | Chatra                                                                                             | Z     | eP    | 22 56 48             |                                                                                          | Slight,distant.                                                      |
| 25                     | Bokaro                                                                                             | NE    | iP    | 08 52 42             |                                                                                          | Slight,local.                                                        |
| 25                     | Bokaro                                                                                             | NE    | iP    | 08 56 40             |                                                                                          | Slight,local.                                                        |
| 25                     | Delhi                                                                                              | Z     | e     | 13 30 26             |                                                                                          | Russian Nuclear<br>Explosion.<br>Period = 9 secs.<br>Amp. = 3.9 m.m. |
|                        |                                                                                                    |       | M     | - -                  |                                                                                          |                                                                      |
| 25                     | Chatra                                                                                             | Z     | iP    | 13 41 43             |                                                                                          | Slight,distant.                                                      |
| 25                     | Port Blair                                                                                         | NE    | eP    | 18 29 09             | 550                                                                                      | Slight.                                                              |
|                        |                                                                                                    |       | PP    | 29 17                |                                                                                          |                                                                      |
|                        |                                                                                                    |       | PPP   | 29 26                |                                                                                          |                                                                      |
|                        |                                                                                                    |       | eS    | 30 11                |                                                                                          |                                                                      |
|                        |                                                                                                    |       | e     | 30 20                |                                                                                          |                                                                      |
|                        |                                                                                                    |       | e     | 30 44                |                                                                                          |                                                                      |
|                        | Poona                                                                                              | Z     | eP    | 18 31 24             |                                                                                          | Slight.                                                              |
|                        | Delhi                                                                                              | Z     | eP    | 18 32 25             |                                                                                          | Slight,rarefaction.                                                  |
|                        | Dehra Dun                                                                                          | Z     | e     | 18 32 33             |                                                                                          | Slight.                                                              |
| 25                     | Chatra                                                                                             | Z     | eP    | 18 46 21             |                                                                                          | Slight.                                                              |
| 25                     | Delhi                                                                                              | Z     | iP    | 20 29 11             |                                                                                          | Slight,compression.                                                  |
| 25                     | Chatra                                                                                             | Z     | iP    | 20 52 59             | 160                                                                                      | Slight,rarefaction.                                                  |
|                        |                                                                                                    |       | eS    | 53 19                |                                                                                          |                                                                      |
| 26                     | Delhi                                                                                              | Z     | iP    | 04 35 04             |                                                                                          | Slight,rarefaction.                                                  |
| 26                     | Delhi                                                                                              | Z     | iP    | 05 40 37             |                                                                                          | Slight,rarefaction.                                                  |
| 26                     | Dehra Dun                                                                                          | NE    | iP    | 08 04 20             |                                                                                          | Slight,local.                                                        |
| 26                     | Epc:- 39.3° N 10.6° W, Off coast of Portigal, Felt.<br>h = 19 km.<br>-H= 08 h 58 m 11.1 s (USCGS). |       |       |                      |                                                                                          |                                                                      |
|                        | Delhi                                                                                              | Z     | iP    | 09 09 20             |                                                                                          | Slight,rarefaction.                                                  |
|                        | Shillong                                                                                           | Z     | iP    | 01 10 37             |                                                                                          | Slight,rarefaction.                                                  |
| 26                     | Dehra Dun                                                                                          | NE    | iP    | 11 08 09             |                                                                                          | Slight,local.                                                        |
| 26                     | Epc:- 38,6° N 72.8° E, Tadzhik S.S.R.<br>h = 188 km.<br>-H= 14 h 58 m 56.4 s (USCGS).              |       |       |                      |                                                                                          |                                                                      |

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| DATE            | STATION                                                                                                                 | COMPT     | PHASE                                         | G. M. T.<br>h. m. s.                                                | $\Delta$<br>km. | REMARKS.                                                                                  |
|-----------------|-------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------|---------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------|
| December, 1962. |                                                                                                                         |           |                                               |                                                                     |                 |                                                                                           |
| 26              | Delhi                                                                                                                   | Z         | eP<br>iS                                      | 15 01 15<br>03 19                                                   |                 | Slight, rarefaction.                                                                      |
|                 | Shillong                                                                                                                | Z         | eP                                            | 15 03 23                                                            |                 | Slight, distant.                                                                          |
| 26              | Epc: 53.9° N 168.7° E, Komando Tokie Islands.<br>h = about 33 km.<br>-H = 22 h 25 m 15.5 s (USCGS).<br>Mag. : 6½ (Pas). |           |                                               |                                                                     |                 |                                                                                           |
|                 | Epc: - 52° N 170° E,<br>-H = 22 h 25 m 10 s (Shillong).                                                                 |           |                                               |                                                                     |                 |                                                                                           |
|                 | Shillong                                                                                                                | Z         | iP                                            | 22 35 34                                                            | 6870            | Compression.                                                                              |
|                 |                                                                                                                         | E         | PP                                            | 38 34                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | PPP                                           | 40 24                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | iS                                            | 43 57                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | PS                                            | 44 19                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | SS                                            | 47 49                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | SSS                                           | 50 59                                                               |                 |                                                                                           |
| 26              | Chatra                                                                                                                  | ZNE<br>NE | iP<br>PcP<br>PP<br>iS<br>SSS<br>Lr<br>M       | 22 35 45<br>36 13<br>38 02<br>44 19<br>51 21<br>55 06<br>23 00 00   | 7070            | Initial ground motion towards North East, compression.                                    |
|                 |                                                                                                                         | N         | M                                             | 23 06 07                                                            |                 | Period = 15 secs.<br>$\mu = 3.0$                                                          |
|                 |                                                                                                                         | E         | M                                             | 07 08                                                               |                 | Period = 16 secs.<br>$\mu = 5.5$ .                                                        |
|                 | Dehra Dun                                                                                                               | ZNE       | iP<br>i<br>PcP                                | 22 36 03<br>36 11<br>36 33                                          | 7390            | Initial ground movement towards South West, compression.                                  |
|                 |                                                                                                                         | NE        | PP                                            | 38 25                                                               |                 |                                                                                           |
|                 |                                                                                                                         | ZNE       | iS                                            | 44 48                                                               |                 |                                                                                           |
|                 |                                                                                                                         | NE        | PS                                            | 45 05                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | PPS                                           | 45 16                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | SKS1                                          | 45 50                                                               |                 |                                                                                           |
|                 |                                                                                                                         | E         | SS                                            | 48 58                                                               |                 |                                                                                           |
|                 |                                                                                                                         |           | LQ                                            | 52 47                                                               |                 |                                                                                           |
|                 |                                                                                                                         | NE        | M                                             | 23 01 32                                                            |                 |                                                                                           |
| 26              | Bokaro                                                                                                                  | NE        | iP<br>iS                                      | 22 36 08<br>44 59                                                   | 9420            | Initial ground motion towards West.                                                       |
|                 | Delhi                                                                                                                   | ZNE<br>E  | iP<br>iS<br>PS<br>ScS<br>SS<br>SSS<br>LQ<br>M | 22 36 11<br>45 07<br>45 07<br>45 53<br>49 13<br>32 20<br>53 25<br>- | 7500            | Initial ground motion towards West, compression.<br><br>Period = 18 secs.<br>Amp. 12 m.m. |

| DATE                   | STATION    | COMPT    | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                          |       |  |
|------------------------|------------|----------|-------|----------------------|-----------------|---------------------------------------------------|-------|--|
| <u>December, 1962.</u> |            |          |       |                      |                 |                                                   |       |  |
| 26                     | Port Blair | NE       | iP    | 22 36 41             | 7980            | Initial ground motion towards South West.         |       |  |
|                        |            | E        | PP    | 39 08                |                 |                                                   |       |  |
|                        |            |          | PPP   | 41 08                |                 |                                                   |       |  |
|                        |            | NE       | iS    | 46 01                |                 |                                                   |       |  |
|                        |            | E        | PS    | 46 42                |                 |                                                   |       |  |
|                        |            |          | SS    | 50 30                |                 |                                                   |       |  |
|                        |            |          | SSS   | 53 23                |                 |                                                   |       |  |
|                        |            |          | LQ    | 56 23                |                 |                                                   |       |  |
|                        |            |          | LR    | 59 26                |                 |                                                   |       |  |
|                        | M          | 23 05 08 |       |                      |                 |                                                   |       |  |
| 26                     | Sehore     | E        | eP    | 22 36 41             |                 |                                                   |       |  |
|                        | Hyderabad  | NE       | iP    | 22 37 03             | 8390            | Initial ground motion towards South East.         |       |  |
|                        |            | PcP      | 37 14 |                      |                 |                                                   |       |  |
|                        |            | N        | PP    | 39 52                |                 |                                                   |       |  |
|                        |            |          | PPP   | 41 40                |                 |                                                   |       |  |
|                        |            |          | iS    | 46 44                |                 |                                                   |       |  |
|                        |            |          | SS    | 51 40                |                 |                                                   |       |  |
|                        |            |          | SSS   | 54 52                |                 |                                                   |       |  |
|                        |            | E        | M     | 06 44                |                 | Period = 15 secs.<br>$\mu = 14.$                  |       |  |
|                        | Poona      | ZNE      | iP    | 22 37 11             | 8580            | Compression.<br>Initial ground motion West South. |       |  |
|                        |            | N        | PP    | 40 11                |                 |                                                   |       |  |
|                        |            |          | PPP   | 42 01                |                 |                                                   |       |  |
|                        |            |          | iS    | 47 01                |                 |                                                   |       |  |
|                        |            |          | ScS   | 48 23                |                 |                                                   |       |  |
|                        |            |          | PS    | 47 45                |                 |                                                   |       |  |
|                        |            |          | SS    | 51 58                |                 |                                                   |       |  |
|                        |            |          | SSS   | 55 27                |                 |                                                   |       |  |
|                        |            |          | M     | 23 08 15             |                 |                                                   |       |  |
|                        | Bombay     | ZNEe     | eP    | 22 37 13             | 8598            | Period = 7 secs.<br>$\mu = 13.$                   |       |  |
|                        |            | NE       | PP    | 40 09                |                 |                                                   |       |  |
|                        |            | E        | eS    | 47 03                |                 |                                                   |       |  |
|                        |            |          | ScS   | 47 30                |                 |                                                   |       |  |
|                        |            |          | PS    | 47 45                |                 |                                                   |       |  |
|                        |            |          | M     | 23 14 55             |                 |                                                   |       |  |
|                        |            |          | N     | M                    |                 |                                                   | 17 22 |  |
| 26                     | Delhi      | E        | iP    | 22 37 21             | 8710            | Initial ground motion towards West.               |       |  |
|                        |            |          | PcP   | 37 21                |                 |                                                   |       |  |
|                        |            |          | PP    | 40 19                |                 |                                                   |       |  |
|                        |            |          | PPP   | 42 09                |                 |                                                   |       |  |
|                        |            |          | iS    | 47 17                |                 |                                                   |       |  |
|                        |            |          | SKS   | 47 30                |                 |                                                   |       |  |
|                        |            |          | ScS   | 47 41                |                 |                                                   |       |  |
|                        |            |          | PS    | 47 56                |                 |                                                   |       |  |
|                        |            |          | PPS   | 48 11                |                 |                                                   |       |  |
|                        |            |          | SS    | 52 27                |                 |                                                   |       |  |
|                        |            |          | LQ    | 58 45                |                 |                                                   |       |  |
|                        |            |          | LR    | 23 02 17             |                 |                                                   |       |  |
|                        |            |          | M     | 08 04                |                 |                                                   |       |  |

