

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

1956

Complete



Published under the direction of  
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Director General of Observatories

## Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECOND	STATIC MAGNIFICA- TION	DAMPING RATIO	PAPER SPEED IN mm/min.
BOKARO	Wood-Anderson	E	0.8	960	0.8	
	Wood-Anderson	N	0.8	1000	0.8	
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMBAY	Milne-Shaw	N	12.0	350	30:1	16.0
	Milne-Shaw	E	12.0	350	3:1	8.0
	Sprengnether Microseismograph	E	7.0			30.0
CHATRA	Milne-Shaw	E	12.0	250	20:1	16
	Benioff Vertical	Z	$T_0=0.72$ $T_g=0.45$		Critical	60
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	E	12.0	250	20:1	8.0
DEHRA DUN	Wood-Anderson	N	0.8	800	60:1	50
	Wood-Anderson	E	0.8	950	60:1	60
	Milne-Shaw	N	12.0	250	20:1	8
HYDERABAD	Milne-Shaw	E	12	250	20:1	8
	Milne-Shaw	N	12	250	20:1	8
KODAIKANAL	Milne-Shaw	E	10	250	20:1	8
MADRAS	Sprengnether	E	$T_0=T_g=7.3$			30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Wood-Anderson	N	4	900	20:1	16
	Wood-Anderson	E	2	1770	30:1	50
	Omari-Ewing	E	30	30	1	12
POONA	Sprengnether Vertical	Z	$T_0=T_g=1.5$			30
SHILLONG	Milne-Shaw	N	12.0	250	20:1	8
	Wood-Anderson	E	$T_0=4.0$	1100	20:1	16
	Benioff Vertical	Z	$T_g=0.18$			60
	Sprengnether	E	$T_0=T_g=7.6$			30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km	
January 1956						
01	SHILLONG	Z	ePg	05 58 43		Slight local
01	SHILLONG	Z	e	07 26 35		Feeble
01	SHILLONG	Z	e	07 32 05		Slight, near.
01	SHILLONG	Z	e	07 54 57		Slight, near.
01	SHILLONG	Z	e	07 57 58		Slight, near
01	SHILLONG	Z	eP	09 08 04		Slight
			i	08 07		
01	SHILLONG	Z	eP	09 13 59		Slight, near
01	SHILLONG	Z	iP	12 05 16		Slight, Compression
01	SHILLONG	Z	eP	14 13 43		Slight
			i	14 42		
01	SHILLONG	Z	e	15 43 31		Feeble.
01	SHILLONG	Z	eP	15 58 09		Slight, near
			i	16 00 07		
		Z E	e	01 25		
01	SHILLONG	Z	e	16 12 25		Slight
01	SHILLONG	Z	iPg	17 47 23	20	Slight.
			eSg	47 25		Compression
01	CHATRA	Z	iP	18 33 00	400	Slight
			iS	33 44		
	SHILLONG	Z	eP	18 33 39		Slight, near
		N	i			
		E	e	34 42		
01	DEHRA DUN	N.E	e	19 43 02		Tremor
01	SHILLONG	Z	e	21 00 31		Slight, near.
01	SHILLONG	Z	e	22 42 36		Slight
01	SHILLONG	Z	iP	22 52 27		Slight, compression
01 Epc: 8 5°S, 130°E. Timor Island Region. h = 200 KmCa.						
K = 23h 08m 47s (Shillong)						
7°S 129°E h = 150 Km.						
H = 23h 08m 28s (U.S.C.G.S)						
Magnitude: 6½ (U.S.S.R), 6 (Pasadena).						
	SHILLONG	Z.E	iP	23 17 07	5380	Compression
		N	eL			
		E	pP	17 44		
		N.E	PcP	18 38		
		E	PP	18 49		
			PPP	19 34		
		Z.E	PcS	22 05		
		Z.N.E	iS	25 50		
			PPS	24 06		
		N.E	sS	25 00		
			ScS	26 39		
			SS	27 23		
			SSS	28 39		
			Lr	30 04		
	COLOMBO	E	P	23 17 22	5330	
			S	24 20		
			L	28 04		
			M	29 57		Amp: 1.0 mm
	BOKARO	N.E	eP	23 17 36		Slight. Phases not clear
			PP	18 19		
			i	24 43		
	MADRAS	E	iP	23 17 37	5720	Ground movement towards East
			pP	18 14		
			PcP	18 33		
			PP	19 22		
			PPP	20 27		
			iS	24 41		
			PS	24 47		
			PPS	25 01		
			SS	25 55		
			ScS	27 09		
			SS	28 28		
			Lq	29 53		
	KODAIKANAL	E	e	23 17 42		Tremor

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km	
January 1956						
01	HYDERABAD	E	iP	23 17 57	5850	Ground movement towards East
Contd.				i	18 33	
			PcP	18 55		
			PP	19 42		
			iS	25 24		
			ScS	27 28		
			SS	29 15		
			L	33 30		
			M	41 24		Per 8 secs.
						U 2
	POONA	Z.E	eP	23 18 30	6240	Ground movement towards West
			PcP	19 09		
			PP	20 38		
			PPP	21 55		
			eS	26 19		
			PS	26 31		
			ScS	27 38		
			SS	30 01		
	NEW DELHI	N	eP	23 18 31	6330	
			PcP	19 07		
			iS	26 25		
			ScS	28 04		
			SS	30 10		
	BOMBAY	N.E	eP	23 18 33	6480	Deep focus
		E	eP	18 27		
			i	19 15		
			i	19 18		
			i	19 51		
			PP	20 55		
		N	PPP	22 10		
		E	PPP	22 15		
			PcS	23 06		
			i	23 44		
		N	iS	26 32		
		E	iS	26 35		
		N	PS	26 50		
		E	PS	26 53		
			PPS	27 04		
			ScS	27 47		
		N	ScS	27 48		
		E	SSS	33 05		
	DEHRA DUN	N.E	eP	23 18 40	6510	
		N	PP	20 47		
			iS	26 44		
			PS	26 54		
			PPS	27 15		
			SS	30 44		
			Lq	33 32		
			Lr	36 09		
			M	40 54		
02 Epc: 8°N, 95°E. Nicobar Islands Region Indian Ocean						
H = 01h 36m 15s (U.S.C.G.S)						
	MADRAS	E	iP	01 33 48	1420	Slight Ground movement towards East
			PP	33 59		
			FPP	34 09		
			Lq	36 08		
			iS	36 13		
			SS	36 32		
			M	37 37		
	SHILLONG	Z.N.E	iP	01 34 24	1820	Slight, near Rarefaction
		E	i	34 31		
			eS	37 26		
	POONA	Z	iP	01 35 20		Very feeble shock Phases not clear
			e	35 51		
			e	39 09		
	BOMBAY	E	eP	01 35 30	2550	Feeble Record over run in Milneshaw N.S. Compt
			e	36 09		
			eS	39 37		
	DEHRA DUN	N.E	e	01 36 00		Slight Phases not clear
			i	41 02		
02	SHILLONG	Z	iP	01 42 34		Slight Compression
02	SHILLONG	Z	e	04 38 08		Slight
02	SHILLONG	Z	eP*	05 29 14	120	Slight
			Pg/P	29 15		
			PP	29 21		
			Pg	29 29		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km	REMARKS	
January 1956							January 1956							
02	SHILLONG	Z	iPg Sg	06 05 31 05 33	20	Slight	04	SHILLONG	Z	eP	10 49 51		Compression	
02	SHILLONG	Z	ePg iSg	07 28 41 28 43	20	Slight	04	SHILLONG	Z	iP	12 03 43		Slight. Compression	
02	SHILLONG	Z	e	07 58 18		Slight	04	SHILLONG	Z	iP	14 26 47		Slight. Rarefaction	
02	SHILLONG	Z	e	13 02 54		Slight	04	SHILLONG	Z	e	17 54 02		Slight tremor	
02	SHILLONG	Z	e	14 30 30		Slight	04	SHILLONG	Z	eP	23 40 03		Slight. Compression	
02	SHILLONG	Z	e	15 06 26		Slight	05	SHILLONG	Z	e	17 06 15		Slight Tremor	
02	SHILLONG	Z	e	17 31 03		Slight	05	SHILLONG	Z	eP	19 08 33		Slight. Rarefaction	
02	SHILLONG	Z	iP/P* Pg Z,N,E eSg/S*	18 35 50 35 51 36 09	150	Slight. Compression.	05	SHILLONG	Z	e i	19 39 41 40 15		Slight. Compression	
	CHATRA	Z	iPg iSg	18 36 42 36 56	100	Slight	05	SHILLONG	Z	eP	22 40 18		Slight. Compression	
02	SHILLONG	Z	iP	19 44 25		Slight.Compression	06	SHILLONG	Z	e	01 46 54		Slight. Compression	
02	SHILLONG	Z	eP	21 24 41		Slight.	06	SHILLONG	Z	e	02 52 50		Slight. Compression	
02	SHILLONG	Z	ePg eSg	21 49 37 49 44	60	Slight	06	SHILLONG	Z	e	05 56 13		Tremor	
02	SHILLONG	Z	e	22 53 31		Feeble	06	SHILLONG	Z	e	07 10 28		Tremor	
03	SHILLONG	Z	eP	00 04 47		Slight	06	SHILLONG	Z	e	07 10 28		Tremor	
03	SHILLONG	Z	iPg eSg	00 05 40 05 53	110	Slight	06	POONA	Z	eP	12 24 09		Tremor	
03	SHILLONG	Z	eP/P* Pg PP iSg	00 29 33 29 34 29 37 29 48	130	Slight		SHILLONG	Z	iP	12 25 20		Rarefaction	
03	SHILLONG	Z	iPg PP S* Sg	04 20 59 21 07 21 11 21 12	110	Slight	06	SHILLONG	Z	e	13 34 12		Compression	
03	SHILLONG	Z	iP iPg PP PPP iSg/S* SS SSS	05 04 24 04 26 04 31 04 37 04 45 04 56 05 06	170	Slight	06	DEHRA DUN	N,E	e	14 58 41		Tremor	
	CHATRA	Z	iP iS	05 05 24 06 42	750	Slight		SHILLONG	Z	e	14 59 33		Rarefaction	
03	CHATRA	Z	ePg iSg	11 31 09 31 22	100	Feeble	06	SHILLONG	Z	iP	18 02 44		Rarefaction	
03	Epc: 48°N, 155°E. Kurile Islands. - H = 15h 40m 55s (U.S.C.G.S) Magnitude: 6 (Roma).							06	POONA	Z	eP	18 04 15		Tremor
	POONA	Z	eP N PcP eS PS PPS	15 52 22 52 45 16 01 39 01 55 02 17	7910	Slight. Other phases not clear.	06	SHILLONG	Z	eP	18 15 41		Rarefaction	
	MADRAS	E	eP eSP	15 52 22 16 01 36	7860	Slight. Other phases not clear	06	SHILLONG	Z	eP	20 16 53 i 17 27		Compression	
	BOMBAY	E	eP N eP E eS N eS E PPS e M	15 52 25 52 30 16 01 42 01 45 02 26 02 45 20 31	7870	Per.: 20 secs. Δ = 5	06	SHILLONG	Z	e	21 03 54		Compression	
		N	M	20 47		Per.: 19 secs Δ = 5	06	SHILLONG	Z	iP	22 33 07		Compression	
	DEHRA DUN	N,E	e	16 01 14		Slight. Phases not clear.	06	BOMBAY	E	e M	22 33 54 35 20 41 24 44 16		Slight	
	COLOMBO	E	e L M	16 02 24 28 31 29		Amp.: 0.4 mm	06	POONA	Z	eP	22 35 21		Tremor	
03	BOKARO	N,E	e	16 58 56 17 00 56		Feeble	07	CHATRA	Z	ePg iSg	08 15 05 15 17	90	Feeble	
							07	CHATRA	Z	iPg iSg	08 37 09 37 22	100	Feeble	
							07	DEHRA DUN	N,E	e	09 56 28		Tremor	
							07	SHILLONG	Z	iP	10 27 10		Compression	
								POONA	Z	eP	10 28 42		Tremor	
							07	SHILLONG	Z	iP i	10 35 30 36 08		Rarefaction	
								BOMBAY	E	e M	10 39 17 11 10 --		Slight. Distant.	
							07	SHILLONG	Z	eP	10 43 28		Compression	
							07	SHILLONG	Z	eP	16 53 31		Rarefaction	
								POONA	Z	eP	16 54 25		Tremor	
							07	DEHRA DUN	N,E	e i	17 07 18 08 08		Feeble Phases not clear	





DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
				h. m. s.	km						h. m. s.	km	
January 1956							January 1956						
11 SHILLONG	N, E	iS		06 17 30			11 SHILLONG	Z	e		15 15 18		Slight
Contd.		SS		18 00			11 SHILLONG	Z	e		15 59 38		Slight
		Lr		18 25			11 SHILLONG	Z	e		19 49 11		Slight
		M		20 02		$\mu = 60$	11 SHILLONG	Z	eP		20 43 57		Slight
BOKARB	N, E	iP		06 14 15	2070	Ground movement towards North and West	11 SHILLONG	Z	e		21 02 41		Slight
		PP		14 34			11 SHILLONG	Z	eP		21 22 34		Slight
		PPP		14 47									
		iS/Lq		17 40									
		SS		18 16									
		SSS		18 33									
		Lr		18 40									
		M		20 23		Per: 18.7 secs $\mu = 39.4$							
HYDRABAD	E	iP		06 14 17	2130	Ground movement towards West	DEHRA DUN	N, E	eP		22 18 19		Slight. Other phases not clear
		PP		14 26							20 19		
		iS		17 48							20 33		
		SS		17 58							20 43		
		L		19 04							21 33		
		M		21 22		Per: 21.4 secs $\mu = 26$	BOMBAY	E	eP		22 19 18	1400	Slight
POONA	Z, E	iP		06 15 09	2580	Ground movement towards North and West. Compression.		N	eP		19 24		
		PP		15 31				E	PPP		19 31		
		PPP		15 54					Lq		21 33		
		iS		19 18					eS		21 40		
		Lq		19 37					SSS		22 05		
		SSS		20 11					M		24 --		
		Lr		20 43			POONA	Z	eP		22 19 23	1420	Feeble. Phases not clear
		M		22 30		Per: 18.7 secs $\mu = 59.7$			iS		21 47		
		ScS		26 19					e		22 13		
BOMBAY	N, E	iP		06 15 22	2670		BOKARO	N, E	eP		22 20 12	1960	Slight
	N	e		15 42					e		22 53		
		PP		15 53					e		23 08		
		PPP		16 14					S		23 27		
	N, E	iS		19 37					Lr		23 31		
	N	Lq		20 22					M		24 46		
		SS		20 34			SHILLONG	Z, E	iP		22 20 55	2330	Slight
		SSS		20 46				N	eP		21 16		
		Lr		21 16		Per: 17.5 secs $\mu = 40$		E	PP		21 28		
		M		25 22				N, E	eS		24 44		
NEW DELHI	N	eP		06 15 40	3050			E	SS		25 20		
		PPP		16 46				N, E	Lr		26 10		
		iS		20 20					M		27 26		
		i		20 58			MADRAS	E	eP		22 21 14	2410	Slight. Beginning doubtful
		i		22 19					e		24 34		
		Lr		23 05					e		24 56		
		M		25 37					S		25 11		
DEHRA DUN	N, E	eP		06 15 55	3100		HYDRABAD	E	M		22 24 35		Per: 5.5 secs $\mu = 7$
	N	PP		16 34									
		PPP		17 03			11 SHILLONG	Z	e		23 57 40		Slight
		iS		20 38			12 SHILLONG	Z	e		00 06 11		Slight
		Lq		22 01			12 SHILLONG	Z	e		00 59 25		Slight
		SS		22 14			12 SHILLONG	Z	eP		03 14 34	130	Slight
		SSS		22 34				N, E	iP		17 29		
		Lr		23 23				E	iS		15 07		Compression
		M		25 02		Per: 17.5 secs $\mu = 53.8$		N	eS		16 58		
11 SHILLONG	Z, E	iP		06 34 59		Slight, near Compression.	CHATRA	Z	iP		03 15 35	760	Slight
11 SHILLONG	Z	eP		06 38 27		Slight, near.			iS		16 54		
11 SHILLONG	Z, E	iP		07 15 00		Slight, near Rarefaction.	12 SHILLONG	Z	eP		03 54 17		Slight
POONA	Z	iP		07 15 55			12 SHILLONG	Z	eP		04 50 05		Slight
11 CHATRA	Z	iP		10 31 19	130	Feeble	12 SHILLONG	Z	e		05 54 37		Slight
		iS		31 36				E	e(M)		06 30 57		Disent
11 SHILLONG	Z	eP		10 38 49		Slight, near	BOMBAY	E	e		06 03 41		Surface waves.
11 SHILLONG	Z	eP		12 05 52		Slight, near Compression	12 BOMBAY	E	e		06 17 19		
	Z, E	i		05 53					e		24 43		
		i		06 15			12 SHILLONG	Z	e		06 24 18		Slight
POONA	Z	e		12 07 16		Tremor	12 SHILLONG	Z	eP		07 48 37		Slight, near.
11 SHILLONG	Z	e		12 41 29		Slight	12 SHILLONG	Z	eP		11 40 35		Slight. Disent
11 SHILLONG	Z	e		13 38 41		Slight			e		57 51		
11 SHILLONG	Z	e		14 54 53		Slight							

DATE STATION COMPT. PHASES Loc. M. T. REMARKS  
 (hh:mm:ss) (lat:lon:alt)

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12	SHILLONG	Z	e	15:44:27	Slight
12	SHILLONG	Z	e	15:57:09	Slight
12	SHILLONG	Z	e	16:09:39	Slight
12	SHILLONG	Z	e	16:45:54	Slight
12	SHILLONG	Z	e	17:00:03	Slight
12	SHILLONG	Z	e	17:21:32	Slight
12	SHILLONG	Z	e	17:23:16	Slight, near.
12	SHILLONG	Z	e	19:45:02	Slight, near.
			i	19:45:19	
12	SHILLONG	Z	e	22:03:49	Slight, near.
12	SHILLONG	Z	e	22:38:15	Slight
12	SHILLONG	Z	e	22:44:10	Slight, near.
13	SHILLONG	Z	iP <sub>g</sub>	00:56:57	20: Slight
			eS <sub>g</sub>	00:56:59	

13. Ept: 57°N, 163°E. Near East Coast of Kamchatka  
 H<sub>0</sub> = 05h 27m 13s (U.S.C.G.S)  
 Magnitude: 5.4 (Moskva).