| DATE                   | STATION                                                                                  | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                            |
|------------------------|------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|-----------------------------------------------------|
| <u>December, 1962.</u> |                                                                                          |       |       |                      |                 |                                                     |
| 26                     | Epc:- 23.9° N 66.4° E, Arabian Sea.<br>h = about 34 km.<br>-H= 23 h 25 m 16.7 s (USCGS). |       |       |                      |                 |                                                     |
|                        | Bombay                                                                                   | ZE    | eP    | 23 27 19             |                 | Slight.                                             |
|                        |                                                                                          | E     | e     | 23 30 25             |                 | Period = 11 secs.<br>u = 38.                        |
|                        |                                                                                          | N     | M     | 33 51                |                 | Period = 7 secs.<br>u = 10.                         |
|                        | Poona                                                                                    | Z     | iP    | 23 27 30             |                 | Slight, compression.                                |
|                        | Sehore                                                                                   | E     | eP    | 23 27 31             |                 | Slight.                                             |
|                        |                                                                                          |       | ePPP  | 27 59                |                 |                                                     |
|                        |                                                                                          | E     | e     | 29 04                |                 |                                                     |
|                        |                                                                                          | N     |       |                      |                 |                                                     |
|                        |                                                                                          | E     | iS    | 29 14                |                 |                                                     |
|                        |                                                                                          | E     | SSS   | 29 36                |                 |                                                     |
|                        |                                                                                          | NE    | M     | 30 09                |                 |                                                     |
| 26                     | Delhi                                                                                    | ZE    | iP    | 23 28 00             | 1270            | Moderate. East,<br>rarefaction.<br>Mag: 6.1.        |
|                        |                                                                                          | E     | PP    | 28 10                |                 |                                                     |
|                        |                                                                                          |       | PPP   | 28 17                |                 |                                                     |
|                        |                                                                                          | ZE    | iS    | 30 10                |                 |                                                     |
|                        |                                                                                          | E     | i     | 30 57                |                 |                                                     |
|                        |                                                                                          |       | i     | 31 31                |                 |                                                     |
|                        | Dehra Dun                                                                                | Z     | iP    | 23 28 20             | 1415            | Moderate,<br>rarefaction.                           |
|                        |                                                                                          | NE    | eP    | 28 20                |                 |                                                     |
|                        |                                                                                          | ZNE   | PP    | 28 25                |                 |                                                     |
|                        |                                                                                          |       | LQ    | 30 02                |                 |                                                     |
|                        |                                                                                          | NE    | i     | 30 36                |                 |                                                     |
|                        |                                                                                          |       | iS    | 30 44                |                 |                                                     |
|                        |                                                                                          |       | iSSS  | 31 11                |                 |                                                     |
|                        | Hyderabad                                                                                | NE    | iP    | 23 28 30             | 1470            | Moderate.<br>Intensity south-<br>ward-westward.     |
|                        |                                                                                          |       | iSSS  | 31 29                |                 |                                                     |
|                        |                                                                                          | E     | i     | 32 06                |                 |                                                     |
|                        | Kodaikanal                                                                               | E     | e     | 23 29 12             |                 |                                                     |
|                        |                                                                                          |       | e     | 34 22                |                 |                                                     |
| 26                     | Madras                                                                                   | E     | iP    | 23 29 32             | 2600            | Moderate.                                           |
|                        |                                                                                          |       | PPP   | 29 57                |                 |                                                     |
|                        |                                                                                          |       | eS    | 32 49                |                 |                                                     |
|                        |                                                                                          |       | SS    | 34 14                |                 |                                                     |
|                        |                                                                                          |       | SSS   | 34 20                |                 |                                                     |
|                        |                                                                                          |       | LR    | 34 53                |                 |                                                     |
|                        |                                                                                          |       | M     | 36 16                |                 |                                                     |
| 26                     | Bokaro                                                                                   | NE    | iP    | 23 29 40             | 2300            | Moderate. Initial<br>ground motion<br>towards West. |
|                        |                                                                                          | E     | PP    | 09 57                |                 |                                                     |
|                        |                                                                                          |       | PPP   | 30 08                |                 |                                                     |
|                        |                                                                                          | NE    | S     | 33 24                |                 |                                                     |
|                        |                                                                                          |       | LQ    | 33 43                |                 |                                                     |
|                        |                                                                                          |       | i     | 34 13                |                 |                                                     |
|                        |                                                                                          |       | LR    | 34 51                |                 |                                                     |

| DATE                   | STATION                                                                                           | COMPT | PHASE   | G. M. T.<br>h. m. s. | <br>km. | REMARKS.                                                        |
|------------------------|---------------------------------------------------------------------------------------------------|-------|---------|----------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                   |       |         |                      |                                                                                           |                                                                 |
| 26                     | Chatra                                                                                            | ZNE   | iP      | 23 29 48             | 2250                                                                                      | Moderate. Initial motion towards North-East-wards, rarefaction. |
|                        |                                                                                                   |       | PP      | 30 10                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | PPP     | 30 14                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | iS      | 33 29                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | LQ, PcS | 33 53                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | SS      | 34 19                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | SSS     | 34 31                |                                                                                           |                                                                 |
|                        |                                                                                                   | NE    | LQ      | 34 54                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | M       | 23 36 -              |                                                                                           |                                                                 |
| 26                     | Shillong                                                                                          | Z     | iP      | 23 30 09             |                                                                                           | Moderate, compression.                                          |
|                        |                                                                                                   |       | iP      | 30 45                |                                                                                           |                                                                 |
|                        |                                                                                                   |       | i       | 34 55                |                                                                                           |                                                                 |
| 26                     | Epc:- 54.0° N 168.8° E, Komandorkis Islands.<br>h = about 33 km.<br>-H= 23 h 46 m 14.7 s (USCGS). |       |         |                      |                                                                                           |                                                                 |
|                        | Shillong                                                                                          | Z     | iP      | 23 56 14             |                                                                                           | Slight, distant, compression.                                   |
|                        | Chatra                                                                                            | ZNE   | iP      | 23 56 44             | 7070                                                                                      | Slight, compression.                                            |
|                        |                                                                                                   | N     | iS      | 05 18                |                                                                                           |                                                                 |
|                        | Delhi                                                                                             | Z     | iP      | 23 57 07             |                                                                                           | Slight, compression.                                            |
|                        | Poona                                                                                             | Z     | iP      | 23 58 10             |                                                                                           | Slight, compression.                                            |
| 27                     | Poona                                                                                             | Z     | eP      | 00 31 52             |                                                                                           | Slight.                                                         |
|                        | Bombay                                                                                            | Z     | e       | 00 31 40             |                                                                                           | Slight.                                                         |
|                        | Delhi                                                                                             | Z     | iP      | 00 32 00             |                                                                                           | Slight, rarefaction.                                            |
|                        |                                                                                                   |       | i       | 32 01                |                                                                                           |                                                                 |
|                        | Chatra                                                                                            | Z     | eP      | 00 34 21             |                                                                                           | Slight.                                                         |
| 27                     | Shillong                                                                                          | Z     | iP      | 00 34 34             |                                                                                           | Slight, distant, compression.                                   |
| 27                     | Shillong                                                                                          | Z     | iP      | 05 25 53             |                                                                                           | Slight, distant.                                                |
| 27                     | Bombay                                                                                            | NE    | iP      | 09 20 49             |                                                                                           | Slight, local.                                                  |
| 27                     | Dehra Dun                                                                                         | Z     | iP      | 01 33 27             |                                                                                           | Slight, rarefaction.                                            |
|                        |                                                                                                   |       | e       | 33 56                |                                                                                           |                                                                 |
| 27                     | Bombay                                                                                            | NE    | iP      | 10 39 03             |                                                                                           | Slight, local.                                                  |
| 27                     | Dehra Dun                                                                                         | Z     | e       | 10 57 31             |                                                                                           | Tremor.                                                         |
| 27                     | Dehra Dun                                                                                         | Z     | e       | 12 13 29             |                                                                                           | Tremor.                                                         |
| 27                     | Shillong                                                                                          | NE    | iP      | 06 52 08             |                                                                                           | Feeble, local.                                                  |
| 27                     | Shillong                                                                                          | Z     | iP      | 08 30 59             |                                                                                           | Slight, distant, compression.                                   |



| DATE                   | STATION                                                                                        | COMPT | PHASE        | G. M. T.<br>h. m. s.          | △   | REMARKS                          |
|------------------------|------------------------------------------------------------------------------------------------|-------|--------------|-------------------------------|-----|----------------------------------|
| <u>December, 1962.</u> |                                                                                                |       |              |                               |     |                                  |
| 27                     | Bokaro                                                                                         | NE    | iP           | 09 20 49                      |     | Slight, local.                   |
| 27                     | Dehra Dun                                                                                      | Z     | iP<br>i      | 09 33 27<br>33 56             |     | Slight, rarefaction.             |
| 27                     | Bokaro                                                                                         | NE    | iP           | 10 39 03                      |     | Slight, local.                   |
| 27                     | Dehra Dun                                                                                      | Z     | e            | 10 57 31                      |     | Tremor.                          |
| 27                     | Delhi                                                                                          | Z     | iP<br>i      | 11 33 23<br>33 52             |     | Slight, rarefaction.             |
| 27                     | Shillong                                                                                       | Z     | iP           | 12 11 37                      |     | Slight, distant,<br>rarefaction. |
| 27                     | Dehra Dun                                                                                      | Z     | e            | 12 13 29                      |     | Tremor.                          |
| 27                     | Chatra                                                                                         | Z     | eP<br>eS     | 12 35 09<br>35 55             | 420 | Slight.                          |
| 27                     | Shillong                                                                                       | Z     | eP           | 12 35 11                      |     | Slight, near.                    |
| 27                     | Epc:- 9.1° S 113.1° E, Off coast of Java.<br>h = about 40 km.<br>-H= 12 h 48 m 17.9 s (USCGS). |       |              |                               |     |                                  |
|                        | Shillong                                                                                       | Z     | iP           | 12 55 54                      |     | Slight, distant,<br>rarefaction. |
|                        | Chatra                                                                                         | Z     | iP           | 12 56 21                      |     | Slight, distant,<br>compression. |
|                        | Delhi                                                                                          | Z     | eP           | 12 57 14                      |     | Slight, rarefaction.             |
| 27                     | Shillong                                                                                       | Z     | iP           | 13 58 02                      |     | Slight, distant,<br>compression. |
|                        | Chatra                                                                                         | Z     | eP<br>i<br>i | 13 58 56<br>59 18<br>14 00 18 |     | Slight.                          |
| 27                     | Shillong                                                                                       | Z     | iP           | 14 12 07                      |     | Slight, distant,<br>compression. |
|                        | Chatra                                                                                         | Z     | iP           | 14 12 37                      |     | Slight, distant,<br>compression. |
|                        | Delhi                                                                                          | Z     | iP           | 14 13 28                      |     | Slight, compression.             |
| 27                     | Poona                                                                                          | Z     | iP           | 14 13 35                      |     | Slight, compression.             |
| 27                     | Dehra Dun                                                                                      | Z     | iP<br>e<br>e | 16 27 49<br>28 00<br>28 06    |     | Slight, compression.             |
| 27                     | Chatra                                                                                         | Z     | eP           | 18 11 09                      |     | Slight, distant.                 |