SHILLONG	Z	iP	03:37:13	7110	Slight
	N,E	eP			
	Z,N,E	PcP	03:37:45		Compression
	E	PPP	03:40:55		
	N	eS	03:45:45	49	
	E	PS	03:46:07		
	N,E	ScS	03:46:47		
	E	SSS	03:52:24		
	N,E	M	03:57:33		

BOKARO	E	eP	03:38:13	7220	Feeble
		iS	03:46:55		
		i	04:01:43		
		i	04:09:43		

POONA	Z	eP	03:39:22	8360	Slight
	N	PP	03:42:17		
	E	PPP	03:44:07		
	E	eS	03:49:01		
	N	M	04:09:07		

BOMBAY	N,E	eP	03:39:26	8330	
	E	PcP	03:39:33		
		PPP	03:44:08		
	N,E	eS/IS	03:49:04		
	E	SKS	03:49:22		
		PS	03:49:36		
		e	03:50:15		
		SS	03:53:54		
		SSS	03:56:02		
	N	M	04:11:01		Peri=17 secs D <sub>1</sub> =4
	E	M	04:18:13		Peri=18 secs D <sub>1</sub> =3

COLOMBO	E	P	03:40:03		
		e	03:45:03		
		e	04:12:48		
		M	04:15:28		Amp=0.4 mm

HYDERABAD	E	e	03:48:43		
		M	04:07:16		Peri=16 secs D <sub>1</sub> =3

13 CHATRA	Z	eP	05:27:52	210	Slight
		iS	05:28:17		

SHILLONG	Z	iP	05:28:06	280	Slight.
		P <sub>e</sub>	05:28:10		Compression
		P <sub>g</sub>	05:28:14		
		L <sub>q</sub>	05:28:30		
		S	05:28:43		
		iS*	05:28:46		
		S <sub>g</sub>	05:28:51		
		SSS	05:29:07		

13 SHILLONG	Z,E	eP	06:29:22		Slight; distant
	N,E	e	06:39:52		Compression

COLOMBO	E	e(S)	06:29:53		
		L	07:02:08		
		M	07:05:08		Amp=0.6 mm

DATE STATION COMPT. PHASES Loc. M. T. REMARKS  
 (hh:mm:ss) (lat:lon:alt)

January 1956

13 BOMBAY	E	e	06:33:30		Slight. Phases
		e	06:33:49		not clear
		e	06:40:54		
		e	06:46:50		
		e	06:50:54		

Contd.

KODAIKANAL	E	e	06:40:12		Tremor
13 SHILLONG	Z	eP	09:10:18		Slight
13 SHILLONG	Z	iP	11:03:12		Slight, near
					Rerefraction
CHATRA	Z	iP	11:04:07	780	Slight
		iS	11:05:28		
13 SHILLONG	Z	eP	12:26:33		Slight
13 SHILLONG	Z	iP	15:39:33		Slight. Rerefraction
13 SHILLONG	Z	eP	15:47:09		Slight
13 SHILLONG	Z	eP	18:43:46		Slight
13 SHILLONG	Z	eP	23:08:06		Slight
13 SHILLONG	Z	eP	23:43:03		Slight

14 SHILLONG	Z	iP/P*	03:06:32	140	Slight
		P <sub>g</sub>	03:06:34		Compression
		PP	03:06:38		
		eS <sub>g</sub> /S*	03:06:49		
		SS	03:06:58		

14 SHILLONG	Z	eP	07:33:43		Slight
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DEHRA DUN	N,E	e	07:34:33		Tremor
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14 SHILLONG	Z	iP	08:14:35		Slight.
					Compression

14 SHILLONG	Z	eP	08:54:22		Slight, near.
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14 SHILLONG	Z	eP	12:00:26		Slight, near.
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14 KODAIKANAL	E	e	13:32:32		Tremor
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SHILLONG	Z	e	13:34:15		Slight, near.
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14. Ept: 51°N, 173°W. Fox Islands, Aleutian Islands.  
 H<sub>0</sub> = 14h 08m 41s (U.S.C.G.S)  
 51°N, 173°W. H<sub>0</sub> = 14h 08m 48s (B.C.I.S)  
 Magnitude: 6.4 (Moskva), 6 (Pasadena),  
 5.9 (Roma, Uppsala, Kiruna).

SHILLONG	Z,N,E	eP	14:20:19	8220	Slight
	E	PcP	14:20:28		Compression
		i	14:22:46		
	N,E	eS	14:29:51		
		SKS	14:30:03		
		PS	14:30:28		
		PPS	14:30:55		
	E	L <sub>q</sub>	14:40:11		
		L <sub>r</sub>	14:42:55		
	N,E	M	14:48:25		

DEHRA DUN	N,E	eP	14:20:42		Slight. Phases
		i	14:30:45		not clear

BOKARO	N,E	eP	14:20:53	8890	Slight
		SKS1	14:30:42		
		iS	14:31:01		

POONA	Z	iP	14:21:42	10330	Slight
	N	PPP	14:25:19		
		SKS1	14:32:28		
		PS	14:32:47		
	Z	e?	14:35:14		
	N	SSS	14:42:42		
		M	14:58:04		

BOMBAY	N,E	eP	14:21:46		Slight
		e	14:32:12		
		e	14:32:49		
	N	M	15:04:28		Peri=17 secs D <sub>1</sub> =4

14 MADRAS	E	e	14:32:30		Distant
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COLOMBO	E	P	14:32:55		
		L	15:03:30		
		M	15:08:55		Amp=0.5 mm

SHILLONG	Z	iP	14:33:09		Slight. Compression
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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS
January 1956	14 SHILLONG	Z	iPg ePg iSg	14 43 20 43 23	30	Slight Compression	16/17 Epc: 1/4° S, 80 1/2° W. Near Coast. of Ecuador. Heavy property damage at Portoviejo and Bahá de Caraquez. H: 23h. 37m. 37s. (U.S.C.G.S) Magnitudes: 7 1/2 (Pasadena), 7-7 1/2 (Skalnate Pleso), 7.0 (Uppsala, Kiruna, Roma, Murbanova), 6.8 (Takabaya).						
	14 SHILLONG	Z	e	15 46 37		Feeble	NEW DELHI N N ePKP 23 57 19 16050 iPP 00 00 23 PKS 01 01 07 SKSP 10:45 SS 19:24						
	14 SHILLONG	Z	eP	17 49 07		Slight	DEHRADUN N, E ePKP 23 57 19 N i 00 00 31 i 10 46 i 19 17						
	14 SHILLONG	Z	eP	18 12 56		Slight	POONA Z PKP1 23 57 25 e 00 03 57 e 11 17 e 37 51 e 44:33 e 01 06 17						
	14 SHILLONG	Z	e	19 20 25		Slight	BOMBAY N, E ePKP1 23 57 29 16730 PKP2 57 53 N PKS1 00 01 00 E PKS1 01 05 N, E SKS2 04 24 i 16 40 SS 20 33 N M 01 10 54 E M 11 38						
	14 SHILLONG	Z	eP	19 24 40		Slight, near	SHILLONG ZNE ePKP1 23 57 31 17720 PKP2 57 56 N, E PKS1 00 01 07 PP 01 30 SKS2 04 48 PP 05 44 SKSP 11 48 PPS 14 14 SS 19 44 SSS 26 14 Lq 42 25 Lr 49 37 M 59 56						
	14 SHILLONG	Z	e	21 11 24		Slight	BOKARO N, E ePKP1 23 57 35 i 57 54 i 00 01 35 i 08 09 i 11 46						
	14 SHILLONG	Z	ePg iSg	21 15 30 15 34	30	Slight	COLOMBO E PKP1 23 57 42 i 00 02 00 e 57 20 M1 01 05 20 M2 08 10						
	14 SHILLONG	Z	e	21 53 23		Slight	MADRAS E ePKP1 23 57 49 i 00 01 47 i 02 17 i 12 17						
	14 SHILLONG	Z	eP	21 59 18		Slight	HYDERABAD E ePKP 23 57 55 e 00 01 09 i 01 31 e 04 57 i 11 42 e 21 11 e 26 18 e 31 13 e 59 22 M 01 00 02						
	14 SHILLONG	Z	eP	22 38 06		Slight Compression	17 BOMBAY N, E e 09 33 13						
	14 SHILLONG	Z	eP	23 07 40		Slight, near	17 SHILLONG Z eP 16 29 29						
	15 DEHRA DUN	N, E	e	00 51 36		Tremor	17 DEHRA DUN N, E e 17 48 05						
	15 SHILLONG	Z	iP	03 01 14		Slight Compression	SHILLONG Z eP 17 48 34						
	15 SHILLONG	Z	e	04 18 48		Slight							
	15 SHILLONG	Z	e	08 59 09		Slight							
	15 SHILLONG	Z	e	12 35 54		Slight							
	15 SHILLONG	Z	e	12 51 38		Slight							
	POONA	Z	eP	12 54 39		Slight							
	15 SHILLONG	Z	iPg eSg	15 09 17 09 24	60	Slight Rarefaction							
	15 SHILLONG	Z	eP	15 55 30		Slight							
	15 SHILLONG	Z	eP	19 37 52		Slight							
	15 SHILLONG	Z	eP	20 49 30		Slight							
	15 SHILLONG	Z	iP	21 13 05		Slight Rarefaction							
	15 SHILLONG	Z	e	23 11 22		Slight							
	16 SHILLONG	Z	iP	00 16 53		Slight Rarefaction							
	16 SHILLONG	Z	eP	01 27 21		Slight, near							
	16 SHILLONG	Z	iP	02 10 58		Slight, rarefaction							
	16 SHILLONG	Z	iP	07 00 04		Slight, near. Compression							
	16 SHILLONG	Z	iPg/P* iSg/S*	07 31 10 31 25	120	Slight Compression							
	16 SHILLONG	Z	eP	07 52 33		Slight, near.							
	16 SHILLONG	Z	eP	09 50 53		Slight, near							
	16 DEHRA DUN	N, E	e	12 48 55 49 33		Feeble. Phases not clear							
	16 SHILLONG	Z	iP	14 37 49		Slight, Compression							
	16 SHILLONG	Z	eP	16 06 46		Slight, near							
	16 SHILLONG	Z	eP	16 48 46		Slight							
	16 SHILLONG	Z	eP	18 58 29		Slight							
	16 SHILLONG	Z	iP	18 59 01		Slight, Compression							
	16 DEHRA DUN	N, E	e	19 51 52		Tremor							
	16 SHILLONG	Z	eP	20 20 37		Slight							
	16 SHILLONG	Z	eP	22 13 47		Slight, near.							



DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km	
January 1956						
21	DEHRA DUN Contd.	N, E N	eP PP i iS i M	17 39 21 39 33 42 03 42 19 42 31 43 47	1780	Feeble
	MADRAS	E	iP PP PPP iS SS SSS M	17 39 28 39 39 39 51 42 44 43 08 43 21 45 10	1970	Slight. Initial ground movement towards 'West'
	POONA	Z E	eP PP PPP eS SS SSS M PcS	17 40 03 40 17 40 32 43 45 44 16 44 31 45 26 47 34	2240	Slight
	BOMBAY	N, E E N E N E N, E E N E	eP e PP PP PPP eS Lq SS SSS Lr M	17 40 14 40 30 40 31 40 37 40 42 40 48 44 00 44 21 44 33 44 52 45 18 47 --	2290	Slight. 'M' not well developed.
	COLOMBO	E	P S M	17 40 51 44 31 48 06	2220	Amp. ≈ 0.4 mm
22	CHATRA	Z	eP iS	08 24 32 25 57	820	Feeble
23	BOMBAY	N, E E N	eP eS M	03 59 02 04 08 27 33 35	8070	Per. ≈ 17 secs M = 4 Per. ≈ 15 secs M = 4
	POONA	E	e	04 07 30		Very feeble shocks. Phases not clear
	HYDERABAD	E	M	04 27 31		Per. ≈ 21 secs M = 9
	COLOMBO	E	L M	04 33 20 40 10		Amp. ≈ 0.5 mm
23	Epc: 7°N, 123°E. Mindanao Islands, Philippines H: 07h 36m 14s. (U.S.C.G.S)					
	SHILLONG	Z	eP e e	07 42 25 44 04 47 16		Slight
	DEHRA DUN	N, E	e	07 44 08		Tremor
	POONA	Z	iP	07 44 16		Tremor
	BOMBAY	E N E	i e e	07 44 21 50 07 50 48		Slight
23	SHILLONG	Z	eP	23 07 03		Slight
23	SHILLONG	Z	eP	23 54 56		Slight
24	SHILLONG	Z	e	09 01 43		Tremor
24	SHILLONG	Z	e i i	11 06 37 06 58 07 29		Compression
24	SHILLONG	Z	iP	12 24 08		Compression
	POONA	Z	e	12 26 03		Tremor
26	SHILLONG	Z	e	16 38 00		Tremor
January 1956						
24	POONA	Z	e	20 28 44		Tremor
24	SHILLONG	Z	iP	21 40 27		Compression
24	SHILLONG	Z	i	23 11 38		Compression
25	BOMBAY	N	e e e e	07 26 09 33 34 08 05 24 07 39		Distant
25	SHILLONG	Z	e	11 18 28		Slight
25	SHILLONG	Z	e	15 42 10		Compression
25	DEHRA DUN	N, E	e	16 25 08		Feeble. Phases not clear
	SHILLONG	Z	e	16 27 49		Tremor
	POONA	Z	e	16 30 54		Tremor
26	SHILLONG	Z	i	01 15 37		Compression
27	CHATRA	Z	iP iS	02 31 53 32 51	550	Feeble
27	Epc: 42°N, 84°E. Sinkiang Province, China. H: 10h 06m 52s. (Shillong) 41°N, 53°E. H: 10h 06m 53s. (U.S.C.G.S) Magnitude: 5. (Moskva).					
	DEHRA DUN	N, E	e i i	10 09 51 12 07 13 36 15 22		Slight. Phases not clear
	SHILLONG	Z, N, E	eP PP PPP iS/Lq SS SSS Lr M	10 11 01 11 16 11 26 14 17 14 37 14 41 14 58 16 27	1970	Per. ≈ 15 secs M = 4
	BOKARO	N	iP eS M	10 11 09 14 54 18 58	2280	Slight
	BOMBAY	N	eP eS M	10 12 18 16 46 24 32	2880	Per. ≈ 11 secs. M = 1
	POONA	Z E	eP PP eS Lq Lr M	10 12 19 12 57 16 39 17 00 18 21 20 14	2740	Slight
	KODAIKANAL	E	e	10 21 24		Tremor
27	KODAIKANAL	E	e	13 54 18		Tremor
27	COLOMBO	E	P S L M	14 03 42 12 30 31 -- 35 35	7360	Amp. ≈ 0.9
27	SHILLONG	Z, E	iP i i e i	14 14 02 17 09 18 52 19 03 19 26		Slight Rarefaction
	BOMBAY	N	e e e	14 04 30 05 45 10 11		Feeble, distant
	POONA	Z	e	14 15 53		Tremor
27	SHILLONG	Z	e	17 44 11		Slight. Compression
27	DEHRA DUN	N, E	e e	18 40 22 41 47		Feeble. Phases not clear
	SHILLONG	Z	iP	18 42 40		Compression