| DATE                   | STATION                                                                                                                 | COMPT   | PHASE         | G. M. T.<br>h. m. s.       | $\Delta$<br>km. | REMARKS .                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------|---------|---------------|----------------------------|-----------------|-------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                         |         |               |                            |                 |                                                             |
| 27                     | Epc:- 39.9° N 142.0° E, Near west coast of Southern Honshu, Japan.<br>h = about 36 km.<br>-H= 18 h 18 m 42.0 s (USCGS). |         |               |                            |                 |                                                             |
|                        | Shillong                                                                                                                | Z       | iP            | 18 26 49                   |                 | Slight, distant.                                            |
|                        | Chatra                                                                                                                  | Z       | iP<br>eS      | 18 27 09<br>33 46          | 4970            | Slight, compression.                                        |
| 27                     | Bokaro                                                                                                                  | NE<br>E | iP<br>e       | 18 27 23<br>27 39          |                 | Slight, distant.                                            |
|                        | Delhi                                                                                                                   | ZE      | iP<br>e       | 18 27 57<br>28 14          |                 | Slight, compression.<br>Initial ground motion towards West. |
|                        | Madras                                                                                                                  | E       | eP<br>eS      | 18 28 50<br>37 02          |                 | Slight.                                                     |
|                        | Poona                                                                                                                   | ZE      | iP            | 18 28 57                   |                 | Slight, compression.<br>Initial movement West.              |
|                        | Bombay                                                                                                                  | ZE<br>E | eP<br>e<br>eS | 18 29 06<br>33 07<br>37 21 |                 | Slight.                                                     |
| 28                     | Bokaro                                                                                                                  | NE      | iP            | 08 21 51                   |                 | Slight, local.                                              |
| 28                     | Bokaro                                                                                                                  | NE      | iP            | 10 06 46                   |                 | Slight, local.                                              |
| 28                     | Shillong                                                                                                                | Z       | iP            | 11 57 00                   |                 | Slight, distant.                                            |
| 28                     | Chatra                                                                                                                  | Z       | eP            | 14 22 46                   |                 | Slight, distant.                                            |
|                        | Shillong                                                                                                                | Z       | eP            | 14 23 28                   |                 | Slight, distant.                                            |
| 28                     | Epc:- 53.7° N 163.7° W, Fox Islands, Aleutian Islands.<br>h = about 33 km.<br>-H= 14 h 47 m 41.4 s (USCGS).             |         |               |                            |                 |                                                             |
|                        | Shillong                                                                                                                | Z       | eP            | 14 59 02                   |                 | Slight, distant.                                            |
|                        | Chatra                                                                                                                  | Z       | iP            | 14 59 16                   |                 | Slight, distant,<br>rarefaction.                            |
| 28                     | Shillong                                                                                                                | Z       | eP            | 17 13 36                   |                 | Slight, distant.                                            |
| 28                     | Shillong                                                                                                                | Z       | iP            | 17 59 15                   |                 | Slight, distant,<br>rarefaction.                            |
| 28                     | Epc:- 42.9° N 145.4° E, Off east coast of Hokkaido, Japan.<br>h = 41 km.<br>-H= 19 h 50 m 10.7 s (USCGS).               |         |               |                            |                 |                                                             |
|                        | Shillong                                                                                                                | Z       | iP            | 19 58 45                   |                 | Slight, distant,<br>rarefaction.                            |
|                        | Chatra                                                                                                                  | Z       | iP            | 19 59 04                   |                 | Slight, distant,<br>rarefaction.                            |

| DATE                   | STATION                                                                                                                                       | COMPT   | PHASE                                         | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------------------------------|-------------------------------------------------------------------------|-----------------|----------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                                               |         |                                               |                                                                         |                 |                                                                |
| 28                     | Chatra                                                                                                                                        | Z       | iP<br>S                                       | 23 05 50<br>06 31                                                       | 380             | Slight, rarefaction.                                           |
|                        | Shillong                                                                                                                                      | Z       | eP                                            | 23 06 31                                                                |                 | Slight, distant.                                               |
|                        | Dehra Dun                                                                                                                                     | Z       | eP                                            | 23 06 47                                                                |                 | Tremor.                                                        |
| 28                     | Bokaro                                                                                                                                        | NE<br>E | iP<br>S                                       | 23 07 32<br>07 55                                                       | 190             | Slight.                                                        |
| 29                     | Epc:- 2.4° N 127.1° E, Halmahera region.<br>h = 33 km.<br>-H= 04 h 12 m 09.0 s (USCGS).                                                       |         |                                               |                                                                         |                 |                                                                |
|                        | Shillong                                                                                                                                      | Z       | eP                                            | 04 19 49                                                                |                 | Slight, distant.                                               |
|                        | Bokaro                                                                                                                                        | NE      | iP                                            | 04 20 27                                                                |                 | Slight, distant.                                               |
|                        | Chatra                                                                                                                                        | Z       | iP                                            | 04 20 31                                                                |                 | Slight, distant,<br>rarefaction.                               |
|                        | Madras                                                                                                                                        | E       | eP<br>e<br>LR                                 | 04 20 44<br>21 05<br>25 45                                              |                 | Slight.                                                        |
|                        | Dehra Dun                                                                                                                                     | Z       | iP<br>eP                                      | 04 21 01<br>21 01                                                       |                 | Slight, rarefaction.                                           |
|                        | Poona                                                                                                                                         | ZE      | iP                                            | 04 21 36                                                                |                 | Slight, rarefaction.<br>Initial ground<br>motion towards West. |
| 29                     | Epc:- 23.9° N 65.2° E, Afghanistan.<br>h = about 33 km.<br>-H= 08 h 04 m 25.7 s (USCGS).<br>Epc:- 23° N 63° E, -H= 08 h 54 m 00 s (Shillong). |         |                                               |                                                                         |                 |                                                                |
|                        | Bombay                                                                                                                                        | ZE<br>E | eP<br>eS<br>SS<br>SSS<br>M                    | 08 06 26<br>08 00<br>09 17<br>09 44<br>10 19                            | 910             | Moderate.                                                      |
|                        | Poona                                                                                                                                         | Z<br>E  | eP<br>SS                                      | 08 06 41<br>09 46                                                       |                 | Slight.                                                        |
|                        | Dehra Dun                                                                                                                                     | Z<br>E  | eP<br>SS                                      | 08 07 00<br>10 15                                                       |                 | Slight.                                                        |
|                        | Delhi                                                                                                                                         | Z       | iP<br>iS                                      | 08 07 09<br>09 18                                                       | 1270            | Slight, compression.                                           |
|                        | Madras                                                                                                                                        | E       | eP<br>PP<br>PPP<br>eS<br>LQ<br>SSS<br>LR<br>M | 08 08 29<br>08 46<br>09 04<br>11 45<br>11 48<br>12 18<br>12 38<br>14 03 | 1960            | Slight.                                                        |

| DATE                   | STATION                                                                                                                                                                                            | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                         |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----------------------|-----------------|----------------------------------|
| <u>December, 1962.</u> |                                                                                                                                                                                                    |       |       |                      |                 |                                  |
| 29                     | Bokaro                                                                                                                                                                                             | NE    | iP    | 08 08 45             | 2960            | Slight.                          |
|                        |                                                                                                                                                                                                    |       | iS    | 12 12                |                 |                                  |
|                        |                                                                                                                                                                                                    | E     | SS    | 12 41                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | SSS   | 12 51                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | LR    | 13 17                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | M     | 14 42                |                 |                                  |
|                        | Chatra                                                                                                                                                                                             | Z     | iP    | 08 09 02             | 2220            | Slight.                          |
|                        |                                                                                                                                                                                                    | NE    | PP    | 09 27                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | S     | 12 42                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | i     | 13 35                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | i     | 13 57                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | i     | 20 27                |                 |                                  |
|                        | Shillong                                                                                                                                                                                           | Z     | iP    | 08 09 40             | 2890            | Slight, rarefaction.             |
|                        |                                                                                                                                                                                                    | E     | iS    | 14 09                |                 |                                  |
|                        | Port Blair                                                                                                                                                                                         | E     | i     | 08 16 49             |                 | Distant.                         |
| 29                     | Kodaikanal                                                                                                                                                                                         | E     | i     | 08 41 -              |                 |                                  |
| 29                     | Epc:- $23^{\circ}$ N $63^{\circ}$ E,<br>-H= 08 h 54 m 00 s (Shillong)                                                                                                                              |       |       |                      |                 |                                  |
| 29                     | Bokaro                                                                                                                                                                                             | NE    | i     | 09 13 25             |                 | Slight.                          |
| 29                     | Epc:- $20.0^{\circ}$ S $69.9^{\circ}$ W, Northern Chile, Felt: Araginpas, Peru.<br>h = about 46 km.<br>-H= 10 h 41 m 04.1 s (USCGS).<br>Mag: $6\frac{3}{4}$ (Pas), $6\frac{1}{2}$ (Berk), 6 (Pas). |       |       |                      |                 |                                  |
|                        | Madras                                                                                                                                                                                             | E     | iPKP  | 10 59 54             |                 | Distant. Initial                 |
|                        |                                                                                                                                                                                                    |       | i     | 11 01 20             |                 | ground motion                    |
|                        |                                                                                                                                                                                                    |       | e     | 04 27                |                 | towards East.                    |
|                        |                                                                                                                                                                                                    |       | e     | 11 40                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | e     | 14 53                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | SSP   | 17 50                |                 |                                  |
| 29                     | Dehra Dun                                                                                                                                                                                          | ZE    | iPKP  | 11 00 21             |                 | Compression. Initial             |
|                        |                                                                                                                                                                                                    |       | i     | 00 26                |                 | ground motion                    |
|                        |                                                                                                                                                                                                    |       | i     | 00 36                |                 | towards East.                    |
| 29                     | Bombay                                                                                                                                                                                             | ZE    | ePKP  | 11 00 36             | 16330           |                                  |
|                        |                                                                                                                                                                                                    | E     | SKKS  | 11 02                |                 |                                  |
|                        |                                                                                                                                                                                                    | N     | M     | 12 02 28             |                 | Period = 21 secs.                |
|                        |                                                                                                                                                                                                    | E     | M     | 04 29                |                 | $\mu = 3$ .<br>Period = 19 secs. |
|                        |                                                                                                                                                                                                    |       |       |                      |                 | $\mu = 6$ .                      |
|                        | Poona                                                                                                                                                                                              | Z     | iP    | 11 00 42             |                 | Compression.                     |
|                        |                                                                                                                                                                                                    |       | e     | 04 03                |                 |                                  |
|                        | Delhi                                                                                                                                                                                              | Z     | iPKP  | 11 00 42             |                 | Compression.                     |
|                        |                                                                                                                                                                                                    |       | iPP   | 01 25                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | e     | 04 15                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | e     | 04 45                |                 |                                  |
|                        | Kodaikanal                                                                                                                                                                                         | E     | iPKP  | 11 00 44             |                 | Distant.                         |
|                        |                                                                                                                                                                                                    |       | e     | 11 20                |                 |                                  |
|                        |                                                                                                                                                                                                    |       | e     | 11 26                |                 |                                  |

| DATE                   | STATION                                                                                                                           | COMPT | PHASE                    | G. M. T.<br>h. m. s.                                    | $\Delta$<br>km. | REMARKS.                                     |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------|---------------------------------------------------------|-----------------|----------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                                   |       |                          |                                                         |                 |                                              |
| 29                     | Bokaro                                                                                                                            | E     | iP<br>e<br>e<br>M        | 11 01 01<br>01 32<br>05 13<br>08 45                     |                 |                                              |
| 29                     | Chatra                                                                                                                            | Z     | iP<br>e                  | 11 01 01<br>04 55                                       | 2380            | Distant, compression.                        |
|                        | Shillong                                                                                                                          | Z     | iPKP                     | 11 01 02                                                |                 | Distant, Compression.                        |
|                        | Port Blair                                                                                                                        | E     | iPKP<br>i<br>i<br>i<br>M | 11 01 08<br>05 32<br>07 38<br>14 58<br>25 34<br>12 07 - |                 | Distant.<br><br>Period = 25 secs.<br>u = 13. |
|                        | Calcutta                                                                                                                          | E     | ePKP                     | 11 01 12                                                |                 |                                              |
| 29                     | Epc:- 31.2° S 177.9° W, Kermades Islands region.<br>h = 43 km.<br>-H= 14 h 47 m 41.4 s (USCGS).<br>Mag. : 6-6 $\frac{1}{4}$ (Pas) |       |                          |                                                         |                 |                                              |
|                        | Port Blair                                                                                                                        | E     | eP<br>e<br>i<br>M        | 15 02 09<br>05 30<br>11 39<br>15 45 -                   |                 | Distant.<br><br>Period = 19 secs.<br>u = 7.  |
|                        | Madras                                                                                                                            | E     | eP<br>e<br>e<br>e        | 15 02 20<br>06 24<br>12 40<br>15 27                     |                 | Distant.                                     |
|                        | Calcutta                                                                                                                          | E     | e                        | 15 06 52                                                |                 |                                              |
|                        | Bombay                                                                                                                            | E     | e<br>e<br>e<br>e         | 15 07 33<br>13 11<br>17 04<br>18 30                     |                 |                                              |
| 30                     | Bokaro                                                                                                                            | NE    | iP                       | 04 19 08                                                |                 | Slight.                                      |
| 30                     | Shillong                                                                                                                          | Z     | eP                       | 06 13 03                                                |                 | Slight, distant.                             |
| 30                     | Delhi                                                                                                                             | Z     | iP                       | 07 04 03                                                |                 | Slight, compression.                         |
| 30                     | Sehore                                                                                                                            | N     | eP                       | 08 09 20                                                |                 |                                              |
| 30                     | Delhi                                                                                                                             | Z     | iP                       | 13 59 38                                                |                 | Slight, rarefaction.                         |
| 30                     | Delhi                                                                                                                             | Z     | iP                       | 14 15 22                                                |                 | Tremor, compression.                         |
| 30                     | Chatra                                                                                                                            | Z     | eP<br>e                  | 15 19 00<br>19 18                                       |                 | Slight.                                      |

| DATE | STATION | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS. |
|------|---------|-------|-------|----------------------|-----------------|----------|
|------|---------|-------|-------|----------------------|-----------------|----------|

December, 1962.

|    |                                                                                                       |          |                 |                            |      |                                  |
|----|-------------------------------------------------------------------------------------------------------|----------|-----------------|----------------------------|------|----------------------------------|
| 30 | Epc:- 36.8° N 72.3° E, Hindukush.<br>h = about = 232 km.<br>-H= 15 h 25 m 40.3 s (USCGS).             |          |                 |                            |      |                                  |
|    | Shillong                                                                                              | Z        | eP<br>iS        | 15 27 39<br>29 17          | 970  | Slight, compression.             |
|    | Dehra Dun                                                                                             | Z        | e<br>e          | 15 28 50<br>30 27          |      | Slight.                          |
|    | Chatra                                                                                                | Z        | eP              | 15 29 04                   |      | Slight.                          |
|    | Shillong                                                                                              | Z        | eP              | 15 29 58                   |      | Slight, distant.                 |
| 30 | Port Blair                                                                                            | E        | eP<br>e         | 18 26 42<br>35 06          |      | Distant.                         |
|    | Shillong                                                                                              | Z        | iP              | 18 27 05                   |      | Slight, distant,<br>compression. |
|    | Chatra                                                                                                | Z<br>NE  | iP<br>e         | 18 27 32<br>36 51          |      | Slight, distant,<br>compression. |
|    | Madras                                                                                                | E        | eP<br>e         | 18 28 03<br>37 30          |      |                                  |
|    | Delhi                                                                                                 | Z        | iP<br>i         | 18 28 18<br>28 49          |      | Slight, compression.             |
|    | Poona                                                                                                 | ZE       | eP              | 18 28 29                   |      | Slight.                          |
|    | Bombay                                                                                                | ZNE<br>E | eP<br>SKS<br>eS | 18 28 42<br>38 52<br>39 28 | 9850 | Moderate.                        |
|    | Calcutta                                                                                              | E        | eP              | 18 29 05                   |      | Slight.                          |
|    | Dehra Dun                                                                                             | Z<br>E   | eP<br>e         | 18 29 48<br>39 51          |      | Slight.                          |
| 30 | Chatra                                                                                                | Z        | e<br>i          | 18 56 35<br>56 54          |      |                                  |
| 30 | Delhi                                                                                                 | Z        | iP              | 23 41 55                   |      |                                  |
| 31 | Delhi                                                                                                 | Z        | iP              | 06 37 08                   |      | Tremor, rarefaction.             |
| 31 | Dehra Dun                                                                                             | Z        | iP<br>e         | 06 38 38<br>40 10          |      | Tremor.                          |
| 31 | Epc:- 52.5° N, 160.8° E, Near east coast of Kamchatka.<br>h = 51 km.<br>-H= 08 h 00 m 23.8 s (USCGS). |          |                 |                            |      |                                  |
|    | Epc:- 52.5° N 160.8° E, Near west coast of Kamchatka.<br>h = 47 km.<br>-H= 08 h 00 m 23.4 s (USCGS).  |          |                 |                            |      |                                  |
|    | Chatra                                                                                                | Z        | iP              | 08 10 21                   |      | Slight, distant,<br>compression. |

| DATE                   | STATION                                                                                                               | COMPT              | PHASE                                       | G. M. T.<br>h. m. s.                                                    | $\Delta$<br>km. | REMARKS.                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------|-------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------|
| <u>December, 1962.</u> |                                                                                                                       |                    |                                             |                                                                         |                 |                                                                                |
| 31                     | Delhi                                                                                                                 | Z                  | i                                           | 08 10 49                                                                |                 | Slight.                                                                        |
| 31                     | Poona                                                                                                                 | Z                  | iP                                          | 08 11 53                                                                |                 | Slight, compression.                                                           |
|                        | Bombay                                                                                                                | Z                  | e                                           | 08 11 56                                                                |                 | Slight.                                                                        |
|                        | Dehra Dun                                                                                                             | Z                  | iP                                          | 08 12 23                                                                |                 | Slight, rarefaction.                                                           |
| 31                     | Chatra                                                                                                                | Z                  | eP<br>i<br>i                                | 08 20 50<br>22 14<br>22 33                                              |                 | Slight, distant.                                                               |
| 31                     | Bokaro                                                                                                                | NE                 | iP                                          | 09 00 04                                                                |                 | Slight, local.                                                                 |
| 31                     | Bokaro                                                                                                                | NE                 | iP                                          | 10 31 56                                                                |                 | Slight, local.                                                                 |
| 31                     | Port Blair                                                                                                            | N                  | e                                           | 11 04 13                                                                |                 |                                                                                |
| 31                     | Epc:- $1^{\circ}$ N, $10.1^{\circ}$ E,<br>-H= 11 h 01 m 00 s (Shillong).                                              |                    |                                             |                                                                         |                 |                                                                                |
|                        | Epc:- $0.15^{\circ}$ S, $99.3^{\circ}$ E, Near coast of Sumatra.<br>h = about 33 km.<br>-H= 11 h 00 m 59.5 s (USCGS). |                    |                                             |                                                                         |                 |                                                                                |
|                        | Madras                                                                                                                | E                  | iP<br>PP<br>PPP<br>e<br>iS<br>LQ<br>LR<br>M | 11 06 10<br>06 43<br>06 53<br>07 14<br>10 26<br>10 58<br>12 00<br>13 50 | 2680            | Slight. Initial ground motion towards West.                                    |
|                        | Shillong                                                                                                              | ZN                 | iP<br>iS                                    | 11 06 34<br>11 08                                                       | 2870            | Slight, rarefaction.                                                           |
|                        | Bokaro                                                                                                                | E                  | eP<br>iS                                    | 11 06 42<br>11 16                                                       | 2960            | Slight.                                                                        |
|                        | Hyderabad                                                                                                             | NE<br>E<br>N       | eP<br>eS<br>LR<br>M<br>M                    | 11 06 54<br>11 34<br>12 59<br>14 24<br>14 30                            | 3110            | Slight.<br>Period = 9 secs.<br>$\mu = 3$ .<br>Period = 18 secs.<br>$\mu = 6$ . |
|                        | Chatra                                                                                                                | Z                  | iP                                          | 11 06 58                                                                |                 | Slight, distant, rarefaction.                                                  |
|                        | Poona                                                                                                                 | Z                  | eP                                          | 11 07 21                                                                |                 | Slight.                                                                        |
|                        | Bombay                                                                                                                | ZE<br>Z<br>E<br>NE | eP<br>e<br>e<br>eS<br>SS                    | 11 07 32<br>10 33<br>11 26<br>12 49<br>14 59                            | 3650            | Slight.                                                                        |

| DATE                   | STATION        | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km. | REMARKS.                                                       |
|------------------------|----------------|-------|-------|----------------------|-----------------|----------------------------------------------------------------|
| <u>December, 1962.</u> |                |       |       |                      |                 |                                                                |
| 31                     | Bombay(Contd.) | E     | SSS   | 11 15 24             |                 |                                                                |
|                        |                |       | LR    | 16 41                |                 |                                                                |
|                        |                |       | M     | 25 -                 |                 |                                                                |
|                        |                | N     | M     | 26 -                 |                 |                                                                |
|                        | Delhi          | Z     | iP    | 11 07 51             | 3890            | Slight, compression.                                           |
| 31                     | Delhi          | NE    | eS    | 11 13 23             |                 |                                                                |
|                        |                | N     | eSSS  | 16 07                |                 |                                                                |
|                        |                |       | LR    | 17 12                |                 |                                                                |
|                        | Dehra Dun      | Z     | e     | 11 09 47             |                 | Slight.                                                        |
|                        |                | E     | e     | 10 25                |                 |                                                                |
|                        |                |       | e     | 15 25                |                 |                                                                |
|                        | Kodaikanal     | E     | iS    | 11 10 06             |                 | Slight, distant.<br>Initial ground move-<br>ment towards West. |
|                        | Calcutta       | E     | e     | 11 10 46             |                 | Slight.                                                        |
| 31                     | Chatra         | Z     | eP    | 13 56 16             | 130             | Feeble.                                                        |
|                        |                |       | S     | 56 33                |                 |                                                                |
| 31                     | Dehra Dun      | Z     | e     | 15 50 02             |                 | Tremor.                                                        |
| 31                     | Chatra         | Z     | eP    | 15 58 21             |                 | Slight.                                                        |
|                        |                |       | i     | 58 26                |                 |                                                                |
|                        | Chatra         | Z     | iP    | 17 30 25             |                 | Slight, distant,<br>compression.                               |
| 31                     | Delhi          | Z     | iP    | 17 31 11             |                 | Slight, compression.                                           |
|                        |                |       | i     | 31 12                |                 |                                                                |

.....