DATE STATION COMPT PHASE G. M. T. REMARKS					DATE STATION COMPT PHASE G. M. T. REMARKS						
January 1956					January 1956						
DATE	STATION	COMPT	PHASE	G. M. T. h.m.s. km	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T. h.m.s. km	REMARKS
28	SHILLONG	Z	i	00 49 34 50 05	Slight Compression	28	SHILLONG	Z	e	20 29 47	Tremor
28	SHILLONG	Z	i	00 54 43	Compression	28	SHILLONG	Z	e	21 28 39	Tremor
28	CHATRA	Z	eP	00 55 15 55 57	380 Feeble	28	CHATRA	Z	iP	23 14 39 14 59	160 Feeble
	SHILLONG	Z	i	00 55 54	Slight Rarefaction		SHILLONG	Z	e	23 16 00	Slight
28	SHILLONG	Z	iPg	04 56 23	60 Rarefaction	29	SHILLONG	Z	e	03 01 07	Slight Compression
			P	56 26		29	SHILLONG	Z	iP	03 45 41	Rarefaction
			Sg	56 30		29	SHILLONG	Z	e	09 37 00	Slight
			PP	56 35		29	SHILLONG	Z	iP	16 42 34	Compression
			S	56 38		29	SHILLONG	Z	iP	17 07 20	Compression
			SS	56 48		29	SHILLONG	Z	e	18 59 37	Compression
	CHATRA	Z	iP	04 57 11 57 33	180 Feeble	29	SHILLONG	Z	iP	20 56 54 56 56 56 59 57 07 57 16	170 Rarefaction
28	CHATRA	Z	iP	04 57 34 57 55	170 Feeble	CHATRA	Z	eP	20 57 37 58 24	430 Feeble	
	CHATRA	Z	iP	04 58 05 58 27	180 Feeble						
28	SHILLONG	Z	iP	06 51 26	Slight Compression	29	Epc: 21°N, 121°E. South of Formosa				
	MADRAS	E	e	06 54 16	Othe phases not clear.		- H = 22h 20m 53s (U.S.C.G.S)				
							21°N, 121°E. - H = 22h 20m 56s (B.C.I.S)				
28	Epc: 4½°S, 151½°E. New Britain. - h = 100 KmCa						Magnitude = 6½ (Pasadena).				
							- H = 07h 42m 52s (U.S.C.G.S)				
							Magnitude = 5½ (Moskva)				
	SHILLONG	Z,N,E	iP	07 53 28	7290 Moderate		SHILLONG	Z,N,E	iP	22 26 38	2930
		N,E	PcP	53 59					PP	27 19	
			PP	55 53					PPP	27 39	
			iS	08 02 13					PcP	29 48	
			PS	02 31					iS	31 10	
			PPS	03 07					Lq	32 11	
			ScS	03 31					SS	32 26	
			SS	06 25					Lr	33 34	
			SSS	09 15					M	35 47	
			Lq	10 11							
			Lr	13 20							
			M	17 22							
	BOKARO	N,E	iP	07 54 01	7800 Slight		DEHRA DUN	N,E	eP	22 28 29	4280 Moderate
			PcP	54 22			N	PPP	30 38		
			iS	08 03 12				iS	34 25		
			PS	03 31				SSS	37 36		
			PPS	03 53				Lr	38 51		
			SS	07 39				M	41 51		
			Lq	12 54							
			Lr	16 50							
			M	23 01							
	COLOMBO	E	P	07 54 22	8440		KODAIKANAL	E	eP	22 28 57	4690
			S	08 04 05				PP	30 36		
			L	19 20				eS	35 18		
			M	24 05				PS	35 33		
								PPS	35 40		
								Lq	38 50		
								SSS	39 10		
								Lr	41 00		
								M	44 32		Per. = 20 secs μ = 10
	KODAIKANAL	E	eP	07 54 24	8550 Slight. Ground movement 'West'.		COLOMBO	E	P	22 28 58	4500
			PP	57 21				S	35 08		
			iS	08 04 12				L	45 52		
			PS	04 54				M	48 35		Amp. = 0.6 mm
			PPS	05 13							
			SS	09 12							
			M	25 12							
											Per. = 29 secs μ = 17
	DEHRA DUN	N,E	eP	07 54 48	8690 Moderate		POONA	Z	eP	22 29 05	4870 Slight
		N	PP	57 40			E	PPP	31 19		
			PPP	59 37				PcS	34 28		
			iS	08 04 43				eS	35 37		
			PPS	05 53							
			SS	09 50							
			SSS	13 19							
			M	26 56							Per. = 23 secs μ = 6
	POONA	Z	eP	07 54 55	8800 Slight	29	SHILLONG	Z	e	23 01 58	Tremor
		E	PPP	59 51		30	SHILLONG	Z	e	03 36 13	Slight
			eS	08 04 55							
			SS	10 23							
	BOMBAY	N,E	eP	07 55 00	9070 Slight	30	Epc: 38½°S, 177½°E. Near North Coast of North Island, New Zealand. - H = 08h 43m 01s (U.S.C.G.S)				
		N	eS	08 05 12			Magnitude = 6½ (Lwiro), 6½ (Pasadena),				
		E	e	11 11			6.0 (Wellington, Moskva).				
			e	11 29							

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS	
January 1956							January 1956							
30	MADRAS	E	ePKP1	08 58 53		Phases not clear	31	Epc: 4°S, 152°E. New Island. - h = 400 Km - H = 09h 17m 11s (U.S.C.G.S) Magnitude = 7-7½ (Pasadena).						
Contd.			i	09 01 38		clear.								
			e	03 54										
			e	07 18										
	KODAIKANAL	E	e	09 01 06		Phases not clear		SHILLONG	Z	P	09 27 16	7200	Slight	
	BOMBAY	E	ePKP1	09 01 28	12720				E	S	35 25			
			PP	03 14				COLOMBO	E	P	09 28 02	7500		
			e	12 01						S	36 58			
			eSS	18 18				MADRAS	E	iP	09 28 06		Slight. Ground movement 'East'	
			e	19 16		Per. = 17 secs				i	34 09		Phases not clear	
			M	47 38		$\Delta = 7$				i	37 03			
			M	49 26		Per. = 16 secs		DEHRA DUN	N,E	e	09 28 34		Slight. Phases not clear	
						$\Delta = 50$				i	37 54			
	POONA	Z	e	09 02 21		Distant shock.				i	40 24			
						Phases not clear				i	43 01			
	DEHRA DUN	N,E	ePKP1	09 02 32				POONA	E	eP	09 28 42	8240	Slight. Other phases not clear	
		N	PPP	05 38						iS	38 15			
			e	12 25				BOMBAY	N,E	eP	09 28 49	8310	Slight. Deep focus.	
			e	13 24					N	e	29 20			
			e	13 36					E	e	30 10			
			e	17 54					N,E	eS	30 26			
			e	20 33					N	e	39 17			
			M	34 40				31	DEHRA DUN	N,E	e	14 26 03		Tremor
	COLOMBO	E	e	09 06 34				31	DEHRA DUN	N,E	e	14 46 57		Tremor
			e	33 --		Amp. = 1.1 mm		31	MADRAS	E	e	18 13 40		Moderate. Distant
			M	37 04										
	HYDERABAD	E	M	09 42 14		Per. = 18 secs								
						$\Delta = 7$								
30	SHILLONG	Z	i	14 08 39		Rarefaction								
30	SHILLONG	Z	i	14 17 06		Rarefaction								
30	SHILLONG	Z	iP	15 07 16		Slight Rarefaction								
30	CHATRA	Z	eP	21 02 25	140	Feeble								
			iS	02 43										
	SHILLONG	Z	i	21 03 07		Slight								
30	SHILLONG	Z	e	22 40 25		Slight								
31	SHILLONG	Z	iP	00 51 23		Slight Rarefaction								

*Earthquake Reports  
(Non Instrumental Reports)*

The following is the list of earthquakes that were reported by Voluntary Observers from different places during the month of January 1956.

PLACE AT WHICH FELT	DATE IN G. M. T.	TIME IN G. M. T. h. m.	No. OF SHOCKS	DURATION OF SHOCKS SECS	INTENSITY IN R.F. SCALE.	REMARKS
SHILLONG	02	19 35	1	3	IV	
SHILLONG	08	02 50	1	3	IV	
SURI (Dist. Birbhum)	08	16 50	3	3	IV	E-W movement
SHILLONG	14	14 42	1	5	IV	
SHILLONG	19	14 05	1	3	IV	
SHILLONG	20	16 13	1	2	II	

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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



Published under the direction of  
Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

| STATION    | INSTRUMENTS   | COMPONENT | PERIOD<br>IN<br>SECOND   | STATIC<br>MAGNIFI-<br>CATION | DAMPING RATIO | PAPER SPEED<br>IN<br>mm/min |
|------------|---------------|-----------|--------------------------|------------------------------|---------------|-----------------------------|
| BOKARO     | Wood-Anderson | E         | 0.8                      | 960                          | 0.8           | 60.0                        |
|            | Wood-Anderson | N         | 0.8                      | 1000                         | 0.8           | 60.0                        |
|            | Milne-Shaw    | N         | 12.0                     | 250                          | 20:1          | 16.0                        |
|            | Milne-Shaw    | E         | 12.0                     | 250                          | 20:1          | 16.0                        |
| BOMBAY     | Sprengnether  | E         | $T_0=T_g=7$ secs         | -                            | -             | 30                          |
|            | Milne-Shaw    | N         | 12                       | 350                          | 20:1          | 16                          |
|            | Milne-Shaw    | E         | 12                       | 350                          | 15:1          | 8                           |
| CHAIRA     | Benioff       | Z         | $T_0=0.7?$<br>$T_g=0.45$ | Critical                     | -             | 60                          |
|            | Milne-Shaw    | E         | 12.0                     | 250                          | 20:1          | 16                          |
|            | Wood-Anderson | E         | 1.0                      | 1000                         | 30:1          | 60                          |
| COLOMBO    | Milne-Shaw    | E         | 12.1                     | 250                          | 19:1          | 8                           |
| GHINA DUN  | Milne-Shaw    | N         | 12                       | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 0.8                      | 800                          | 60:1          | 60                          |
|            | Wood-Anderson | E         | 0.8                      | 950                          | 60:1          | 60                          |
| HYDERABAD  | Milne-Shaw    | N         | 12                       | 254                          | 20:1          | 8                           |
|            | Milne-Shaw    | E         | 12                       | 254                          | 20:1          | 8                           |
| KODAIKANAL | Milne-Shaw    | E         | 10.0                     | 250                          | 20:1          | 8                           |
| MADRAS     | Sprengnether  | E         | $T_0-T_g=7.2$            | -                            | -             | 30                          |
| NEW DELHI  | Milne-Shaw    | N         | 12                       | 320                          | 20:1          | 8                           |
|            | Omori-Ewing   | E         | 30                       | 30                           | 1             | 12                          |
| POONA      | Sprengnether  | Z         | $T_0=T_g=1.6$            | -                            | 2.1:1         | 30                          |
|            | Milne-Shaw    | N         | 12                       | 300                          | 20:1          | 8                           |
|            | Wood-Anderson | E         | 4                        | 1100                         | 20:1          | 16                          |
| SHILLONG   | Benioff       | Z         | $T_g=0.18$ $T_0=1.0$     | -                            | -             | 60                          |
|            | Sprengnether  | E         | $T_0=T_g=7.8$            | Critical                     | -             | 30                          |
|            | Milne-Shaw    | N         | 12                       | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 4                        | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | E         | 0.8                      | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | N         | 0.8                      | 1000                         | Critical      | 30                          |





| STATION                                                                                                 | COMPT PHASE | G. M. T.     | REMARKS                           | DATE | STATION   | COMPT PHASE  | G. M. T.        | REMARKS                                      |
|---------------------------------------------------------------------------------------------------------|-------------|--------------|-----------------------------------|------|-----------|--------------|-----------------|----------------------------------------------|
|                                                                                                         |             | h. m. s.     |                                   |      |           |              | h. m. s.        |                                              |
| BOMBAY                                                                                                  | Z           | eP 16 45 44  | Slight, near                      | 01   | SHILLONG  | iPg 03 07 38 | 90              | Slight Compression                           |
| 01 SHILLONG                                                                                             | Z           | e 17 14 02   | Slight                            | 01   | SHILLONG  | iSg 07 49    |                 |                                              |
| 02 POONA                                                                                                | Z           | e 20 44 00   | Tremor                            | 05   | SHILLONG  | iP 04 58 36  |                 | Slight Compression                           |
| 02 POONA                                                                                                | Z           | e 22 44 15   | Tremor                            | 05   | SHILLONG  | e 10 14 22   |                 | Slight                                       |
| 03 SHILLONG                                                                                             | Z           | ePg 00 07 13 |                                   | 05   | SHILLONG  | e 13 07 22   |                 | Slight                                       |
|                                                                                                         |             | eSg 07 17    |                                   | 05   | SHILLONG  | e 15 16 33   |                 | Slight, local                                |
| 03 DEHRA DUN                                                                                            | N, E        | e 08 19 51   | Feble, Phases not clear           | 05   | SHILLONG  | e 16 26 55   |                 | Slight Compression                           |
|                                                                                                         |             | i 11 12      |                                   | 05   | SHILLONG  | e 16 37 12   |                 | Slight Compression                           |
| 03 SHILLONG                                                                                             | Z           | eP 01 52 03  | Slight                            | 05   | SHILLONG  | e 17 13 13   |                 | Slight                                       |
| 03 Epic: 34°N, 47°E. Epicentre 300 km S. of the epicentre of the 1950 earthquake. Magnitude 5 (Moskva). |             |              |                                   | 05   | SHILLONG  | iP 19 05 48  |                 | Slight Rarefaction                           |
| DEHRA DUN                                                                                               | N, E        | eP 13 21 45  |                                   | 05   | SHILLONG  | e 21 07 19   |                 | Slight Compression                           |
|                                                                                                         | N           | PPF 22 42    |                                   | 05   | SHILLONG  | e 21 27 38   |                 | Slight, near Compression                     |
|                                                                                                         |             | iS 23 06     |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | eS 23 15     |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | PPC 23 27    |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | L 23 32      |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | M 23 42      |                                   |      |           |              |                 |                                              |
| BOMBAY                                                                                                  | F           | eP 13 21 45  |                                   | 05   | SHILLONG  | eP 20 43 43  | 4520            | Slight, Initial ground movement towards West |
|                                                                                                         |             | eS 26 34     |                                   |      |           | eS 49 48     |                 | Compression                                  |
|                                                                                                         |             | Lq 27 49     |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | SS 28 18     |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | Lr 29 20     |                                   |      |           |              |                 |                                              |
| POONA                                                                                                   | Z, E        | eP 13 22 01  | 3190                              |      |           |              |                 |                                              |
|                                                                                                         | E           | PPF 22 57    |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | eS 26 50     |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | Lq 28 18     |                                   |      |           |              |                 |                                              |
|                                                                                                         |             | M 32 09      |                                   |      |           |              |                 |                                              |
| HYDERABAD                                                                                               | F           | e 13 22 31   | 3610                              |      | DEHRA DUN | N, E         | e 20 45 27      | Tremor                                       |
|                                                                                                         |             | eS 27 46     |                                   |      | BOMBAY    | E            | eP 20 45 39     | 6120 Slight                                  |
|                                                                                                         |             | M 38 29      | Periodic U = 2                    |      |           | N            | eS 53 21        |                                              |
|                                                                                                         |             |              |                                   |      |           | E            | e 53 27         |                                              |
| MADRAS                                                                                                  | Z           | eP 13 23 15  | 3960                              | 05   | SHILLONG  | Z            | iP 22 07 57     | Slight, near Rarefaction                     |
|                                                                                                         |             | eS 28 51     |                                   | 06   | SHILLONG  | Z            | e 00 11 14      | Slight                                       |
|                                                                                                         |             | e 31 44      |                                   | 06   | SHILLONG  | Z            | e 02 56 52      | Feeble                                       |
| SHILLONG                                                                                                | Z, E        | iP 13 23 38  | 4200 Ground movement towards West | 05   | CHITRA    | Z            | iPg 05 29 27    | 70 Feeble                                    |
|                                                                                                         | E           | PPF 25 12    |                                   |      |           |              | iSg 29 27       |                                              |
|                                                                                                         |             | PPF 25 39    |                                   | 06   | SHILLONG  | Z            | eP 07 28 06     | Slight, near                                 |
|                                                                                                         |             | PcS 29 23    |                                   | 06   | SHILLONG  | Z            | eP 10 02 45     | Slight, near                                 |
|                                                                                                         | N, E        | eS 29 42     |                                   | 06   | SHILLONG  | Z            | eP 11 32 47     | Slight, near                                 |
|                                                                                                         | E           | SS 32 32     |                                   | 06   | SHILLONG  | Z            | ePg/P+ 12 41 48 | 110 Slight                                   |
|                                                                                                         | N, E        | M 37 51      |                                   |      |           |              | P 41 49         |                                              |
| COLOMBO                                                                                                 | F           | P 13 25 19   |                                   |      |           |              | eSg 42 01       |                                              |
|                                                                                                         |             | L 42 29      |                                   | 06   | SHILLONG  | Z, E         | eP 13 12 56     | 3850 Slight                                  |
|                                                                                                         |             | M 42 29      |                                   |      |           | E            | PP 14 25        |                                              |
| NEW DELHI                                                                                               | N           | e 13 26 13   | Slight                            | 06   | SHILLONG  | N, E         | eS 18 25        |                                              |
|                                                                                                         |             | e 30 41      |                                   |      |           |              | SS 20 27        |                                              |
|                                                                                                         |             | i 31 46      |                                   |      |           |              | Lr 22 15        |                                              |
| DEHRA DUN                                                                                               | N, E        | e 13 28 29   | Feeble                            |      |           |              | M 25 13         |                                              |
|                                                                                                         |             | e 38 09      |                                   | 03   | SHILLONG  | Z            | e 15 35 18      | Slight                                       |
| 03 SHILLONG                                                                                             | Z           | e 15 35 18   | Slight                            | 03   | DEHRA DUN | N, E         | e 14 21 41      | Tremor                                       |
| 03 DEHRA DUN                                                                                            | N, E        | i 16 10 14   | Slight, Phases not clear          |      | SHILLONG  | Z            | e 14 22 06      | Slight                                       |
| 04 SHILLONG                                                                                             | Z           | ePg 04 04 42 | 40 Slight                         | 06   | SHILLONG  | Z            | e 17 40 47      | Slight                                       |
|                                                                                                         |             | iSg 04 47    |                                   |      |           |              | i 40 55         |                                              |
| 04 SHILLONG                                                                                             | Z           | e 07 36 45   | Feeble                            | 06   | SHILLONG  | Z            | e 18 38 25      | Slight, near                                 |
| 04 SHILLONG                                                                                             | Z           | iP 15 16 24  | Slight, near Compression          | 06   | SHILLONG  | Z            | e 19 06 43      | Slight                                       |
| 04 SHILLONG                                                                                             | Z           | e 18 49 22   | Slight                            | 06   | SHILLONG  | Z            | eP 19 44 29     | 140 Slight                                   |
| 04 SHILLONG                                                                                             | Z           | iP 20 24 01  | Slight Compression                |      |           |              | eSg 44 47       |                                              |
| 04 SHILLONG                                                                                             | Z           | e 22 23 42   | Slight                            | 06   | POONA     | Z, E         | iP 20 45 32     | Slight, Phases not clear                     |
| 05 SHILLONG                                                                                             | Z           | eP 02 07 41  | Slight, near.                     |      |           | E            | e 48 49         |                                              |
| 05 SHILLONG                                                                                             | Z           | e 02 43 52   | Slight, local                     | 06   | SHILLONG  | Z            | e 53 08         |                                              |
|                                                                                                         |             | e 44 24      |                                   | 06   | SHILLONG  | Z            | eP 21 22 34     | Slight Rarefaction                           |



| DATE     | STATION                                                                                                                                        | COMPT | PHASE  | G. M. T.<br>h. m. s. | Δ<br>km | REMARKS                                 | DATE     | STATION                                                                    | COMPT    | PHASE | G. M. T.<br>h. m. s. | Δ<br>km  | REMARKS             |        |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|----------------------|---------|-----------------------------------------|----------|----------------------------------------------------------------------------|----------|-------|----------------------|----------|---------------------|--------|
| February |                                                                                                                                                |       |        |                      |         |                                         | February |                                                                            |          |       |                      |          |                     |        |
| 05       | SHILLONG                                                                                                                                       | Z     | iPg    | 22 15 51             | 110     | Slight                                  | 09       | MADRAS                                                                     | E        | iP    | 14 55 24             |          | Distant, ground     |        |
|          |                                                                                                                                                |       | iSg    | 16 04                |         | Compression                             |          | Contd.                                                                     |          | e     | 15 06 17             |          | movement towards    |        |
| 06       | SHILLONG                                                                                                                                       | Z     | e      | 22 20 15             |         | Slight                                  |          |                                                                            |          |       |                      |          | West. Other         |        |
| 06       | SHILLONG                                                                                                                                       | Z     | e      | 22 35 03             |         | Slight, near                            |          | HYDERABAD                                                                  | E        | SS    | 15 11 28             |          | phases not clear    |        |
| 06       | SHILLONG                                                                                                                                       | Z     | e      | 23 33 07             |         | Slight, near                            |          |                                                                            |          | M     | 38 25                |          | Per. ± 18 secs      |        |
| 07       | SHILLONG                                                                                                                                       | Z     | eP     | 00 38 09             |         | Slight                                  |          | COLOMBO                                                                    | E        | L     | 15 40 31             |          | Per. ± 24           |        |
| 07       | SHILLONG                                                                                                                                       | Z, E  | eP     | 00 39 54             |         | Slight, near                            |          |                                                                            |          | M     | 45 51                |          | Amp. ± 1.0 mm       |        |
| 07       | SHILLONG                                                                                                                                       | Z     | iP     | 02 01 04             |         | Slight, rarefaction                     | 09       | SHILLONG                                                                   | Z        | eP    | 22 03 24             |          | Slight              |        |
| 07       | SHILLONG                                                                                                                                       | Z     | eP     | 10 07 28             | 370     | Slight                                  | 09       | SHILLONG                                                                   | Z        | eP    | 22 38 06             |          | Slight              |        |
|          |                                                                                                                                                |       | PP     | 07 34                |         |                                         | 09       | SHILLONG                                                                   | Z        | iP    | 23 09 35             |          | Rarefaction, slight |        |
|          |                                                                                                                                                |       | Pg     | 07 46                |         |                                         | 10       | SHILLONG                                                                   | Z        | iP    | 00 10 46             | 5050     | Compression         |        |
|          |                                                                                                                                                |       | eS     | 08 03                |         |                                         |          |                                                                            |          | iS    | 17 28                |          | Slight              |        |
|          | CHATRA                                                                                                                                         | Z     | eP     | 10 08 12             | 740     | Feeble                                  |          | DEHRA DUN                                                                  | N, E     | e     | 00 11 55             |          | Tremor              |        |
|          |                                                                                                                                                |       | iS     | 09 29                |         |                                         |          | POONA                                                                      | Z, E     | iP    | 00 13 01             |          | Slight shock.       |        |
| 07       | SHILLONG                                                                                                                                       | Z     | ePg    | 11 43 37             |         | Slight                                  |          |                                                                            |          |       |                      |          | Phases not clear    |        |
| 07       | SHILLONG                                                                                                                                       | Z     | ePg    | 12 43 43             | 20      | Slight                                  | 10       | MADRAS                                                                     | E        | iP    | 03 58 45             |          | Slight, very near   |        |
|          |                                                                                                                                                |       | eSg    | 43 51                |         |                                         |          | SHILLONG                                                                   | Z        | iP    | 03 59 05             |          | Slight, compression |        |
| 07       | DEHRA DUN                                                                                                                                      | N, E  | eP     | 13 24 42             |         | Feeble, phases not clear                |          | POONA                                                                      | Z, E     | iP    | 03 59 55             |          | Very feeble shock   |        |
|          |                                                                                                                                                |       | i      | 26 15                |         |                                         | 10       | SHILLONG                                                                   | Z        | eP    | 12 59 35             |          | Phases not clear.   |        |
|          | SHILLONG                                                                                                                                       | Z     | eP     | 13 27 08             |         | Slight                                  | 10       | POONA                                                                      | Z        | e     | 14 03 31             |          | Slight              |        |
|          | POONA                                                                                                                                          | Z, E  | e      | 13 30 10             |         | Very feeble shock Phases not developed. | 10       | SHILLONG                                                                   | Z        | eP    | 14 04 15             |          | Slight              |        |
| 07       | SHILLONG                                                                                                                                       | Z     | iP     | 14 05 55             |         | Slight, Compression                     | 10       | SHILLONG                                                                   | Z        | eP    | 15 21 23             |          | Slight              |        |
| 07       | SHILLONG                                                                                                                                       | Z     | iPg    | 15 28 10             |         | Slight                                  | 10       | CHATRA                                                                     | Z        | iPg   | 17 31 42             | 70       | Feeble              |        |
| 07       | DEHRA DUN                                                                                                                                      | N, E  | e      | 17 50 49             |         | Feeble, phases not clear                |          |                                                                            |          | iSg   | 31 51                |          |                     |        |
| 07       | SHILLONG                                                                                                                                       | Z     | iP     | 17 53 16             |         | Slight, Rarefaction                     | 10       | SHILLONG                                                                   | Z        | iP    | 18 08 47             |          | Slight, compression |        |
| 07       | SHILLONG                                                                                                                                       | Z     | iP     | 19 24 50             |         | Slight                                  | 10       | SHILLONG                                                                   | Z        | eP    | 18 46 42             |          | Slight              |        |
| 08       | DEHRA DUN                                                                                                                                      | N, E  | e      | 01 02 43             |         | Tremor                                  | 10       | BOMBAY                                                                     | N, E     | e     | 18 56 12             |          | Feeble shock        |        |
| 08       | SHILLONG                                                                                                                                       | Z     | ePg    | 13 35 24             |         | Slight                                  |          | SHILLONG                                                                   | Z        | ePg   | 23 55 42             | 50       | Slight              |        |
| 09       | DEHRA DUN                                                                                                                                      | N, E  | e      | 01 27 29             |         | Tremor                                  |          |                                                                            |          | eSg   | 55 48                |          |                     |        |
| 09       | SHILLONG                                                                                                                                       | Z     | eP     | 07 52 04             |         | Slight                                  | 11       | SHILLONG                                                                   | A        | ePg   | 00 08 39             | 100      | Slight              |        |
|          |                                                                                                                                                |       |        |                      |         |                                         |          |                                                                            |          | eSg   | 08 50                |          |                     |        |
| 09       | Epc: 32°N, 116°W. Lower California. Minor damage in Imperial Valley, California.<br>H: 14h 32m 38s (U.S.C.G.S)<br>Magnitude: 6.4-7 (Pasadena). |       |        |                      |         |                                         |          | 11                                                                         | SHILLONG | Z     | eP                   | 00 21 06 |                     | Slight |
|          | SHILLONG                                                                                                                                       | Z     | e(PKP) | 14 51 24             | 13670   |                                         | 11       | SHILLONG                                                                   | Z        | iP    | 00 37 44             | 130      | Slight              |        |
|          |                                                                                                                                                | N     | PP     | 52 32                |         |                                         |          |                                                                            |          | ePg   | 37 45                |          | Rarefaction         |        |
|          |                                                                                                                                                |       | PS     | 15 02 32             |         |                                         |          |                                                                            |          | Sg    | 37 59                |          |                     |        |
|          |                                                                                                                                                |       | SS     | 09 02                |         |                                         | 11       | SHILLONG                                                                   | Z        | iP    | 00 40 21             | 130      | Slight              |        |
|          |                                                                                                                                                |       | SSS    | 13 14                |         |                                         |          |                                                                            |          | Sg    | 40 36                |          |                     |        |
|          |                                                                                                                                                |       | Lq     | 24 02                |         |                                         | 11       | SHILLONG                                                                   | Z        | eP    | 01 53 59             |          | Slight              |        |
|          |                                                                                                                                                |       | Lr     | 29 02                |         | Per. ± 19 secs.   Δ = 11.1              | 11       | CHATRA                                                                     | Z        | eP    | 03 38 30             | 390      | Feeble              |        |
|          |                                                                                                                                                |       |        |                      |         |                                         |          |                                                                            |          | iS    | 39 13                |          |                     |        |
|          | POONA                                                                                                                                          | Z     | e      | 14 51 49             |         | Phases not clear                        | 11       | Epc: 5°N, 94°E. Off North Coast of Sumatra.<br>H: 05h 38m 38s (U.S.C.G.S). |          |       |                      |          |                     |        |
|          | DEHRA DUN                                                                                                                                      | N, E  | e      | 14 52 40             |         | Phases not clear                        |          | MADRAS                                                                     | E        | iP    | 05 42 30             | 1600     | Slight              |        |
|          |                                                                                                                                                |       | e      | 58 11                |         |                                         |          |                                                                            |          | PP    | 42 42                |          |                     |        |
|          |                                                                                                                                                |       | i      | 15 00 58             |         |                                         |          |                                                                            |          | PPP   | 42 47                |          |                     |        |
|          |                                                                                                                                                |       | i      | 04 24                |         |                                         |          |                                                                            |          | i     | 43 11                |          |                     |        |
|          | BOKARO                                                                                                                                         | E     | e      | 14 53 03             |         | Long distance shock                     |          |                                                                            |          | Lq    | 45 08                |          |                     |        |
|          |                                                                                                                                                |       |        |                      |         |                                         |          |                                                                            |          | iS    | 45 11                |          |                     |        |
|          | BOMBAY                                                                                                                                         | N     | e      | 14 53 08             |         | Phases not clear                        |          |                                                                            |          | SS    | 45 30                |          |                     |        |
|          |                                                                                                                                                | E     | e      | 54 07                |         |                                         |          |                                                                            |          | SSS   | 45 45                |          |                     |        |
|          |                                                                                                                                                | N     | e      | 15 08 33             |         |                                         |          |                                                                            |          | Lr    | 45 51                |          |                     |        |
|          |                                                                                                                                                |       | e      | 10 41                |         |                                         |          |                                                                            |          |       |                      |          |                     |        |
|          |                                                                                                                                                | E     | M      | 45 38                |         | Per. ± 23 secs<br>  Δ = 35              |          | SHILLONG                                                                   | E        | iP    | 05 43 19             | 2250     | Moderate            |        |
|          |                                                                                                                                                | N     | M      | 52 35                |         | Per. ± 25 secs<br>  Δ = 25              |          |                                                                            |          | eS    | 47 02                |          |                     |        |
|          | NEW DELHI                                                                                                                                      | N     | e      | 14 55 17             |         | Very distant                            |          | BOKARO                                                                     | E        | eP    | 05 43 26             | 2280     | Slight              |        |
|          |                                                                                                                                                |       | e      | 58 11                |         |                                         |          |                                                                            |          | PP    | 43 39                |          |                     |        |
|          |                                                                                                                                                |       | e      | 59 09                |         |                                         |          |                                                                            |          | Lq    | 47 02                |          |                     |        |
|          |                                                                                                                                                |       | e      | 15 01 49             |         |                                         |          |                                                                            |          | iS    | 47 09                |          |                     |        |
|          |                                                                                                                                                |       | e      | 02 36                |         |                                         |          |                                                                            |          | SS    | 47 31                |          |                     |        |
|          |                                                                                                                                                |       | e      | 05 22                |         |                                         |          |                                                                            |          | SSS   | 48 01                |          |                     |        |
|          |                                                                                                                                                |       | e      | 06 54                |         |                                         |          |                                                                            |          | Lr    | 48 16                |          |                     |        |
|          |                                                                                                                                                |       |        |                      |         |                                         |          |                                                                            |          | M     | 49 20                |          |                     |        |