MICROSEISMIC TABULATION

| DATE                      | HOUR<br>GMT | K | MEAN<br>AMPLITUDE<br>IN M.M. | MEAN<br>PERIOD<br>IN SECS. | DATE            | HOUR<br>GMT | K | MEAN<br>AMPLITUDE<br>IN M.M. | MEAN<br>PERIOD<br>IN SECS. |
|---------------------------|-------------|---|------------------------------|----------------------------|-----------------|-------------|---|------------------------------|----------------------------|
| Station : Bombay (Colaba) |             |   | Month : December, 1962.      |                            | Component: E-W. |             |   |                              |                            |
| 01                        | 00          | 3 | 0.5                          | 3.8                        | 10              | 00          | 3 | 0.6                          | 5.5                        |
|                           |             |   | 0.6                          | 2.3                        |                 |             |   | 0.3                          | 2.0                        |
|                           | 06          | - | -                            | -                          |                 | 06          | 3 | 0.7                          | 5.5                        |
|                           | 12          | - | -                            | -                          |                 |             |   | 0.4                          | 2.2                        |
|                           | 18          | 3 | 0.5                          | 3.3                        |                 | 12          | 3 | 0.7                          | 5.8                        |
|                           |             |   | 0.4                          | 2.4                        |                 |             | 3 | 0.3                          | 2.0                        |
|                           |             |   |                              |                            |                 | 18          | 3 | 0.7                          | 5.6                        |
|                           |             |   |                              |                            |                 |             |   | 0.4                          | 2.2                        |
| 02                        | 00          | 3 | 0.6                          | 3.4                        |                 |             |   |                              |                            |
|                           |             |   | 0.4                          | 2.1                        |                 |             |   |                              |                            |
|                           | 06          | 1 | 0.9                          | 2.9                        | 11              | 00          | 1 | 0.8                          | 5.9                        |
|                           | 12          | 1 | 0.8                          | 3.3                        |                 | 06          | 1 | 0.9                          | 7.1                        |
|                           | 18          | 1 | 0.7                          | 3.2                        |                 | 12          | 1 | 1.0                          | 6.8                        |
|                           |             |   |                              |                            |                 | 18          | 1 | 1.0                          | 7.0                        |
| 03                        | 00          | 3 | 0.6                          | 3.7                        |                 |             |   |                              |                            |
|                           |             |   | 0.4                          | 2.0                        | 12              | 00          | 1 | 0.9                          | 6.8                        |
|                           | 06          | 1 | 1.4                          | 2.5                        |                 | 06          | 1 | 1.0                          | 7.2                        |
|                           | 12          | - | -                            | -                          |                 | 12          | 1 | 0.7                          | 5.0                        |
|                           | 18          | 3 | 0.5                          | 3.8                        |                 | 18          | 1 | 0.6                          | 4.7                        |
|                           |             |   | 0.4                          | 2.0                        |                 |             |   |                              |                            |
|                           |             |   |                              |                            | 13              | 00          | 1 | 0.6                          | 4.9                        |
| 04                        | 00          | 3 | 0.6                          | 4.1                        |                 | 06          | 1 | 0.5                          | 4.4                        |
|                           |             |   | 0.4                          | 1.8                        |                 | 12          | 1 | 0.5                          | 4.8                        |
|                           | 06          | 3 | 0.7                          | 3.7                        |                 | 18          | 1 | 0.5                          | 4.9                        |
|                           |             |   | 0.5                          | 2.0                        |                 |             |   |                              |                            |
|                           | 12          | 1 | 1.1                          | 2.6                        | 14              | 00          | 1 | 0.4                          | 4.6                        |
|                           | 18          | 1 | 2.0                          | 2.8                        |                 | 06          | 3 | 0.4                          | 4.7                        |
|                           |             |   |                              |                            |                 |             |   | 0.3                          | 1.7                        |
| 05                        | 00          | 1 | 1.6                          | 2.8                        |                 | 12          | 3 | 0.3                          | 4.6                        |
|                           | 06          | 1 | 1.3                          | 2.6                        |                 |             |   | 0.3                          | 2.0                        |
|                           | 12          | 1 | 1.4                          | 2.4                        |                 | 18          | 3 | 0.3                          | 4.4                        |
|                           | 18          | 1 | 1.1                          | 2.5                        |                 |             |   | 0.4                          | 2.0                        |
| 06                        | 00          | 1 | 1.1                          | 2.7                        | 15              | 00          | 3 | 0.4                          | 4.8                        |
|                           | 06          | 1 | 1.2                          | 2.7                        |                 |             |   | 0.3                          | 2.0                        |
|                           | 12          | 1 | 1.5                          | 2.7                        |                 | 06          | 2 | 0.5                          | 5.3                        |
|                           | 18          | 1 | 1.1                          | 2.6                        |                 | 12          | 2 | 0.4                          | 5.8                        |
|                           |             |   |                              |                            |                 | 18          | 2 | 0.5                          | 6.0                        |
| 07                        | 00          | 1 | 1.1                          | 2.7                        |                 |             |   |                              |                            |
|                           | 06          | 1 | 1.3                          | 2.7                        | 16              | 00          | 2 | 0.5                          | 5.2                        |
|                           | 12          | 1 | 1.1                          | 2.6                        |                 | 06          | 3 | 0.4                          | 5.6                        |
|                           | 18          | 1 | 1.1                          | 2.6                        |                 |             |   | 0.3                          | 3.0                        |
|                           |             |   |                              |                            |                 | 12          | 3 | 0.4                          | 5.0                        |
| 08                        | 00          | 1 | 0.8                          | 2.6                        |                 |             |   | 0.3                          | 3.0                        |
|                           | 06          | 1 | 0.9                          | 2.7                        |                 | 18          | 2 | 0.4                          | 4.2                        |
|                           | 12          | 1 | 0.8                          | 2.7                        |                 |             |   |                              |                            |
|                           | 18          | 1 | 0.7                          | 2.7                        | 17              | 00          | 2 | 0.6                          | 4.5                        |
|                           |             |   |                              |                            |                 | 06          | - | -                            | -                          |
| 09                        | 00          | 1 | 0.5                          | 2.7                        |                 | 12          | 3 | 0.6                          | 4.4                        |
|                           | 06          | 3 | 0.6                          | 4.6                        |                 |             |   | 0.4                          | 2.7                        |
|                           |             |   | 0.5                          | 2.5                        |                 | 18          | - | -                            | -                          |
|                           | 12          | 3 | 0.6                          | 5.9                        |                 |             |   |                              |                            |
|                           |             |   | 0.4                          | 2.6                        | 18              | 00          | 3 | 0.6                          | 4.1                        |
|                           | 18          | 3 | 0.6                          | 6.3                        |                 |             |   | 0.4                          | 2.3                        |
|                           |             |   | 0.4                          | 2.3                        |                 |             |   |                              |                            |