| STATION                                                                                                                                                                                                                   | COMP. PHASE | G. M. T. h. m. s.                                                                                                                          | Δ km  | REMARKS                                                                                     | DATE          | STATION                                            | COMP. PHASE                                                                                                                                                                                                                     | G. M. T. h. m. s. | Δ km | REMARKS                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------|---------------|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------|----------------------------------------------------------------|
| February 1956                                                                                                                                                                                                             |             |                                                                                                                                            |       |                                                                                             | February 1956 |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| 17 CHATRA                                                                                                                                                                                                                 | Z           | iP 05 39 43<br>iS 40 04                                                                                                                    | 170   | Feeble                                                                                      | 18 BOKARO     | N, E                                               | PS 07 48 42<br>PPS 48 57<br>SS 51 46<br>Lq 52 14<br>SSS 52 40<br>Lr 54 40<br>M 57 40                                                                                                                                            |                   |      | Per. ≈ 13 secs<br>μ ≈ 16.8                                     |
| 17 SHILLONG                                                                                                                                                                                                               | Z           | e 07 52 19                                                                                                                                 |       | Slight                                                                                      | DEHRA DUN     | N, E                                               | eP 07 42 44<br>iP 44 40<br>PPP 45 20<br>iS 49 24<br>SS 52 38<br>Lq 53 24<br>SSS 53 38<br>Lr 55 43<br>M 59 37                                                                                                                    | 5520              |      |                                                                |
| 17 DEHRA DUN                                                                                                                                                                                                              | N, E        | e 08 04 41<br>i 06 02                                                                                                                      |       | Feeble. Phases not clear                                                                    | NEW DELHI     | N                                                  | eP 07 42 54<br>iS 49 42<br>e 51 47<br>SS 53 25                                                                                                                                                                                  | 5610              |      | Ground movement towards "North"                                |
| 17 SHILLONG                                                                                                                                                                                                               | Z           | e 08 07 19                                                                                                                                 |       | Slight                                                                                      | HYDERABAD     | E                                                  | iP 07 43 11<br>PcP 44 19<br>PP 45 17<br>PcS 47 59<br>iS 50 23<br>i 52 03<br>SS 53 38<br>SSS 55 59<br>Lr 58 47<br>M 08 02 38                                                                                                     | 5410              |      | Initial ground movement towards "East"                         |
| 17 Epic: 47°S, 15°E. South Atlantic Ocean<br>h = 09h 53m 55s (U.S.C.G.S)                                                                                                                                                  |             |                                                                                                                                            |       |                                                                                             |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| POONA                                                                                                                                                                                                                     | Z           | eP 10 12 11                                                                                                                                |       | Slight. Probably distant. Phases not clear                                                  |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| MADRAS                                                                                                                                                                                                                    | E           | e 10 12 12<br>e 18 35                                                                                                                      |       | Moderate Distant                                                                            |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| BOKARO                                                                                                                                                                                                                    | N, E        | e 10 12 12<br>e 12 49<br>e 22 29                                                                                                           |       | Feeble                                                                                      |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| BOMBAY                                                                                                                                                                                                                    | N, E        | e 10 12 14<br>e 18 38<br>e 47 01<br>e 49 37                                                                                                |       | Distant and moderate Phases not clear<br>Per. ≈ 29 secs<br>μ = 7<br>Per. ≈ 18 secs<br>μ = 5 |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| SHILLONG                                                                                                                                                                                                                  | Z, N, E     | PPP 10 12 46<br>PP 13 45<br>SKS1 19 30<br>SKS2 19 43<br>SKS 21 08<br>PS 22 22<br>PPS 24 22<br>SS 29 22                                     | 12780 | Moderate                                                                                    | MADRAS        | E                                                  | iP 07 43 18<br>PcP 44 25<br>pP 44 32<br>sP 45 09<br>i 45 35<br>PPP 46 14<br>i 47 02<br>ScP 48 14<br>iS 50 33<br>PS 50 39<br>PPS 50 48<br>i 51 56<br>sS 52 43<br>ScS 52 53<br>SS 54 13<br>SSS/Lq 56 11<br>Lr 58 33<br>M 08 01 27 | 5280              |      | Per. ≈ 12 secs<br>μ = 10<br>Ground movement towards "East"     |
| DEHRA DUN                                                                                                                                                                                                                 | N, E        | e 10 13 38<br>i 19 25<br>i 20 35<br>i 23 08                                                                                                |       | Slight Phases not clear                                                                     |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| COLOMBO                                                                                                                                                                                                                   | E           | i 10 18 19<br>i 26 01<br>e 40 21<br>M 43 06                                                                                                |       | Amp. ≈ 0.8 mm                                                                               |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| HYDERABAD                                                                                                                                                                                                                 | E           | e 10 18 47<br>M 43 32                                                                                                                      |       | Per. ≈ 18 secs<br>μ = 8                                                                     |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| MADRAS                                                                                                                                                                                                                    | E           | i 11 03 08                                                                                                                                 |       | Very short period movement superimposed on long period waves.                               | COLOMBO       | E                                                  | iP 07 43 29<br>iS 51 09                                                                                                                                                                                                         | 6650              |      |                                                                |
| DEHRA DUN                                                                                                                                                                                                                 | N, E        | e 19 17 55                                                                                                                                 |       | Tremor                                                                                      | POONA         | Z, N, E<br>N, E                                    | iP 07 43 39<br>iS 51 05<br>i 52 34<br>ScS 53 06<br>SS 54 30<br>SSS 56 21<br>Lq 57 23<br>Lr 58 48                                                                                                                                | 6330              |      | Moderate. Ground movement towards "North and East" Rarefaction |
| 17 DEHRA DUN                                                                                                                                                                                                              | N, E        | e 19 34 32                                                                                                                                 |       | Tremor                                                                                      | KOZAIKANAL    | E                                                  | iP 07 43 43<br>PP 45 43<br>PPP 46 49<br>S 51 17<br>PPS 51 38                                                                                                                                                                    | 6530              |      | Moderate                                                       |
| 17 POONA                                                                                                                                                                                                                  | Z           | eP 23 41 00                                                                                                                                |       | Tremor, near.                                                                               | BOMBAY        | N, E<br>E<br>N<br>E<br>N, E<br>E<br>N, E<br>E<br>N | iP 07 43 45<br>e 46 11<br>e 46 15<br>e 46 53<br>PcS 48 30<br>iS 51 20<br>PS 51 32<br>PPS 51 43<br>i 52 29<br>ScS 53 23<br>SS 55 18<br>SS 55 23<br>SSS 57 00                                                                     | 6550              |      |                                                                |
| 18 Epic: 32.5°N, 138.5°E. h = 350 km<br>H = 07h 34m 16s (Shillong)<br>30°N, 137°E. South of Honshu Japan.<br>h = 480 KmCa H = 07h 34m 16s (U.S.C.G.S)<br>29.9°N, 138.5°E. h = 07h 34m 19s (C.M.O., Japan)<br>h = 480 KmCa |             |                                                                                                                                            |       |                                                                                             |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| Magnitude = 7 1/4 (Moskva), 7 1/4 = 7 1/4 (Pasadena),<br>7.2 (Uppsala, Kinoshita)                                                                                                                                         |             |                                                                                                                                            |       |                                                                                             |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| SHILLONG                                                                                                                                                                                                                  | Z, N, E     | iP 07 41 19<br>e 41 28<br>N, E PPP 42 53<br>sP 43 04<br>iS 46 57<br>sS 48 59<br>SS/Lq 49 04<br>SSS 49 30<br>i 50 04<br>i 50 26<br>Lr 50 49 | 3450  |                                                                                             |               |                                                    |                                                                                                                                                                                                                                 |                   |      |                                                                |
| BOKARO                                                                                                                                                                                                                    | N, E        | iP 07 42 11<br>PP 43 52<br>PPP 44 29<br>iS 48 27                                                                                           | 5120  | Initial ground movements towards "North and East"                                           | 18 CHATRA     | Z                                                  | eP 08 09 38<br>iS 10 00                                                                                                                                                                                                         | 190               |      | Feeble                                                         |
|                                                                                                                                                                                                                           |             |                                                                                                                                            |       |                                                                                             | POONA         | Z                                                  | eP 08 12 48                                                                                                                                                                                                                     |                   |      | Slight. Phases merged with previous shock.                     |

| DATE          | STATION                                                                                                                                                      | COMPT | PHASE | G. M. T. | Δ     | REMARKS                  | DATE          | STATION                                                                                                                                                                                                                                                                                                            | COMPT    | PHASE    | G. M. T. | Δ                                          | REMARKS            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|----------|-------|--------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|--------------------------------------------|--------------------|
|               |                                                                                                                                                              |       |       | h. m. s. | km    |                          |               |                                                                                                                                                                                                                                                                                                                    |          |          | h. m. s. | km                                         |                    |
| February 1956 |                                                                                                                                                              |       |       |          |       |                          | February 1956 |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            |                    |
| 18            | DEHRA DUN                                                                                                                                                    | N, E  | e     | 08 27 35 |       | Feeble Phases not clear  | 19            | DEHRA DUN                                                                                                                                                                                                                                                                                                          | N, E     | e        | 20 12 40 |                                            | Tremor             |
|               |                                                                                                                                                              |       | i     | 29 06    |       |                          | Contd.        |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            |                    |
|               | SHILLONG                                                                                                                                                     | Z     | e     | 08 30 04 |       | Slight                   | 19            | POONA                                                                                                                                                                                                                                                                                                              | Z, E     | e        | 21 16 -- |                                            | Tremor             |
| 18            | CHATRA                                                                                                                                                       | Z     | iP    | 11 48 40 | 170   | Slight                   | 20            | SHILLONG                                                                                                                                                                                                                                                                                                           | Z        | i        | 07 09 44 |                                            | Rarefaction        |
|               |                                                                                                                                                              | E     | iP    | 49 01    |       |                          | 20            | Epc: 24°N, 124°E. Ryukyn Islands<br>H: 07h 57m 38s (U.S.C.G.S)                                                                                                                                                                                                                                                     |          |          |          |                                            |                    |
|               | BOKARO                                                                                                                                                       | N, E  | iP    | 11 49 02 | 480   | Slight                   | SHILLONG      | Z, N, E                                                                                                                                                                                                                                                                                                            | eP       | 08 03 38 | 3120     | Rarefaction                                |                    |
|               |                                                                                                                                                              |       | Pg    | 49 22    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | PP       | 04 26    |          | Slight                                     |                    |
|               |                                                                                                                                                              |       | Lq    | 49 47    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | PPP      | 04 44    |          |                                            |                    |
|               |                                                                                                                                                              |       | iS    | 49 53    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | iS       | 08 23    |          |                                            |                    |
|               |                                                                                                                                                              |       | Sg/M  | 50 15    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | Lq       | 09 30    |          |                                            |                    |
|               | SHILLONG                                                                                                                                                     | Z, E  | eP    | 11 41 04 | 310   | Rarefaction, local       |               |                                                                                                                                                                                                                                                                                                                    | SS       | 09 51    |          |                                            |                    |
|               |                                                                                                                                                              |       | eS    | 49 39    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | SSS      | 10 07    |          |                                            |                    |
|               |                                                                                                                                                              |       | Sg    | 49 44    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | Lr       | 10 55    |          |                                            |                    |
|               | DEHRA DUN                                                                                                                                                    | N, E  | e     | 11 51 18 |       | Feeble Phases not clear  |               |                                                                                                                                                                                                                                                                                                                    | M        | 12 37    |          |                                            |                    |
|               |                                                                                                                                                              |       | i     | 52 26    |       |                          | MADRAS        | E                                                                                                                                                                                                                                                                                                                  | eP       | 08 05 24 |          | Slight                                     |                    |
|               | POONA                                                                                                                                                        | Z     | e?    | 11 54 42 |       | Feeble Phases not clear  |               |                                                                                                                                                                                                                                                                                                                    | e        | 05 30    |          |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | e        | 05 38    |          |                                            |                    |
| 18            | DEHRA DUN                                                                                                                                                    | N, E  | e     | 14 04 16 |       | Feeble Phases not clear  |               |                                                                                                                                                                                                                                                                                                                    | e        | 07 24    |          |                                            |                    |
| 18            | CHATRA                                                                                                                                                       | Z     | iP    | 16 12 47 | 190   | Tremor                   |               |                                                                                                                                                                                                                                                                                                                    | e        | 07 34    |          |                                            |                    |
|               |                                                                                                                                                              |       | iS    | 13 10    |       | Slight                   |               |                                                                                                                                                                                                                                                                                                                    | r        | 07 50    |          |                                            |                    |
|               | SHILLONG                                                                                                                                                     | Z     | e     | 16 13 13 |       | Slight                   |               |                                                                                                                                                                                                                                                                                                                    | e        | 08 00    |          |                                            |                    |
|               |                                                                                                                                                              |       | i     | 13 48    |       |                          | POONA         | Z, E                                                                                                                                                                                                                                                                                                               | eP       | 08 06 05 |          | Slight Phases not clear                    |                    |
| 18            | SHILLONG                                                                                                                                                     | Z     | e     | 22 57 10 |       | Slight, tremor           |               |                                                                                                                                                                                                                                                                                                                    | i        | 06 08    |          |                                            |                    |
| 19            | POONA                                                                                                                                                        | Z     | e     | 02 06 45 |       | Slight                   | BOMBAY        | E                                                                                                                                                                                                                                                                                                                  | eP       | 08 06 14 | 5220     |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | eS       | 13 06    |          | Per. ± 15 secs                             |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | M        | 27 11    |          | μ = 3                                      |                    |
| 19            | Epc: 52°N, 131½°W. Queen Charlotte Islands<br>H: 02h 18m 00s (U.S.C.G.S)<br>Magnitude: 6% (Pasadena, Roma), 6.6 (Iskubaya),<br>6.5 (Uppsala, Kiruna, Praha). |       |       |          |       |                          |               | 20                                                                                                                                                                                                                                                                                                                 | SHILLONG | Z        | iP       | 11 52 10                                   | Slight Compression |
|               | DEHRA DUN                                                                                                                                                    | N, E  | e     | 02 31 27 |       | Feeble Phases not clear  | 20            | SHILLONG                                                                                                                                                                                                                                                                                                           | Z        | e        | 16 19 03 |                                            | Tremor             |
|               |                                                                                                                                                              |       | i     | 42 36    |       |                          | 20            | SHILLONG                                                                                                                                                                                                                                                                                                           | Z        | iP       | 20 08 08 | 190                                        | Slight Rarefaction |
|               |                                                                                                                                                              |       | i     | 44 05    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | P        | 08 09    |          |                                            |                    |
| 19            | BOMBAY                                                                                                                                                       | N, E  | ePKP1 | 02 36 30 | 11700 |                          |               |                                                                                                                                                                                                                                                                                                                    | Pg       | 08 11    |          |                                            |                    |
|               |                                                                                                                                                              | E     | SKS   | 43 03    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | pP       | 08 17    |          |                                            |                    |
|               |                                                                                                                                                              |       | S     | 44 20    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | Sg/S     | 08 31    |          |                                            |                    |
|               |                                                                                                                                                              | N, E  | PS    | 46 04    |       |                          | 20            | SHILLONG                                                                                                                                                                                                                                                                                                           | Z        | iP       | 20 31 08 |                                            | Compression        |
|               |                                                                                                                                                              | E     | PPS   | 47 01    |       |                          |               |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            |                    |
|               |                                                                                                                                                              | N, E  | SS    | 51 44    |       |                          | 20            | Epc: 42.5°N, 30°E. Turkey. H: 20h 31m 28s (Shillong)<br>39½°N, 30½°E. H: 20h 31m 35s (U.S.C.G.S)<br>39°N, 30½°E. H: 20h 31m 37s (U.S.C.I.S)<br>40°N, 30½°E. H: 20h 31m 37s (Moskva)<br>Four killed and many injured with extensive property.<br>Magnitude: 6.5 (Uppsala, Kiruna), 6% (Skalsate Fieso), 6 (Athens). |          |          |          |                                            |                    |
|               |                                                                                                                                                              | E     | e     | 55 18    |       | Per. ± 23 secs<br>μ = 13 |               |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            |                    |
|               |                                                                                                                                                              |       | SSS   | 57 49    |       | Per. ± 21 secs<br>μ = 10 |               |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            |                    |
|               |                                                                                                                                                              | N     | M     | 24 30    |       |                          | DEHRA DUN     | N, E                                                                                                                                                                                                                                                                                                               | eP       | 20 39 11 | 4610     |                                            |                    |
|               | MADRAS                                                                                                                                                       | E     | e     | 02 37 12 |       | Moderate, Distant.       |               |                                                                                                                                                                                                                                                                                                                    | PP       | 40 45    |          |                                            |                    |
|               |                                                                                                                                                              |       | e     | 44 12    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | PPP      | 41 19    |          |                                            |                    |
|               |                                                                                                                                                              |       | e     | 47 42    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | iS       | 45 26    |          |                                            |                    |
|               |                                                                                                                                                              |       | i     | 52 39    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | PS       | 45 37    |          |                                            |                    |
|               | KODAIKANAL                                                                                                                                                   | E     | eP    | 02 45 13 |       | Slight, Distant          |               |                                                                                                                                                                                                                                                                                                                    | PPS      | 45 43    |          |                                            |                    |
|               |                                                                                                                                                              |       | i     | 53 22    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | SS       | 48 18    |          |                                            |                    |
| 19            | SHILLONG                                                                                                                                                     | Z     | iP    | 03 16 38 |       | Slight, Rarefaction      |               |                                                                                                                                                                                                                                                                                                                    | Lq       | 48 37    |          |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | SSS      | 48 59    |          |                                            |                    |
| 19            | SHILLONG                                                                                                                                                     | Z     | iP    | 04 10 49 |       | Compression              |               |                                                                                                                                                                                                                                                                                                                    | Lr       | 50 37    |          |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | M        | 53 56    |          |                                            |                    |
| 19            | SHILLONG                                                                                                                                                     | Z     | e     | 04 25 24 |       | Tremor                   | NEW DELHI     | N                                                                                                                                                                                                                                                                                                                  | iP       | 20 39 16 | 4330     | Ground movement towards 'North'            |                    |
| 19            | MADRAS                                                                                                                                                       | E     | e     | 04 37 19 |       | Slight                   |               |                                                                                                                                                                                                                                                                                                                    | PP       | 40 51    |          |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | iS       | 45 16    |          |                                            |                    |
| 19            | COLOMBO                                                                                                                                                      | E     | L     | 05 21 20 |       | Amp. ± 1.0 mm            |               |                                                                                                                                                                                                                                                                                                                    | SSS      | 48 25    |          |                                            |                    |
|               |                                                                                                                                                              |       | M     | 29 20    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | M        | 53 01    |          |                                            |                    |
| 19            | SHILLONG                                                                                                                                                     | Z     | iP    | 15 11 32 | 90    | Slight, near Rarefaction | BOMBAY        | N, E                                                                                                                                                                                                                                                                                                               | iP       | 20 39 30 | 4780     |                                            |                    |
|               |                                                                                                                                                              |       | P     | 11 34    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | N        | PP       | 41 14    |                                            |                    |
|               |                                                                                                                                                              |       | Sg    | 11 42    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | E        | PP       | 41 17    |                                            |                    |
|               |                                                                                                                                                              |       | i     | 11 47    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | N        | PPP      | 41 46    |                                            |                    |
|               |                                                                                                                                                              |       | SS    | 11 56    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | E        | PPP      | 41 49    |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | N        | eS       | 45 56    |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | E        | iS       | 45 56    |                                            |                    |
| 19            | CHATRA                                                                                                                                                       | E     | eP    | 20 08 59 | 170   | Slight                   |               |                                                                                                                                                                                                                                                                                                                    | i        | 47 30    |          |                                            |                    |
|               |                                                                                                                                                              |       | iS    | 09 20    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | N        | PPS      | 46 24    |                                            |                    |
|               |                                                                                                                                                              |       |       |          |       |                          |               |                                                                                                                                                                                                                                                                                                                    | SS       | 48 46    |          |                                            |                    |
|               | SHILLONG                                                                                                                                                     | Z     | iP    | 20 09 14 | 250   | Rarefaction Slight       |               |                                                                                                                                                                                                                                                                                                                    | Lq       | 49 20    |          |                                            |                    |
|               |                                                                                                                                                              |       | Pg    | 09 21    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | E        | M        | 58 38    |                                            | Per. ± 20 secs     |
|               |                                                                                                                                                              |       | pP    | 09 26    |       |                          |               |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            | μ = 7              |
|               |                                                                                                                                                              |       | Lq    | 09 33    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | N        | M        | 21 02 15 |                                            | Per. ± 14 secs     |
|               |                                                                                                                                                              |       | S     | 09 43    |       |                          |               |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            | μ = 3              |
|               |                                                                                                                                                              |       | Sg    | 09 52    |       |                          |               |                                                                                                                                                                                                                                                                                                                    |          |          |          |                                            |                    |
|               |                                                                                                                                                              |       | SS    | 09 56    |       |                          | POONA         | Z, N, E                                                                                                                                                                                                                                                                                                            | iP       | 20 39 40 | 4850     | Ground movement towards 'North' and 'West' |                    |
|               |                                                                                                                                                              |       | SSS   | 10 04    |       |                          |               |                                                                                                                                                                                                                                                                                                                    | eS       | 46 16    |          | Rarefaction                                |                    |



| January 1956           |          |            |          | February 1956                                                    |             |         |          |             |                                                                              |          |                  |
|------------------------|----------|------------|----------|------------------------------------------------------------------|-------------|---------|----------|-------------|------------------------------------------------------------------------------|----------|------------------|
| STATION                | COMP     | PHASE      | G. M. T. | REMARKS                                                          | DATE        | STATION | COMP     | PHASE       | G. M. T.                                                                     | REMARKS  |                  |
|                        |          |            | h. m. s. |                                                                  |             |         |          |             | h. m. s.                                                                     |          |                  |
| 20 HYDERABAD<br>Contd. | F        | iP         | 20 40 11 | 5220 Ground movement towards 'West'<br><br>Per. 15 secs<br>U & 4 | 22 SHILLONG | Z       | eP       | 05 37 17    | Tremor                                                                       |          |                  |
|                        |          | PcP        | 41 31    |                                                                  |             |         | Z        | e           |                                                                              | 06 29 36 | Tremor           |
|                        |          | PP         | 42 07    |                                                                  |             |         | E        | eP          |                                                                              | 08 53 19 | Phases not clear |
|                        |          | iS         | 47 03    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | e          | 51 01    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | L          | 55 34    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        | M        | 59 17      |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| BOKARO                 | N.E      | iP         | 20 40 29 | 5560 Slight                                                      | 22 SHILLONG | Z       | iP       | 00 27 24    | Slight. Compression<br>near. Other phases<br>not clear                       |          |                  |
|                        |          | e          | 42 25    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | iS         | 47 41    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | i          | 21 02 04 |                                                                  |             |         |          |             |                                                                              |          |                  |
| MADRAS                 | E        | iP         | 20 40 43 | 5810 Ground movement towards 'East'                              | 22 MADRAS   | Z       | eP       | 00 53 38    | 1100 Slight. Phases<br>mixed up with<br>those of the<br>following<br>shocks. |          |                  |
|                        |          | PcP        | 41 34    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PP         | 42 42    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PPP        | 43 51    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | ScP        | 45 41    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | eS         | 48 08    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PS         | 48 37    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PPS        | 48 24    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | ScS        | 50 28    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | SS         | 51 54    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | SSS        | 53 50    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | Lq         | 53 58    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | Lr         | 58 00    |                                                                  |             |         |          |             |                                                                              |          |                  |
| M                      | 21 01 46 |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| SHILLONG               | Z, E     | iP         | 20 40 50 | 5900 Rarefaction                                                 | 22 MADRAS   | Z       | e        | 01 54 12    | Feeble and<br>near shock                                                     |          |                  |
|                        |          | PcP        | 41 51    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PP         | 42 45    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PPP        | 43 54    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | iS         | 48 20    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PS         | 48 28    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | PPS        | 48 24    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | ScS        | 50 27    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | SS         | 51 54    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | SSS/Lq     | 53 00    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | Lr         | 55 14    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | M          | 59 53    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | KODAIKANAL | E        |                                                                  |             | eP      | 20 40 51 | 5540 Slight |                                                                              | 22 POONA | Z                |
| PP                     | 42 59    |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| S                      | 48 19    |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| COLOMBO                | E        | P          | 20 41 11 |                                                                  | 22 SHILLONG | Z       | iP       | 07 22 26    | 750 Rarefaction.<br>Ground movement<br>towards 'West'                        |          |                  |
|                        |          | e          | 47 36    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | e          | 21 02 00 |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | M          | 06 56    |                                                                  |             |         |          |             |                                                                              |          |                  |
| 20 SHILLONG            | Z, E     | iP         | 07 22 26 | 750 Rarefaction.<br>Ground movement<br>towards 'West'            | 22 SHILLONG | Z       | eP       | 07 27 53    | Slight. Rarefaction                                                          |          |                  |
|                        |          | iS         | 23 44    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | Lr         | 23 54    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | SS         | 24 01    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | SSS        | 24 12    |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          | M          | 24 25    |                                                                  |             |         |          |             |                                                                              |          |                  |
| DEBRA DUN              | N.E      | e          | 07 22 27 | Feeble. Phases<br>not clear                                      | 22 SHILLONG | Z       | eP       | 07 27 53    | Slight. Rarefaction                                                          |          |                  |
|                        |          | e          | 25 53    |                                                                  |             |         |          |             |                                                                              |          |                  |
| BOKARO                 | N.E      | e          | 07 24 31 | Feeble                                                           | 22 SHILLONG | Z       | eP       | 07 27 53    | Slight. Rarefaction                                                          |          |                  |
|                        |          | e          | 37 20    |                                                                  |             |         |          |             |                                                                              |          |                  |
| HYDERABAD              | E        | M          | 17 28 40 | Per. 9 secs<br>U & 1                                             | 22 SHILLONG | Z       | eP       | 07 27 53    | Slight. Rarefaction                                                          |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| 20 POONA               | Z        | iP         | 07 27 26 | Slight. Fairly<br>short distance.<br>Phases not clear.           | 22 SHILLONG | Z       | eP       | 07 27 53    | Slight. Rarefaction                                                          |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| 21 SHILLONG            | Z        | eP         | 07 27 53 | Slight. Rarefaction                                              | 22 SHILLONG | Z       | eP       | 07 27 53    | Slight. Rarefaction                                                          |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| 21 SHILLONG            | Z        | iP         | 09 12 50 | Slight<br>Rarefaction                                            | 22 SHILLONG | Z       | eP       | 09 17 05    | Compression                                                                  |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| 21 SHILLONG            | Z        | eP         | 09 17 05 | Compression                                                      | 22 CHATNA   | Z       | iP       | 09 17 58    | 770 Slight                                                                   |          |                  |
|                        |          | i          | 17 04    |                                                                  |             |         |          |             |                                                                              |          |                  |
| 21 SHILLONG            | Z        | iP         | 09 17 58 | 770 Slight                                                       | 22 SHILLONG | Z       | iP       | 12 28 57    | Slight<br>Compression                                                        |          |                  |
|                        |          | iS         | 19 18    |                                                                  |             |         |          |             |                                                                              |          |                  |
| 21 SHILLONG            | Z        | iP         | 12 28 57 | Slight<br>Compression                                            | 22 SHILLONG | Z       | eP       | 20 45 15    | Very feeble                                                                  |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| 21 SHILLONG            | Z        | eP         | 20 45 15 | Very feeble                                                      | 22 SHILLONG | Z       | e        | 00 16 12    | Tremor                                                                       |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |
| 22 SHILLONG            | Z        | e          | 00 16 12 | Tremor                                                           | 22 SHILLONG | Z       | i        | 00 58 01    | Local                                                                        |          |                  |
|                        |          |            |          |                                                                  |             |         |          |             |                                                                              |          |                  |