| Date                      | Hour<br>GMT | K | Mean<br>amplitude<br>in m.m. | Mean<br>period<br>in secs. | Date            | Hour<br>GMT | K | Mean<br>amplitude<br>in m.m. | Mean<br>period<br>in secs. |                  |  |  |  |  |
|---------------------------|-------------|---|------------------------------|----------------------------|-----------------|-------------|---|------------------------------|----------------------------|------------------|--|--|--|--|
| Station : Bombay (Colaba) |             |   |                              |                            | December, 1952. |             |   |                              |                            | Components: E-W. |  |  |  |  |
| 18                        | 06          | 3 | 0.7                          | 4.1                        | 25              | 18          | 3 | 0.5                          | 3.7                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 2.4                        |                 |             |   | 0.3                          | 1.5                        |                  |  |  |  |  |
|                           | 12          | 3 | 0.6                          | 4.3                        | 26              | 00          | 3 | 0.6                          | 3.5                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 2.3                        |                 |             |   | 0.3                          | 1.8                        |                  |  |  |  |  |
|                           | 18          | - | -                            | -                          |                 | 06          | 3 | 0.6                          | 3.4                        |                  |  |  |  |  |
| 19                        | 00          | 3 | 0.6                          | 4.4                        |                 |             |   | 0.3                          | 1.5                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 2.7                        |                 | 12          | 3 | 0.5                          | 5.5                        |                  |  |  |  |  |
|                           | 06          | - | -                            | -                          |                 |             |   | 0.4                          | 3.0                        |                  |  |  |  |  |
|                           | 12          | 3 | 0.6                          | 3.9                        |                 | 18          | 3 | 0.5                          | 5.6                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 3.0                        |                 |             |   | 0.3                          | 3.0                        |                  |  |  |  |  |
|                           | 18          | 3 | 0.6                          | 4.1                        | 27              | 00          | - | -                            | -                          |                  |  |  |  |  |
|                           |             |   | 0.4                          | 2.7                        |                 | 06          | 3 | 0.7                          | 5.2                        |                  |  |  |  |  |
| 20                        | 00          | 3 | 0.6                          | 3.8                        |                 |             |   | 0.3                          | 3.0                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 2.3                        |                 | 12          | 3 | 0.7                          | 5.5                        |                  |  |  |  |  |
|                           | 06          | 3 | 0.6                          | 4.0                        |                 |             |   | 0.4                          | 3.0                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 2.7                        |                 | 18          | 3 | 0.5                          | 5.4                        |                  |  |  |  |  |
|                           | 12          | 3 | 0.6                          | 4.3                        |                 |             |   | 0.4                          | 3.2                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 2.2                        | 28              | 00          | 3 | 0.5                          | 5.4                        |                  |  |  |  |  |
|                           | 18          | 3 | 0.5                          | 4.1                        |                 |             |   | 0.4                          | 3.0                        |                  |  |  |  |  |
|                           |             |   | 0.4                          | 1.7                        |                 | 06          | 3 | 0.4                          | 4.8                        |                  |  |  |  |  |
| 21                        | 00          | 3 | 0.5                          | 4.0                        |                 |             |   | 0.4                          | 2.8                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 1.9                        |                 | 12          | 3 | 0.4                          | 4.6                        |                  |  |  |  |  |
|                           | 06          | 3 | 0.5                          | 3.7                        |                 |             |   | 0.3                          | 2.0                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 2.2                        |                 | 18          | 3 | 0.4                          | 4.8                        |                  |  |  |  |  |
|                           | 12          | - | -                            | -                          |                 |             |   | 0.3                          | 2.0                        |                  |  |  |  |  |
|                           | 18          | - | -                            | -                          | 29              | 00          | 3 | 0.4                          | 4.2                        |                  |  |  |  |  |
| 22                        | 00          | 3 | 0.4                          | 4.6                        |                 |             |   | 0.4                          | 2.3                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 2.1                        |                 | 06          | 3 | 0.6                          | 3.8                        |                  |  |  |  |  |
|                           | 06          | 3 | 0.5                          | 3.6                        |                 |             |   | -                            | -                          |                  |  |  |  |  |
|                           |             |   | 0.3                          | 1.6                        |                 | 12          | 3 | 0.6                          | 3.6                        |                  |  |  |  |  |
|                           | 12          | 3 | 0.5                          | 3.8                        | 30              | 00          | 3 | 0.5                          | 4.4                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 2.3                        |                 |             |   | 0.4                          | 2.2                        |                  |  |  |  |  |
|                           | 18          | - | -                            | -                          |                 | 06          | 3 | 0.4                          | 5.1                        |                  |  |  |  |  |
| 23                        | 00          | 3 | 0.4                          | 3.6                        |                 |             |   | 0.4                          | 2.3                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 1.7                        |                 | 12          | - | -                            | -                          |                  |  |  |  |  |
|                           | 06          | 3 | 0.4                          | 3.4                        |                 |             |   | 0.4                          | 5.0                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 1.9                        |                 | 18          | 3 | 0.3                          | 2.5                        |                  |  |  |  |  |
|                           | 12          | 3 | 0.4                          | 3.5                        | 31              | 00          | 1 | 0.5                          | 3.6                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 2.5                        |                 |             |   | 0.4                          | 3.7                        |                  |  |  |  |  |
|                           | 18          | 2 | 0.5                          | 3.3                        |                 | 06          | 3 | 0.4                          | 2.0                        |                  |  |  |  |  |
| 24                        | 00          | 2 | 0.4                          | 3.8                        |                 |             |   | 0.4                          | 3.6                        |                  |  |  |  |  |
|                           |             |   | -                            | -                          |                 | 12          | 3 | 0.4                          | 2.4                        |                  |  |  |  |  |
|                           | 06          | - | -                            | -                          |                 |             |   | 0.3                          | 3.9                        |                  |  |  |  |  |
|                           | 12          | - | -                            | -                          |                 | 18          | 3 | 0.4                          | 1.8                        |                  |  |  |  |  |
|                           | 18          | - | -                            | -                          |                 |             |   | 0.4                          | -                          |                  |  |  |  |  |
| 25                        | 00          | - | -                            | -                          |                 |             |   | -                            | -                          |                  |  |  |  |  |
|                           | 06          | 3 | 0.4                          | 4.0                        |                 |             |   | 0.3                          | 1.5                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 1.5                        |                 |             |   | 0.4                          | 3.6                        |                  |  |  |  |  |
|                           | 12          | 3 | 0.4                          | 3.6                        |                 |             |   | 0.3                          | 2.1                        |                  |  |  |  |  |
|                           |             |   | 0.3                          | 2.1                        |                 |             |   | -                            | -                          |                  |  |  |  |  |

| Date             | Hour GMT | K | Mean amplitude in m.m. | Mean period in secs. | Date            | Hour GMT. | K | Mean amplitude in m.m. | Mean period in secs. |                 |  |  |  |  |
|------------------|----------|---|------------------------|----------------------|-----------------|-----------|---|------------------------|----------------------|-----------------|--|--|--|--|
| Station: Madras. |          |   |                        |                      | December, 1962. |           |   |                        |                      | Component: E-W. |  |  |  |  |
| 01               | 00       | 1 | 0.6                    | 3.2                  | 07              | 00        | 3 | 0.5                    | 5.0                  |                 |  |  |  |  |
|                  | 03       | 1 | 0.6                    | 3.2                  |                 |           | 3 | 0.3                    | 2.8                  |                 |  |  |  |  |
|                  | 06       | 1 | 0.5                    | 3.1                  |                 | 03        | 3 | 0.3                    | 2.7                  |                 |  |  |  |  |
|                  | 12       | 1 | 0.5                    | 2.8                  |                 | 06        | 3 | 0.3                    | 2.7                  |                 |  |  |  |  |
|                  |          | 3 | 0.1                    | 1.5                  |                 | 12        | 3 | 0.4                    | 3.0                  |                 |  |  |  |  |
|                  | 18       | 1 | 0.5                    | 2.8                  |                 | 18        | 3 | 0.5                    | 3.4                  |                 |  |  |  |  |
|                  |          | 3 | 0.1                    | 1.6                  |                 |           |   |                        |                      |                 |  |  |  |  |
| 02               | 00       | 1 | 0.5                    | 2.8                  | 08              | 00        | 3 | 0.5                    | 3.6                  |                 |  |  |  |  |
|                  |          | 3 | 0.1                    | 1.6                  |                 |           | 3 | 0.3                    | 2.7                  |                 |  |  |  |  |
|                  | 03       | 1 | 0.4                    | 2.7                  |                 | 03        | 3 | 0.5                    | 3.5                  |                 |  |  |  |  |
|                  |          | 3 | 0.2                    | 1.5                  |                 | 06        | 3 | 0.5                    | 3.3                  |                 |  |  |  |  |
|                  | 06       | 1 | 0.4                    | 2.7                  |                 | 12        | 3 | 0.5                    | 3.5                  |                 |  |  |  |  |
|                  | 12       | 1 | 0.5                    | 2.6                  |                 |           | 3 | 0.3                    | 2.7                  |                 |  |  |  |  |
|                  | 18       | 1 | 0.6                    | 3.5                  |                 | 18        | 3 | 0.4                    | 3.7                  |                 |  |  |  |  |
|                  |          | 1 | 0.5                    | 2.6                  |                 |           | 3 | 0.3                    | 2.7                  |                 |  |  |  |  |
| 03               | 00       | 1 | 0.7                    | 3.6                  | 09              | 00        | 3 | 0.4                    | 3.3                  |                 |  |  |  |  |
|                  | 03       | 1 | 0.6                    | 3.6                  |                 |           | 3 | 0.3                    | 2.6                  |                 |  |  |  |  |
|                  | 06       | 1 | 0.6                    | 3.5                  |                 | 03        | 3 | 0.4                    | 3.1                  |                 |  |  |  |  |
|                  | 12       | 1 | 0.4                    | 3.4                  |                 |           | 3 | 0.3                    | 2.5                  |                 |  |  |  |  |
|                  | 18       | 3 | 0.5                    | 3.6                  |                 | 06        | 3 | 0.3                    | 3.2                  |                 |  |  |  |  |
|                  |          | 3 | 0.2                    | 2.4                  |                 |           | 3 | 0.2                    | 2.4                  |                 |  |  |  |  |
|                  |          |   |                        |                      |                 | 12        | 2 | 0.4                    | 3.7                  |                 |  |  |  |  |
|                  |          |   |                        |                      |                 |           | 3 | 0.3                    | 5.3                  |                 |  |  |  |  |
| 04               | 00       | 3 | 0.4                    | 3.9                  |                 | 18        | 2 | 0.5                    | 5.4                  |                 |  |  |  |  |
|                  |          | 3 | 0.2                    | 2.2                  |                 |           | 3 | 0.4                    | 2.8                  |                 |  |  |  |  |
|                  | 03       | 3 | 0.4                    | 3.8                  | 10              | 00        | 2 | 0.6                    | 5.9                  |                 |  |  |  |  |
|                  |          | 3 | 0.2                    | 2.3                  |                 |           | 3 | 0.5                    | 2.8                  |                 |  |  |  |  |
|                  | 06       | 3 | 0.3                    | 2.5                  |                 | 03        | 2 | 0.6                    | 4.7                  |                 |  |  |  |  |
|                  | 12       | 3 | 0.3                    | 2.7                  |                 |           | 3 | 0.5                    | 2.8                  |                 |  |  |  |  |
|                  | 18       | 3 | 0.4                    | 4.9                  |                 | 06        | 3 | 0.5                    | 2.8                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.7                  |                 | 12        | 3 | 0.5                    | 2.8                  |                 |  |  |  |  |
| 05               | 00       | 3 | 0.5                    | 5.0                  |                 |           | 2 | 0.7                    | 4.5                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 3.0                  |                 | 18        | 2 | 0.9                    | 4.5                  |                 |  |  |  |  |
|                  | 03       | 3 | 0.5                    | 5.1                  |                 |           | 3 | 0.6                    | 2.9                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.9                  | 11              | 00        | 2 | 1.0                    | 4.5                  |                 |  |  |  |  |
|                  | 06       | 3 | 0.5                    | 5.1                  |                 |           | 3 | 0.7                    | 3.4                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 5.4                  |                 | 03        | 2 | 1.1                    | 4.7                  |                 |  |  |  |  |
|                  | 12       | 3 | 0.5                    | 5.4                  |                 |           | 3 | 0.6                    | 2.9                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.7                  |                 | 06        | 2 | 1.2                    | 4.9                  |                 |  |  |  |  |
|                  | 18       | 3 | 0.5                    | 5.6                  |                 |           | 3 | 0.7                    | 2.8                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.8                  |                 |           | 3 | 0.3                    | 1.9                  |                 |  |  |  |  |
| 06               | 00       | 3 | 0.5                    | 5.4                  |                 | 12        | 2 | 1.2                    | 4.6                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.8                  |                 |           | 3 | 0.5                    | 2.6                  |                 |  |  |  |  |
|                  | 03       | 3 | 0.4                    | 5.0                  |                 |           | 3 | 0.2                    | 2.0                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.7                  |                 | 18        | 2 | 1.1                    | 4.5                  |                 |  |  |  |  |
|                  | 06       | 3 | 0.4                    | 5.0                  |                 |           | 3 | 0.5                    | 2.8                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.8                  |                 |           |   |                        |                      |                 |  |  |  |  |
|                  | 12       | 3 | 0.3                    | 2.7                  | 12              | 00        | 2 | 0.9                    | 4.5                  |                 |  |  |  |  |
|                  | 18       | 3 | 0.5                    | 5.0                  |                 |           | 2 | 0.5                    | 2.9                  |                 |  |  |  |  |
|                  |          | 3 | 0.3                    | 2.7                  |                 |           |   |                        |                      |                 |  |  |  |  |

| Date                     | Hour GMT | K | Mean amplitude in m.m. | Mean period in secs. | Date            | Hour GMT | K | Mean amplitude in m.m. | Mean period in secs. |
|--------------------------|----------|---|------------------------|----------------------|-----------------|----------|---|------------------------|----------------------|
| Station : Madras(Contd.) |          |   | December, 1962.        |                      | Component: E-W. |          |   |                        |                      |
| 12                       | 03       | 2 | 0.9                    | 4.4                  | 18              | 00       | 1 | 0.7                    | 3.7                  |
|                          |          | 3 | 0.4                    | 2.7                  |                 | 03       | 1 | 0.7                    | 3.7                  |
|                          | 06       | 2 | 0.8                    | 4.3                  |                 | 06       | 1 | 0.7                    | 3.8                  |
|                          |          | 3 | 0.4                    | 2.7                  |                 | 12       | 1 | 0.7                    | 3.8                  |
|                          | 12       | 2 | 0.7                    | 4.2                  |                 | 18       | 1 | 0.7                    | 3.8                  |
|                          |          | 3 | 0.4                    | 2.7                  |                 |          |   |                        |                      |
|                          | 18       | 2 | 0.7                    | 4.5                  | 19              | 00       | 1 | 0.7                    | 3.7                  |
|                          |          | 3 | 0.3                    | 2.7                  |                 | 03       | 1 | 0.7                    | 3.7                  |
|                          |          |   |                        |                      |                 | 06       | 1 | 0.6                    | 3.7                  |
| 13                       | 00       | 2 | 0.7                    | 4.4                  |                 | 12       | 1 | 0.6                    | 3.6                  |
|                          |          | 3 | 0.3                    | 2.7                  |                 | 18       | 1 | 0.5                    | 3.7                  |
|                          | 03       | 2 | 0.6                    | 4.6                  |                 |          |   |                        |                      |
|                          |          | 3 | 0.3                    | 2.4                  | 20              | 00       | 1 | 0.5                    | 3.5                  |
|                          | 06       | 2 | 0.6                    | 4.6                  |                 | 03       | 1 | 0.5                    | 3.5                  |
|                          |          | 3 | 0.3                    | 2.4                  |                 | 06       | 1 | 0.4                    | 3.3                  |
|                          | 12       | 2 | 0.5                    | 4.5                  |                 | 12       | 1 | 0.4                    | 3.3                  |
|                          |          | 3 | 0.2                    | 2.4                  |                 | 18       | 1 | 0.4                    | 3.3                  |
|                          | 18       | 2 | 0.4                    | 5.0                  |                 |          |   |                        |                      |
|                          |          | 3 | 0.5                    | 4.3                  | 21              | 00       | 1 | 0.4                    | 3.0                  |
|                          |          | 3 | 0.2                    | 2.4                  |                 | 03       | 1 | 0.5                    | 3.1                  |
|                          |          |   |                        |                      |                 | 06       | 1 | 0.5                    | 3.1                  |
| 14                       | 00       | 2 | 0.4                    | 4.2                  |                 | 12       | 1 | 0.5                    | 3.1                  |
|                          |          | 3 | 0.2                    | 2.4                  |                 | 18       | 1 | 0.4                    | 2.9                  |
|                          | 03       | 2 | 0.4                    | 4.1                  |                 |          |   |                        |                      |
|                          |          | 3 | 0.2                    | 2.7                  | 22              | 00       | 1 | 0.5                    | 2.9                  |
|                          | 06       | 2 | 0.4                    | 4.2                  |                 | 03       | 1 | 0.5                    | 2.9                  |
|                          |          | 3 | 0.4                    | 4.4                  |                 | 06       | 1 | 0.6                    | 3.0                  |
|                          | 12       | 2 | 0.4                    | 4.4                  |                 | 12       | 1 | 0.6                    | 2.9                  |
|                          |          | 2 | 0.4                    | 6.2                  |                 | 18       | 1 | 0.6                    | 2.9                  |
|                          |          | 3 | 0.3                    | 2.4                  |                 |          |   |                        |                      |
|                          | 18       | 2 | 0.4                    | 6.5                  | 23              | 00       | 1 | 0.6                    | 2.9                  |
|                          |          | 2 | 0.4                    | 4.3                  |                 | 03       | 1 | 0.6                    | 2.9                  |
|                          |          | 3 | 0.3                    | 2.7                  |                 | 06       | 1 | 0.6                    | 3.0                  |
|                          |          |   |                        |                      |                 | 12       | 1 | 0.6                    | 3.0                  |
| 15                       | 00       | 2 | 0.4                    | 6.3                  |                 | 18       | 1 | 0.7                    | 3.1                  |
|                          |          | 2 | 0.4                    | 4.3                  |                 |          |   |                        |                      |
|                          |          | 3 | 0.2                    | 2.5                  | 24              | 00       | 1 | 0.7                    | 3.1                  |
|                          | 03       | 2 | 0.4                    | 4.3                  |                 | 03       | 1 | 0.7                    | 3.2                  |
|                          |          | 3 | 0.2                    | 2.4                  |                 | 06       | 1 | 0.7                    | 3.0                  |
|                          | 06       | 2 | 0.2                    | 2.4                  |                 | 12       | 1 | 0.7                    | 3.0                  |
|                          | 12       | 2 | 0.2                    | 2.3                  |                 | 18       | 1 | 0.7                    | 3.0                  |
|                          | 18       | 2 | 0.2                    | 2.3                  |                 |          |   |                        |                      |
|                          |          |   |                        |                      | 25              | 00       | 1 | 0.6                    | 2.9                  |
| 16                       | 00       | 3 | 0.3                    | 2.7                  |                 | 03       | 1 | 0.6                    | 2.9                  |
|                          | 03       | 3 | 0.3                    | 2.7                  |                 | 06       | 1 | 0.5                    | 2.9                  |
|                          | 06       | 3 | 0.3                    | 2.7                  |                 | 12       | 1 | 0.5                    | 2.9                  |
|                          | 12       | 1 | 0.4                    | 2.7                  |                 | 18       | 1 | 0.5                    | 3.0                  |
|                          | 18       | 1 | 0.5                    | 2.9                  |                 |          |   |                        |                      |
| 17                       | 00       | 1 | 0.6                    | 3.1                  | 26              | 00       | 1 | 0.6                    | 2.9                  |
|                          | 03       | 1 | 0.6                    | 2.8                  |                 | 03       | 1 | 0.6                    | 3.0                  |
|                          | 06       | 1 | 0.5                    | 2.7                  |                 | 06       | 1 | 0.6                    | 2.9                  |
|                          | 12       | 1 | 0.7                    | 3.2                  |                 | 12       | 1 | 0.6                    | 2.9                  |
|                          | 18       | 1 | 0.7                    | 3.4                  |                 | 18       | 1 | 0.5                    | 3.0                  |

| Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in secs. | Date | Hour GMT | K | Mean amplitude in m.m. | Mean period in secs. |
|------|----------|---|------------------------|----------------------|------|----------|---|------------------------|----------------------|
|------|----------|---|------------------------|----------------------|------|----------|---|------------------------|----------------------|

Station: Madras(Contd.)

December, 1962.

Component: E-W.

|    |    |     |             |     |    |    |   |     |     |
|----|----|-----|-------------|-----|----|----|---|-----|-----|
| 27 | 00 | ... | Earthquake. |     | 03 | 00 | 3 | 0.4 | 4.5 |
|    | 03 | 1   | 0.5         | 2.9 |    | 06 | 3 | 0.4 | 4.0 |
|    | 06 | 1   | 0.5         | 3.0 |    | 12 | 3 | 0.4 | 4.2 |
|    | 12 | 1   | 0.5         | 3.1 |    | 18 | 3 | 0.4 | 4.2 |
|    | 18 | 1   | 0.5         | 3.0 |    |    |   |     |     |
|    |    |     |             |     | 04 | 00 | 3 | 0.4 | 4.2 |
| 28 | 00 | 1   | 0.4         | 3.0 |    | 06 | 3 | 0.4 | 4.2 |
|    | 03 | 1   | 0.4         | 2.8 |    | 12 | 3 | 0.4 | 4.0 |
|    | 06 | 1   | 0.4         | 2.8 |    | 18 | 3 | 0.4 | 4.0 |
|    | 12 | 1   | 0.3         | 2.8 |    |    |   |     |     |
|    | 18 | 1   | 0.3         | 2.7 |    |    |   |     |     |
|    |    |     |             |     | 05 | 00 | 3 | 0.4 | 4.8 |
|    |    |     |             |     |    | 06 | 3 | 0.3 | 5.0 |
| 29 | 00 | 1   | 0.3         | 3.4 |    | 12 | 3 | 0.3 | 4.2 |
|    |    | 1   | 0.3         | 2.9 |    | 18 | 3 | 0.3 | 5.0 |
|    | 03 | 1   | 0.3         | 3.4 |    |    |   |     |     |
|    |    | 1   | 0.3         | 3.3 | 06 | 00 | 3 | 0.4 | 5.0 |
|    | 06 | 1   | 0.3         | 3.3 |    | 06 | 3 | 0.3 | 5.0 |
|    | 12 | 1   | 0.4         | 3.5 |    | 12 | 3 | 0.4 | 5.2 |
|    | 18 | 1   | 0.5         | 3.5 |    | 18 | 3 | 0.3 | 4.8 |
|    |    |     |             |     |    |    |   |     |     |
| 30 | 00 | 1   | 0.5         | 3.4 | 07 | 00 | 3 | 0.3 | 5.2 |
|    | 03 | 3   | 0.4         | 3.4 |    | 06 | 3 | 0.3 | 4.7 |
|    |    | 3   | 0.3         | 2.6 |    | 12 | 3 | 0.3 | 5.2 |
|    | 06 | 3   | 0.4         | 3.3 |    | 18 | 3 | 0.3 | 5.2 |
|    |    | 3   | 0.3         | 2.5 |    |    |   |     |     |
|    | 12 | 3   | 0.4         | 3.7 | 08 | 00 | 3 | 0.3 | 5.0 |
|    |    | 3   | 0.3         | 2.5 |    | 06 | 3 | 0.4 | 4.9 |
|    | 18 | 3   | 0.4         | 3.7 |    | 12 | 3 | 0.3 | 5.4 |
|    |    | 3   | 0.3         | 2.6 |    | 18 | 3 | 0.3 | 5.2 |
|    |    |     |             |     |    |    |   |     |     |
| 31 | 00 | 3   | 0.4         | 3.9 | 09 | 00 | 3 | 0.3 | 5.4 |
|    |    | 3   | 0.3         | 2.7 |    | 06 | 2 | 0.2 | 4.0 |
|    | 03 | 3   | 0.4         | 4.0 |    | 12 | 2 | 0.3 | 4.6 |
|    |    | 3   | 0.3         | 2.7 |    | 18 | 2 | 0.3 | 5.4 |
|    | 06 | 3   | 0.4         | 4.1 |    |    |   |     |     |
|    |    | 3   | 0.2         | 2.5 | 10 | 00 | 2 | 0.2 | 4.2 |
|    | 12 | 3   | 0.4         | 4.0 |    | 06 | 2 | 0.2 | 4.0 |
|    |    | 3   | 0.3         | 2.6 |    | 12 | 2 | 0.3 | 4.6 |
|    | 18 | 3   | 0.4         | 4.1 |    | 18 | 2 | 0.3 | 5.4 |
|    |    | 3   | 0.3         | 2.6 |    |    |   |     |     |

.....