22 Apr. Chagos Islands Region.  
M. 2.0 (Shillong).

22 Apr. Chagos Islands Region.  
M. 2.0 (Shillong).



| DATE          | STATION   | COMPT | PHASE  | G. H. T. | REMARKS                        | DATE          | STATION                                                                                                                                                                                                                           | COMPT | PHASE    | G. H. T. | REMARKS                                                             |                    |
|---------------|-----------|-------|--------|----------|--------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------|----------|---------------------------------------------------------------------|--------------------|
|               |           |       |        | h. m. s. | km                             |               |                                                                                                                                                                                                                                   |       |          | h. m. s. | km                                                                  |                    |
| February 1956 |           |       |        |          |                                | February 1956 |                                                                                                                                                                                                                                   |       |          |          |                                                                     |                    |
| 27            | SHILLONG  | Z     | IP     | 08 49 19 | Slight Compression             | 29            | SHILLONG                                                                                                                                                                                                                          | Z     | eP       | 19 52 21 | Slight                                                              |                    |
|               | POONA     | N     | i      | 08 50 44 | Tremor                         | 29            | Epc: 24°N, 95°E. India Burma Border<br>H = 20h 51m 10s (Shillong)<br>23½°N, 94½°E. H = 20h 51m 18s (U.S.C.G.S.)<br>h = 60 KmCa<br>Magnitude = 5.6 (Shillong), 6.5 (Uppsala, Kiruna), 6 (Roma).                                    |       |          |          |                                                                     |                    |
| 27            | SHILLONG  | Z     | IP     | 09 35 55 | Slight, near                   | SHILLONG      | Z, N, E                                                                                                                                                                                                                           | IP    | 20 52 07 | 300      | Ground movement towards 'South and East'. Felt locally. Rarefaction |                    |
| 27            | SHILLONG  | Z     | IP     | 11 18 33 | Slight Compression             |               | N, E                                                                                                                                                                                                                              | Pg    | 52 09    |          |                                                                     |                    |
| 27            | SHILLONG  | Z     | IP     | 13 35 25 | Slight Rarefaction             |               |                                                                                                                                                                                                                                   | Lq    | 52 14    |          |                                                                     |                    |
| 27            | SHILLONG  | Z     | eP     | 19 54 53 | Slight                         |               |                                                                                                                                                                                                                                   | iS    | 52 26    |          |                                                                     |                    |
| 27            | SHILLONG  | Z     | IP     | 21 18 44 | Slight Compression             |               |                                                                                                                                                                                                                                   | S*    | 52 43    |          |                                                                     |                    |
| 27            | SHILLONG  | Z     | e      | 21 23 42 | Tremor                         | CHATRA        | Z                                                                                                                                                                                                                                 | IP    | 20 53 05 | 780      |                                                                     |                    |
| 27            | SHILLONG  | Z     | IP     | 23 11 15 | Slight Rarefaction             |               | E                                                                                                                                                                                                                                 | eP    | 54 26    |          |                                                                     |                    |
| 28            | SHILLONG  | Z     | eP     | 10 57 20 | Slight, near                   |               | Z, E                                                                                                                                                                                                                              | iS    | 54 26    |          |                                                                     |                    |
| 28            | SHILLONG  | Z     | eP     | 11 24 21 | Slight Compression             | HYDERABAD     | E                                                                                                                                                                                                                                 | IP    | 20 54 58 |          | Ground movement towards 'East'                                      |                    |
| 28            | POONA     | Z     | i      | 11 33 01 | Tremor                         |               |                                                                                                                                                                                                                                   | e     | 58 41    |          |                                                                     |                    |
| 28            | SHILLONG  | Z     | IP     | 11 33 24 | Slight Compression             |               |                                                                                                                                                                                                                                   | i     | 59 14    |          |                                                                     |                    |
| 28            | SHILLONG  | Z     | eP     | 15 16 15 | Slight, near                   |               |                                                                                                                                                                                                                                   | e     | 21 00 41 |          | Per. = 14 secs<br>λ = 23                                            |                    |
| 28            | DEHRA DUN | N, E  | e      | 20 46 33 | Feeble. Phases not clear.      | DEHRA DUN     | N, E                                                                                                                                                                                                                              | eP    | 20 54 59 | 1810     |                                                                     |                    |
| 28            | SHILLONG  | Z     | eP     | 20 49 03 | Slight, distant                |               | N                                                                                                                                                                                                                                 | PP    | 55 18    |          |                                                                     |                    |
| 28            | BOMBAY    | N, E  | e      | 20 53 00 | Very mild surface waves        |               |                                                                                                                                                                                                                                   | PPP   | 55 29    |          |                                                                     |                    |
|               | MADRAS    | E     | e      | 20 54 43 | Slight                         |               |                                                                                                                                                                                                                                   | Lq    | 57 34    |          |                                                                     |                    |
|               |           |       | i      | 55 52    |                                | MADRAS        | E                                                                                                                                                                                                                                 | IP    | 20 55 10 | 1960     | Ground movement towards 'East'                                      |                    |
|               |           |       | i      | 55 57    |                                |               |                                                                                                                                                                                                                                   | PP    | 55 26    |          |                                                                     |                    |
| 28            | DEHRA DUN | N, E  | e      | 22 22 43 | Feeble. Phases not clear       |               |                                                                                                                                                                                                                                   | PPP   | 55 30    |          |                                                                     |                    |
|               |           |       | i      | 23 44    |                                |               |                                                                                                                                                                                                                                   | Lq    | 58 22    |          |                                                                     |                    |
|               | SHILLONG  | Z     | eP     | 22 23 22 | Slight Compression             |               |                                                                                                                                                                                                                                   | iS    | 58 25    |          |                                                                     |                    |
|               | BOMBAY    | N, E  | e      | 22 30 09 | Very mild surface waves        |               |                                                                                                                                                                                                                                   | SS    | 58 44    |          |                                                                     |                    |
| 28            | DEHRA DUN | N, E  | e      | 23 15 07 | Tremor                         |               |                                                                                                                                                                                                                                   | SSS   | 58 56    |          |                                                                     |                    |
|               | SHILLONG  | Z     | eP     | 23 15 41 | Slight, near                   |               |                                                                                                                                                                                                                                   | Lr    | 59 11    |          |                                                                     |                    |
| 29            | SHILLONG  | Z     | eP     | 01 34 01 | Slight, near.                  |               |                                                                                                                                                                                                                                   | PeP   | 59 35    |          |                                                                     |                    |
| 29            | SHILLONG  | Z, E  | IPg/P* | 04 44 02 | 100 Slight Rarefaction felt.   | POONA         | Z                                                                                                                                                                                                                                 | IP    | 20 55 47 | 2310     | Ground movement towards 'North and East'. Rarefaction               |                    |
|               |           | N     | ePg/P* | 44 02    | Ground movement towards 'East' |               | E                                                                                                                                                                                                                                 | iS    | 59 35    |          |                                                                     |                    |
|               |           | E, N  | iSg    | 44 13    |                                |               |                                                                                                                                                                                                                                   | M     | 21 01 04 |          |                                                                     |                    |
|               | CHATRA    | Z     | IP     | 04 44 42 | 380 Slight                     | BOMBAY        | N, E                                                                                                                                                                                                                              | IP    | 20 55 55 | 2330     | Slightly deep                                                       |                    |
|               |           |       | iS     | 45 23    |                                |               |                                                                                                                                                                                                                                   | PP    | 56 14    |          |                                                                     |                    |
| 29            | SHILLONG  | Z     | eP     | 05 53 17 | Slight, near                   |               |                                                                                                                                                                                                                                   | PPP   | 56 30    |          |                                                                     |                    |
| 29            | SHILLONG  | Z     | eP     | 07 06 02 | Slight                         |               |                                                                                                                                                                                                                                   | iS    | 59 45    |          |                                                                     |                    |
| 29            | SHILLONG  | Z     | eP     | 07 11 38 | Slight, distant                |               | N                                                                                                                                                                                                                                 | Lq    | 21 00 18 |          | Per. = 5 secs<br>λ = 17                                             |                    |
| 29            | SHILLONG  | Z     | IPg    | 08 43 30 | 90 Slight                      |               | E                                                                                                                                                                                                                                 | M     | 03 18    |          | Per. = 6 secs<br>λ = 20                                             |                    |
|               |           |       | iSg    | 43 42    |                                |               |                                                                                                                                                                                                                                   | M     | 06 31    |          |                                                                     |                    |
|               | SHILLONG  | Z     | eP     | 08 44 33 | Slight, near                   | KODAIKANAL    | E                                                                                                                                                                                                                                 | IP    | 20 56 03 | 2440     | Ground movement towards 'East'                                      |                    |
| 29            | SHILLONG  | Z     | IP     | 09 04 03 | Slight Rarefaction             |               |                                                                                                                                                                                                                                   | S     | 21 00 02 |          | Per. = 9 secs<br>λ = 4.5                                            |                    |
| 29            | SHILLONG  | Z     | IPg    | 10 22 27 | 20 Slight                      |               |                                                                                                                                                                                                                                   | N     | 03 03    |          |                                                                     |                    |
|               |           |       | eSg    | 22 29    |                                | COLOMBO       | E                                                                                                                                                                                                                                 | IP    | 20 56 08 |          |                                                                     |                    |
| 29            | SHILLONG  | Z     | eP     | 19 23 13 | Slight, near                   |               |                                                                                                                                                                                                                                   | L     | 21 06 20 |          | Amp. = 1.9 mm                                                       |                    |
| 29            | SHILLONG  | Z     | IP     | 19 43 58 | Slight Rarefaction             | 29            | SHILLONG                                                                                                                                                                                                                          | Z     | IP       | 21 23 33 |                                                                     | Slight Compression |
|               |           |       |        |          |                                | 29            | Epc: 23.5°N, 95°E. India Burma Border<br>H = 21h 25m 47s (Shillong)<br>23½°N, 94½°E. H = 21h 25m 58s (U.S.C.G.S.)<br>h = 60 KmCa<br>24°N, 95°E. H = 21h 26m 12s (Quetta).<br>Magnitude = 6 (Uppsala, Kiruna).<br>Felt at Shillong |       |          |          |                                                                     |                    |
|               |           |       |        |          |                                | SHILLONG      | Z, N, E                                                                                                                                                                                                                           | IP    | 21 26 47 | 340      | Rarefaction. Ground movement towards 'South and East'.              |                    |
|               |           |       |        |          |                                |               |                                                                                                                                                                                                                                   | Pe    | 26 51    |          |                                                                     |                    |
|               |           |       |        |          |                                |               | E, N                                                                                                                                                                                                                              | Pg    | 26 55    |          |                                                                     |                    |
|               |           |       |        |          |                                |               |                                                                                                                                                                                                                                   | Lq    | 27 14    |          |                                                                     |                    |
|               |           |       |        |          |                                |               |                                                                                                                                                                                                                                   | eS*   | 27 25    |          |                                                                     |                    |
|               |           |       |        |          |                                |               |                                                                                                                                                                                                                                   | S*    | 27 29    |          |                                                                     |                    |

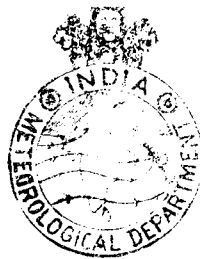
| DATE          | STATION   | COMPT | PHASE | G. M. T. | Δ    | REMARKS                          | DATE          | STATION   | COMPT | PHASE | G. M. T. | Δ    | REMARKS                   |
|---------------|-----------|-------|-------|----------|------|----------------------------------|---------------|-----------|-------|-------|----------|------|---------------------------|
|               |           |       |       | h. m. s. | km   |                                  |               |           |       |       | h. m. s. | km   |                           |
| February 1956 |           |       |       |          |      |                                  | February 1956 |           |       |       |          |      |                           |
| 29            | DEHRA DUN | N, E  | eP    | 21 29 42 | 1690 |                                  | 29            | SHILLONG  | Z     | eP    | 21 39 44 |      | Slight, near.             |
| Contd.        |           |       | PPP   | 30 08    |      |                                  | 29            | SHILLONG  | Z     | eP    | 21 48 33 |      | Slight, near.             |
|               |           |       | Lq    | 32 19    |      |                                  | 29            | NEW DELHI | N     | IP    | 21 55 00 | 1650 | Slight                    |
|               |           |       | IS    | 32 32    |      |                                  |               |           |       | PP    | 55 12    |      |                           |
|               |           |       | SS    | 32 40    |      |                                  |               |           |       | IS    | 57 46    |      |                           |
|               |           |       | SSS   | 32 53    |      |                                  |               |           |       | SS    | 58 04    |      |                           |
|               |           |       | Lr    | 33 19    |      |                                  |               |           |       | Lr    | 58 28    |      |                           |
|               |           |       | M     | 34 11    |      |                                  |               |           |       | M     | 59 59    |      |                           |
|               | CHATRA    | Z     | iP    | 21 27 45 | 790  |                                  | 29            | SHILLONG  | Z     | iP    | 22 05 30 |      | Slight, near. Kurefaction |
|               |           |       | IS    | 29 07    |      |                                  | 29            | CHATRA    | Z     | iP    | 22 06 32 | 790  | Feeble                    |
|               | HYDERABAD | E     | iP    | 21 29 42 |      | Ground movement towards 'East'   |               |           |       | IS    | 07 54    |      |                           |
|               |           |       | i     | 33 53    |      |                                  | 29            | SHILLONG  | Z     | eP    | 23 44 13 |      | Slight, near.             |
|               |           |       | e     | 34 38    |      |                                  | 29            | SHILLONG  | Z     | iP    | 23 56 02 |      | Slight, compression.      |
|               |           |       | e     | 36 20    |      | Per. 8.9 secs                    |               |           |       |       |          |      |                           |
|               |           |       | M     | 38 40    |      | 1.2 5                            |               |           |       |       |          |      |                           |
|               | MADRAS    | E     | eP    | 21 29 51 | 1950 | After shock of previous one      |               |           |       |       |          |      |                           |
|               |           |       | IS    | 33 05    |      |                                  |               |           |       |       |          |      |                           |
|               | POONA     | Z     | iP    | 21 30 27 | 2280 |                                  |               |           |       |       |          |      |                           |
|               |           | E     | eS    | 34 17    |      |                                  |               |           |       |       |          |      |                           |
|               | BOMBAY    | N, E  | eP    | 21 30 40 | 2260 | After shock of the previous one. |               |           |       |       |          |      |                           |
|               |           |       | PP    | 30 56    |      |                                  |               |           |       |       |          |      |                           |
|               |           |       | PPP   | 31 11    |      |                                  |               |           |       |       |          |      |                           |
|               |           |       | eS    | 34 23    |      |                                  |               |           |       |       |          |      |                           |
|               |           |       | Lq    | 34 31    |      |                                  |               |           |       |       |          |      |                           |
|               |           | E     | SS    | 34 49    |      |                                  |               |           |       |       |          |      |                           |
|               |           | N     | SSS   | 34 57    |      |                                  |               |           |       |       |          |      |                           |
|               |           | E     | SSS   | 35 00    |      |                                  |               |           |       |       |          |      |                           |

The following is the list of earthquakes that were reported from different stations by Voluntary Observers during the month of February 1956.

| PLACE    | DATE IN G. M. T. | TIME IN G. M. T. | NO. OF SHOCKS | DURATION OF SHOCKS IN SECS. | INTENSITY IN R. F. SCALE | REMARKS       |
|----------|------------------|------------------|---------------|-----------------------------|--------------------------|---------------|
| SHILLONG | 08               | 13 35            | 1             | 1                           | III                      |               |
| SHILLONG | 13               | 14 37            | 1             | 4                           | III                      |               |
| GAUHATI  | 13               | 14 53            | 1             | 20                          | V                        | Direction N-E |
| SHILLONG | 15               | 18 15            | 1             |                             | III                      |               |
| MALDA    | 18               | 11 53            | 1             | 3                           | V                        | Direction E-W |
| SHILLONG | 19               | 15 10            | 1             | 2                           | IV                       |               |

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



Published under the direction of  
Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

| STATION    | INSTRUMENTS   | COMPONENT | PERIOD<br>IN<br>SECOND   | STATIC<br>MAGNIFI-<br>CATION | DAMPING RATIO | PAPER SPEED<br>IN<br>mm/min |
|------------|---------------|-----------|--------------------------|------------------------------|---------------|-----------------------------|
| BOKARO     | Wood-Anderson | E         | 0.8                      | 960                          | 0.8           | 60.0                        |
|            | Wood-Anderson | N         | 0.8                      | 1000                         | 0.8           | 60.0                        |
|            | Milne-Shaw    | N         | 12.0                     | 250                          | 20:1          | 16.0                        |
|            | Milne-Shaw    | E         | 12.0                     | 250                          | 20:1          | 16.0                        |
| BOMBAY     | Sprengnether  | E         | $T_0=T_g=7$ secs         | -                            | -             | 30                          |
|            | Milne-Shaw    | N         | 12                       | 350                          | 20:1          | 16                          |
|            | Milne-Shaw    | E         | 12                       | 350                          | 15:1          | 8                           |
| CHITRA     | Eenioff       | Z         | $T_0=0.72$<br>$T_g=0.45$ | Critical                     |               | 60                          |
|            | Milne-Shaw    | E         | 12.0                     | 250                          | 20:1          | 16                          |
|            | Wood-Anderson | E         | 1.0                      | 1000                         | 30:1          | 60                          |
| COLOMBO    | Milne-Shaw    | E         | 12.1                     | 250                          | 19:1          | 8                           |
| DEBRA DUN  | Milne-Shaw    | N         | 12                       | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 0.8                      | 800                          | 60:1          | 60                          |
|            | Wood-Anderson | E         | 0.8                      | 950                          | 60:1          | 60                          |
| HYDRABAD   | Milne-Shaw    | N         | 12                       | 254                          | 20:1          | 8                           |
|            | Milne-Shaw    | E         | 12                       | 254                          | 20:1          | 8                           |
| KODAIKANAL | Milne-Shaw    | E         | 10.0                     | 250                          | 20:1          | 8                           |
| MADRAS     | Sprengnether  | E         | $T_0-T_g=7.2$            | -                            | -             | 30                          |
| NEW DELHI  | Milne-Shaw    | N         | 12                       | 220                          | 20:1          | 8                           |
|            | Omori-Fwing   | E         | 30                       | 20                           | 1             | 12                          |
| POONA      | Sprengnether  | Z         | $T_0=T_g=1.6$            | -                            | 2.1:1         | 30                          |
|            | Milne-Shaw    | N         | 12                       | 300                          | 20:1          | 8                           |
|            | Wood-Anderson | E         | 4                        | 1100                         | 20:1          | 16                          |
| SHILLONG   | Eenioff       | Z         | $T_g=0.18$ $T_0=1.0$     | -                            | -             | 60                          |
|            | Sprengnether  | E         | $T_0=T_g=7.8$            | Critical                     | -             | 30                          |
|            | Milne-Shaw    | N         | 12                       | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 4                        | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | E         | 0.8                      | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | N         | 0.8                      | 1000                         | Critical      | 30                          |