Station: Bokaro.

|    |    |   |     |     |    |    |     |     |     |
|----|----|---|-----|-----|----|----|-----|-----|-----|
| 01 | 00 | - | -   | -   | 12 | 00 | 2   | 0.5 | 6.0 |
|    | 06 | 3 | 0.3 | 4.0 |    | 06 | ... | -   | -   |
|    | 12 | 3 | 0.3 | 4.0 |    | 12 | 3   | 0.5 | 5.9 |
|    | 18 | 3 | 0.3 | 4.0 |    | 18 | 3   | 0.4 | 5.2 |
|    |    |   |     |     |    |    |     |     |     |
| 02 | 00 | 3 | 0.3 | 4.2 | 13 | 00 | ... | -   | -   |
|    | 06 | 3 | 0.3 | 4.0 |    | 06 | ... | -   | -   |
|    | 12 | 3 | 0.4 | 4.8 |    | 12 | 3   | 0.3 | 4.0 |
|    | 18 | 3 | 0.4 | 4.6 |    | 18 | 3   | 0.3 | 4.2 |

| Date                    | Hour | K   | Mean amplitude in m.m. | Mean period in secs. | Date                | Hour | K   | Mean amplitude in m.m. | Mean period in secs. |
|-------------------------|------|-----|------------------------|----------------------|---------------------|------|-----|------------------------|----------------------|
| Station: Bokaro(Contd.) |      |     |                        |                      | December, 1962.     |      |     |                        |                      |
|                         |      |     |                        |                      | Component; E-W.     |      |     |                        |                      |
| 14                      | 00   | ... | -                      | -                    | 25                  | 00   | 3   | 0.2                    | 4.8                  |
|                         | 06   | 3   | 0.3                    | 4.0                  |                     | 06   | 2   | 0.1                    | 3.8                  |
|                         | 12   | 3   | 0.3                    | 4.0                  |                     | 12   | 3   | 0.2                    | 4.0                  |
|                         | 18   | ... | -                      | -                    |                     | 18   | 3   | 0.2                    | 4.0                  |
| 15                      | 00   | ... | -                      | -                    | 26                  | 00   | 3   | 0.2                    | 4.0                  |
|                         | 06   | 3   | 0.3                    | 4.0                  |                     | 06   | 3   | 0.3                    | 5.8                  |
|                         | 12   | 3   | 0.3                    | 4.0                  |                     | 12   | 3   | 0.2                    | 4.2                  |
|                         | 18   | 3   | 0.4                    | 4.2                  |                     | 18   | 3   | 0.3                    | 5.0                  |
| 16                      | 00   | 3   | 0.4                    | 4.2                  | 27                  | 00   | ... | -                      | -                    |
|                         | 06   | 3   | 0.3                    | 4.2                  |                     | 06   | 3   | 0.3                    | 5.0                  |
|                         | 12   | 3   | 0.3                    | 4.0                  |                     | 12   | 3   | 0.3                    | 5.0                  |
|                         | 18   | 3   | 0.4                    | 4.2                  |                     | 18   | 3   | 0.3                    | 5.0                  |
| 17                      | 00   | 3   | 0.4                    | 4.2                  | 28                  | 00   | 3   | 0.3                    | 5.0                  |
|                         | 06   | 3   | 0.4                    | 4.2                  |                     | 06   | 3   | 0.3                    | 4.7                  |
|                         | 12   | 3   | 0.4                    | 4.2                  |                     | 12   | 3   | 0.2                    | 4.6                  |
|                         | 18   | 3   | 0.4                    | 4.5                  |                     | 18   | 3   | 0.2                    | 4.2                  |
| 18                      | 00   | 3   | 0.3                    | 4.0                  | 29                  | 00   | 3   | 0.2                    | 4.0                  |
|                         | 06   | 3   | 0.3                    | 4.0                  |                     | 06   | 3   | 0.1                    | 3.0                  |
|                         | 12   | 3   | 0.3                    | 4.2                  |                     | 12   | 3   | 0.2                    | 4.2                  |
|                         | 18   | 3   | 0.3                    | 4.0                  |                     | 18   | 3   | 0.2                    | 4.0                  |
| 19                      | 00   | 3   | 0.3                    | 4.0                  | 30                  | 00   | 3   | 0.2                    | 4.0                  |
|                         | 06   | 3   | 0.2                    | 4.8                  |                     | 06   | ... | -                      | -                    |
|                         | 12   | 2   | 0.2                    | 5.0                  |                     | 12   | 3   | 0.2                    | 3.5                  |
|                         | 18   | 3   | 0.2                    | 4.6                  |                     | 18   | 3   | 0.2                    | 4.0                  |
| 20                      | 00   | 3   | 0.2                    | 5.0                  | 31                  | 00   | 3   | 0.2                    | 4.0                  |
|                         | 06   | 3   | 0.3                    | 5.0                  |                     | 06   | ... | -                      | -                    |
|                         | 12   | 3   | 0.2                    | 4.8                  |                     | 12   | 3   | 0.2                    | 4.3                  |
|                         | 18   | 3   | 0.3                    | 6.0                  |                     | 18   | 3   | 0.2                    | 4.2                  |
| 21                      | 00   | 3   | 0.3                    | 5.6                  | .....               |      |     |                        |                      |
|                         | 06   | 3   | 0.2                    | 4.0                  | Station : Shillong. |      |     |                        |                      |
|                         | 12   | 3   | 0.3                    | 4.0                  | 01                  | 00   | 3   | 0.3                    | 4.5                  |
|                         | 18   | ... | -                      | -                    |                     | 06   | 3   | 0.3                    | 4.5                  |
| 22                      | 00   | 2   | 0.2                    | 4.0                  |                     | 12   | 3   | 0.3                    | 4.1                  |
|                         | 06   | 3   | 0.1                    | 3.4                  |                     | 18   | 3   | 0.3                    | 4.0                  |
|                         | 12   | 2   | 0.2                    | 4.0                  | 02                  | 00   | 3   | 0.4                    | 4.2                  |
|                         | 18   | 3   | 0.2                    | 4.2                  |                     | 06   | 3   | 0.4                    | 4.1                  |
| 23                      | 00   | 2   | 0.2                    | 4.2                  |                     | 12   | 3   | 0.4                    | 4.0                  |
|                         | 06   | ... | -                      | -                    |                     | 18   | 3   | 0.4                    | 4.0                  |
|                         | 12   | ... | -                      | -                    | 03                  | 00   | 3   | 0.4                    | 4.1                  |
|                         | 18   | ... | -                      | -                    |                     | 06   | 3   | 0.4                    | 4.2                  |
| 24                      | 00   | ... | -                      | -                    |                     | 12   | 3   | 0.4                    | 4.2                  |
|                         | 06   | ... | -                      | -                    |                     | 18   | 3   | 0.5                    | 4.4                  |
|                         | 12   | 3   | 0.2                    | 4.5                  |                     |      |     |                        |                      |
|                         | 18   | 3   | 0.2                    | 4.4                  |                     |      |     |                        |                      |







| Date                        | Hour GMT | K   | Mean amplitude in micron | Mean period in secs. | Date            | Hour GMT | K   | Mean amplitude in micron | Mean period in secs. |                 |  |  |  |  |  |  |  |  |  |
|-----------------------------|----------|-----|--------------------------|----------------------|-----------------|----------|-----|--------------------------|----------------------|-----------------|--|--|--|--|--|--|--|--|--|
| Station: Port Blair(Contd.) |          |     |                          |                      | December, 1962. |          |     |                          |                      | Component: E-W. |  |  |  |  |  |  |  |  |  |
| 15                          | 00       | 3   | 0.4                      | 7                    | 24              | 00       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 0.8                      | 2                    |                 | 06       | 1   | 0.2                      | 3                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | 3   | 1.2                      | 7                    |                 | 12       | ... | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 0.8                      | 2                    |                 | 18       | 1   | 0.2                      | 3                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | 3   | 1.2                      | 7                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | 3   | 0.4                      | 2                    | 25              | 00       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 1.2                      | 7                    |                 | 06       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
| 16                          | 00       | 3   | 0.4                      | 2                    |                 | 12       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 0.8                      | 7                    |                 | 18       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | 3   | 0.4                      | 2                    | 26              | 00       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 0.8                      | 7                    |                 | 06       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | ... | -                        | -                    |                 | 12       | 1   | 0.2                      | 5                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | 3   | 0.4                      | 2                    |                 | 18       | 1   | 0.2                      | 7                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 0.8                      | 7                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
| 17                          | 00       | 3   | 0.4                      | 2                    | 27              | 00       | ... | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             |          |     | 0.4                      | 7                    |                 | 06       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | ... | -                        | -                    |                 | 12       | 1   | 0.2                      | 4                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | ... | -                        | -                    |                 | 18       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | ... | -                        | -                    | 28              | 00       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
| 18                          | 00       | ... | -                        | -                    |                 | 06       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | ... | -                        | -                    |                 | 12       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | ... | -                        | -                    |                 | 18       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | ... | -                        | -                    | 29              | 00       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
| 19                          | 00       | ... | -                        | -                    |                 | 06       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | ... | -                        | -                    |                 | 12       | ... | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | -   | -                        | -                    |                 | 18       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | -   | -                        | -                    | 30              | 00       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
| 20                          | 00       | -   | -                        | -                    |                 | 06       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | -   | -                        | -                    |                 | 12       | 1   | 0.2                      | 3                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | -   | -                        | -                    |                 | 18       | 1   | 0.2                      | 3                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | -   | -                        | -                    | 31              | 00       | 1   | 0.4                      | 3                    |                 |  |  |  |  |  |  |  |  |  |
| 21                          | 00       | 1   | 0.4                      | 3                    |                 | 06       | 1   | 0.4                      | 4                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | 1   | 0.4                      | 3                    |                 | 12       | ... | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | 1   | 0.4                      | 3                    |                 | 18       | 0,0 | -                        | -                    |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | 1   | 0.4                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
| 22                          | 00       | 1   | 0.4                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | 1   | 0.2                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | 1   | 0.2                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | 1   | 0.4                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
| 23                          | 00       | 1   | 0.4                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 06       | 1   | 0.2                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 12       | 1   | 0.2                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |
|                             | 18       | 1   | 0.2                      | 3                    |                 |          |     |                          |                      |                 |  |  |  |  |  |  |  |  |  |

| Station | Time | Phase | Amplitude | Period | Frequency | Velocity | Acceleration | Displacement |
|---------|------|-------|-----------|--------|-----------|----------|--------------|--------------|
| 10      | 00   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | P     | 1.2       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | S     | 0.5       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | L     | 1.1       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | S     | 1.2       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 00   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 10   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 20   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 30   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 40   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | P     | 0.4       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |
| 10      | 50   | S     | 0.8       | 0.2    | 5.0       | 0.0      | 0.0          | 0.0          |