| STATION      | COMPT PHASE   | G. M. T.                                                                                                    | Δ    | REMARKS                                    | DATE      | STATION | COMPT PHASE                    | G. M. T.                                                                                                    | Δ    | REMARKS                                                |
|--------------|---------------|-------------------------------------------------------------------------------------------------------------|------|--------------------------------------------|-----------|---------|--------------------------------|-------------------------------------------------------------------------------------------------------------|------|--------------------------------------------------------|
|              |               | h m s.                                                                                                      | km   |                                            | March     |         |                                | h m s.                                                                                                      | km   |                                                        |
| 01 SHILLONG  | eP            | 10 09 02                                                                                                    |      | Slight near                                | 03 MUMBAI | Z       | IP                             | 10 17 35                                                                                                    | 1930 | Ground movement towards 'East'                         |
| 02 SHILLONG  | eP<br>eS<br>M | 12 08 26<br>18 20<br>39 26                                                                                  | 8670 | Slight<br>Compression                      |           |         | PP<br>i<br>IS<br>IS<br>SS<br>L | 17 47<br>19 24<br>20 48<br>20 51<br>21 14<br>21 25<br>21 36<br>22 03<br>23 24                               |      |                                                        |
| 02 SHILLONG  | eP            | 14 58 08                                                                                                    |      | Slight<br>Refraction                       |           | Z       | IS                             | 16 23 31                                                                                                    | 1930 | Refraction<br>Ground movement towards 'North and East' |
| 02 SHILLONG  | eP            | 17 03 10<br>03 07                                                                                           |      | Slight                                     |           | Z       | IS                             | 22 03                                                                                                       |      |                                                        |
| 02 SHILLONG  | eP            | 19 59 20                                                                                                    |      | Slight<br>Compression                      |           | Z       | e                              | 09 16 18                                                                                                    |      | Tremor                                                 |
| 02 SHILLONG  | eP            | 18 21 18                                                                                                    |      | Slight near                                |           | Z       | IP                             | 18 21 18                                                                                                    | 1930 | Slight                                                 |
| 02 SHILLONG  | eP            | 18 01 01                                                                                                    |      | Slight near                                |           | Z       | IP                             | 18 01 01                                                                                                    |      |                                                        |
| 02 DEHRA DUN | eP            | 18 02 1                                                                                                     |      | Slight                                     |           | Z       | IP                             | 18 02 1                                                                                                     |      |                                                        |
| 02 SHILLONG  | eP            | 18 33 50<br>42 52                                                                                           |      | Slight                                     |           | Z       | IP                             | 18 33 50<br>42 52                                                                                           |      |                                                        |
| 02 SHILLONG  | eP            | 18 37 41<br>39 26<br>44 35<br>48 47                                                                         |      | Slight<br>Compression                      |           | Z       | IP                             | 18 37 41<br>39 26<br>44 35<br>48 47                                                                         |      |                                                        |
| 02 CHATRA    | eP            | 19 15 49<br>19 55                                                                                           |      | Slight                                     |           | Z       | IP                             | 19 15 49<br>19 55                                                                                           |      |                                                        |
| 02 SHILLONG  | eP            | 22 27 57                                                                                                    |      | Slight near                                |           | Z       | IP                             | 22 27 57                                                                                                    |      |                                                        |
| 02 SHILLONG  | eP            | 23 44 18                                                                                                    |      | Slight near                                |           | Z       | IP                             | 23 44 18                                                                                                    |      |                                                        |
| 02 SHILLONG  | eP            | 19 19 30<br>19 33<br>51 37                                                                                  |      | Slight near                                |           | Z       | IP                             | 19 19 30<br>19 33<br>51 37                                                                                  |      |                                                        |
| 02 COLOMBO   | P             | 00 24 29<br>33 52<br>01 01 59<br>08 19                                                                      |      | Tremor<br>Dep=0.4 mm                       |           | Z       | P                              | 00 24 29<br>33 52<br>01 01 59<br>08 19                                                                      |      |                                                        |
| 03 SHILLONG  | eP            | 06 00 53                                                                                                    |      | Slight near                                |           | Z       | IP                             | 06 00 53                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 08 52 18                                                                                                    |      | Slight near                                |           | Z       | IP                             | 08 52 18                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 10 11 33<br>14 24<br>14 38<br>14 41<br>15 59<br>16 02<br>16 10<br>16 17<br>16 17<br>16 17<br>16 17<br>16 17 |      | 110 Ground movement towards South and East |           | Z       | IP                             | 10 11 33<br>14 24<br>14 38<br>14 41<br>15 59<br>16 02<br>16 10<br>16 17<br>16 17<br>16 17<br>16 17<br>16 17 |      |                                                        |
| 03 CHATRA    | eP            | 10 25 20<br>16 49                                                                                           |      | Tremor                                     |           | Z       | IP                             | 10 25 20<br>16 49                                                                                           |      |                                                        |
| 03 DEHRA DUN | eP            | 10 17 47<br>17 53<br>18 15<br>20 16<br>20 49<br>21 53                                                       |      | Tremor                                     |           | Z       | IP                             | 10 17 47<br>17 53<br>18 15<br>20 16<br>20 49<br>21 53                                                       |      |                                                        |
| 03 HYDRABAD  | eP            | 10 17 26<br>21 03<br>25 00<br>21 02                                                                         |      | Ground movement towards 'East'             |           | Z       | IP                             | 10 17 26<br>21 03<br>25 00<br>21 02                                                                         |      |                                                        |
| 03 MUMBAI    | Z             |                                                                                                             |      |                                            |           | Z       | IP                             | 15 41 59                                                                                                    |      | Slight Compression                                     |
| 03 CHATRA    | eP            | 21 37 52<br>31 10                                                                                           |      | Tremor                                     |           | Z       | IP                             | 21 37 52<br>31 10                                                                                           |      |                                                        |
| 03 CHATRA    | eP            | 21 38 48<br>31 10                                                                                           |      | Tremor                                     |           | Z       | IP                             | 21 38 48<br>31 10                                                                                           |      |                                                        |
| 03 SHILLONG  | eP            | 21 55 54<br>31 10                                                                                           |      | Slight                                     |           | Z       | IP                             | 21 55 54<br>31 10                                                                                           |      |                                                        |
| 03 SHILLONG  | eP            | 03 26 10                                                                                                    |      | Slight, distant                            |           | Z       | IP                             | 03 26 10                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 08 00 40                                                                                                    |      | Slight                                     |           | Z       | IP                             | 08 00 40                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 05 11 01                                                                                                    |      | Slight                                     |           | Z       | IP                             | 05 11 01                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 06 35 07                                                                                                    |      | Slight                                     |           | Z       | IP                             | 06 35 07                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 10 34 36                                                                                                    |      | Slight                                     |           | Z       | IP                             | 10 34 36                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 10 35 33                                                                                                    |      | Slight near                                |           | Z       | IP                             | 10 35 33                                                                                                    |      |                                                        |
| 03 SHILLONG  | eP            | 14 43 52                                                                                                    |      | Slight<br>Refraction                       |           | Z       | IP                             | 14 43 52                                                                                                    |      |                                                        |
| 03 DEHRA DUN | N, E          | 15 39 57<br>43 54                                                                                           |      | Foible, Phases not clear                   |           | Z       | IP                             | 15 39 57<br>43 54                                                                                           |      |                                                        |



| DATE       | STATION                                               | COMPT | PHASE                                            | G. M. T. h. m. s.                                                       | Δ km | REMARKS                               | DATE       | STATION          | COMPT | PHASE      | G. M. T. h. m. s. | Δ km | REMARKS                  |
|------------|-------------------------------------------------------|-------|--------------------------------------------------|-------------------------------------------------------------------------|------|---------------------------------------|------------|------------------|-------|------------|-------------------|------|--------------------------|
| MARCH 1956 | 04 SHILLONG                                           | Z     | eP                                               | 15 26 37                                                                |      | Slight, distant Compression.          | MARCH 1956 | 05 BOKARO Contd. | N.E   | eP         | 07 16 02          | 1970 |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | IS         | 19 18             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | SS         | 19 41             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | SSS        | 19 56             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | M          | 20 11             |      |                          |
|            | 04 SHILLONG                                           | Z     | eP/Pg<br>P<br>ISg                                | 17 11 30<br>11 31<br>11 42                                              | 100  | Slight                                |            | SHILLONG         | Z,N,E | eP         | 07 16 18          | 1960 |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  | Z,E   | PP         | 16 25             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | PPP        | 16 38             |      |                          |
|            | 04 CHATRA                                             | Z     | iP                                               | 19 23 58                                                                | 280  | Feeble                                |            |                  | E     | i          | 18 49             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  | N,E   | IS         | 19 33             |      |                          |
|            | 04 SHILLONG                                           | Z     | eP                                               | 19 24 35                                                                |      | Slight                                |            |                  |       | SS         | 19 52             |      |                          |
|            | 04 SHILLONG                                           | Z     | e                                                | 22 11 38                                                                |      | Slight, near                          |            |                  |       | SSS        | 20 08             |      |                          |
|            | 04 SHILLONG                                           | Z     | iP                                               | 22 26 15                                                                |      | Slight Rarefaction                    |            |                  | N,E   | Lt         | 20 25             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | M          | 21 54             |      | Per: 25 secs<br>Δ: 20    |
|            | 04 SHILLONG                                           | Z     | eP                                               | 23 08 02                                                                |      | Feeble                                |            | BOMBAY           |       | eP         | 07 16 44          | 2200 |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  | N,E   | IS         | 20 22             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | ISg        | 20 33             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  | E     | M          | 22 --             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  | S     | M          | 24 12             |      | Per: 14 secs<br>Δ: 20    |
|            | 05 SHILLONG                                           | Z     | eP                                               | 02 13 38                                                                |      | Slight Rarefaction                    |            | POONA            | Z     | eP         | 07 16 47          | 2210 |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  | E     | eS         | 20 26             |      |                          |
|            | COLOMBO                                               | E     | F<br>I<br>M                                      | 02 10 01<br>23 25<br>23 11                                              |      | Amp: 0.4 mm                           |            | HYDERABAD        | E     | eP         | 07 17 02          | 2300 |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | S          | 20 49             |      |                          |
|            | MADRAS                                                | E     | eP<br>i                                          | 02 20 17<br>28 16                                                       |      | Slight                                |            |                  |       | SS         | 21 05             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | L          | 22 23             |      |                          |
|            | POONA                                                 | Z     | e                                                | 02 20 37                                                                |      | Tremor                                |            |                  |       | i          | 23 09             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | M          | 23 53             |      | Per: 12 secs<br>Δ: 11    |
|            | KODAIKANAL                                            | E     | eP<br>FP<br>ePPP<br>S<br>SS<br>L<br>M            | 03 23 09<br>23 14<br>23 23<br>24 02<br>25 17<br>26 32<br>26 57<br>28 05 | 1800 | Slight Ground movement towards "East" |            |                  |       | eP         | 07 17 46          | 3000 |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | i          | 18 19             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | PP         | 18 32             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | PPP        | 18 46             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | e          | 22 08             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | IS         | 22 23             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | Lq         | 23 24             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | SS         | 23 37             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | SSS        | 24 00             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | Lq/S&P     | 25 42             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | M          | 27 22             |      |                          |
|            | BOMBAY                                                | N,E   | e                                                | 03 15 13                                                                |      |                                       |            |                  |       | F          | 07 24 53          |      |                          |
|            |                                                       |       | e                                                | 30 08                                                                   |      |                                       |            |                  |       | L          | 31 01             |      |                          |
|            |                                                       | E     | M                                                | 37 --                                                                   |      |                                       |            |                  |       | M          | 32 06             |      | Amp: 0.9 mm              |
|            |                                                       | N     | M                                                | 41 --                                                                   |      |                                       |            |                  |       |            |                   |      |                          |
|            | HYDERABAD                                             | E     | e                                                | 02 28 50                                                                |      | Per: 10 secs<br>Δ: 11                 |            | SHILLONG         | Z     | e          | 08 03 43          |      | Slight, near             |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | 05 POONA                                              | Z     | i                                                | 02 20 07                                                                |      | Slight, Phases not clear              |            | SHILLONG         | Z     | eP         | 09 47 30          |      | Slight Rarefaction       |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | 05 SHILLONG                                           | Z     | e                                                | 03 43 05                                                                |      | Slight                                |            | SHILLONG         | Z     | eP         | 09 47 30          |      | Slight Rarefaction       |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | 05 SHILLONG                                           | Z,N,E | eP<br>eS<br>PIS<br>N,E                           | 03 52 14<br>04 20 07<br>00 13<br>13 07                                  | 6000 | Slight                                |            | MADRAS           | E     | e          | 10 34 12          |      | Slight                   |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | e          | 38 27             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | POONA                                                 | Z     | iP                                               | 03 53 58                                                                |      | Feeble, Phases not clear              |            | COLOMBO          | E     | L          | 10 38 --          |      | Amp: 0.4 mm              |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | M          | 38 06             |      |                          |
|            | 05 SHILLONG                                           | Z     | e                                                | 04 47 11<br>47 12<br>47 18                                              |      | Slight, local                         |            | KODAIKANAL       | E     | e          | 10 37 29          |      | Tremor                   |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | 05 CHATRA                                             | Z     | eP<br>IS                                         | 05 16 27<br>38 49                                                       | 200  | Feeble                                |            | SHILLONG         | Z     | e          | 11 05 42          |      | Slight, near             |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | 05 Epc: 37°N, 74°E                                    |       |                                                  |                                                                         |      | Southern Sikkim Himalaya, China.      |            | SHILLONG         | Z     | e          | 13 10 16          |      | Slight                   |
|            | 37°N, 77°E                                            |       |                                                  |                                                                         |      | China, 075°E to 085°E (Maidong).      |            | SHILLONG         | Z     | e          | 17 00 14          |      | Slight                   |
|            | 37°N, 77°E                                            |       |                                                  |                                                                         |      | China, 075°E to 085°E (U.S. G.S.).    |            | SHILLONG         | Z     | eP         | 17 03 07          |      | Slight Compression       |
|            | 38°N, 77°E                                            |       |                                                  |                                                                         |      | China, 075°E to 085°E (Maidong).      |            |                  |       | i          | 04 00             |      |                          |
|            | Magnitude: 5.3 (Maidong, China), 5.8 (Maidong, China) |       |                                                  |                                                                         |      |                                       |            | CHATRA           | Z     | eP<br>IS   | 17 04 03<br>05 24 | 780  | Feeble                   |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | DEHRA DUN                                             | Z,N   | eP<br>PPP<br>Lq<br>IS<br>SS<br>SSS<br>S*<br>Sg/P | 07 14 11<br>14 24<br>15 30<br>15 42<br>15 55<br>16 03<br>16 11<br>16 32 | 800  |                                       |            | SHILLONG         | Z     | ePg<br>ISg | 18 22 46<br>22 52 | 50   | Slight                   |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            | CHATRA                                                | Z     | iP                                               | 07 15 31                                                                |      |                                       |            | DEHRA DUN        | N,E   | e          | 22 55 46          |      | Slight, Phases not clear |
|            |                                                       | Z,E   |                                                  |                                                                         |      |                                       |            |                  |       | e          | 57 20             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | i          | 57 42             |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            | SHILLONG         | Z     | eP         | 22 58 16          |      | Slight Compression       |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       |            |                   |      |                          |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            | POONA            | Z     | e          | 23 01 17          |      | Tremor                   |
|            |                                                       |       |                                                  |                                                                         |      |                                       |            |                  |       | e          | 01 38             |      |                          |

| STATION      | COMP | TIME     | PHASE | P | S | T | REMARKS                                                                                                 |
|--------------|------|----------|-------|---|---|---|---------------------------------------------------------------------------------------------------------|
| 05 SHILLONG  | Z    | 01 09 41 |       |   |   |   | 840 Feeble                                                                                              |
|              |      | 10 08    |       |   |   |   |                                                                                                         |
| 05 SHILLONG  | Z    | 01 08 58 |       |   |   |   | 210 Feeble                                                                                              |
|              |      | 20 23    |       |   |   |   |                                                                                                         |
|              |      |          |       |   |   |   | 4480 1000<br>Magnitudes: 2.5 (ISC)<br>2.5 (ISC)                                                         |
|              |      |          |       |   |   |   | 8h 54m 16s (Shillong)<br>8h 54m 28s (U.S.C.G.S.)<br>8h 54m 32s (Moskva)<br>8h 54m 36s (Uppsala, Kiruna) |
| SHILLONG     | Z    | 01 08 08 |       |   |   |   | 2050                                                                                                    |
|              |      | 00 43    |       |   |   |   |                                                                                                         |
|              |      | 01 00    |       |   |   |   |                                                                                                         |
|              |      | 04 00    |       |   |   |   |                                                                                                         |
|              |      | 04 13    |       |   |   |   |                                                                                                         |
|              |      | 04 17    |       |   |   |   |                                                                                                         |
|              |      | 04 27    |       |   |   |   |                                                                                                         |
|              |      | 05 27    |       |   |   |   |                                                                                                         |
|              |      | 11 33    |       |   |   |   |                                                                                                         |
|              |      |          |       |   |   |   | Phase 13 sec<br>μ = 3                                                                                   |
|              |      | 00 00 31 |       |   |   |   | 1000                                                                                                    |
|              |      | 01 24    |       |   |   |   |                                                                                                         |
|              |      | 04 00 00 |       |   |   |   | 2000                                                                                                    |
|              |      | 02 14    |       |   |   |   |                                                                                                         |
|              |      | 04 20    |       |   |   |   |                                                                                                         |
|              |      | 05 20    |       |   |   |   |                                                                                                         |
|              |      | 06 33    |       |   |   |   |                                                                                                         |
|              |      | 08 17    |       |   |   |   |                                                                                                         |
|              |      | 00 01 01 |       |   |   |   | 1040                                                                                                    |
|              |      | 02 46    |       |   |   |   |                                                                                                         |
|              |      | 05 41    |       |   |   |   |                                                                                                         |
|              |      | 06 42    |       |   |   |   |                                                                                                         |
|              |      | 08 24    |       |   |   |   |                                                                                                         |
|              |      | 12 06    |       |   |   |   |                                                                                                         |
|              |      |          |       |   |   |   | Phase 13 sec<br>μ = 5                                                                                   |
| 06 HYDERABAD | E    | 01 02 04 |       |   |   |   |                                                                                                         |
|              |      | 02 04    |       |   |   |   |                                                                                                         |
|              |      | 02 42    |       |   |   |   | 0580                                                                                                    |
|              |      | 03 01    |       |   |   |   |                                                                                                         |
|              |      | 06 55    |       |   |   |   |                                                                                                         |
|              |      | 08 14    |       |   |   |   |                                                                                                         |
|              |      | 07 10    |       |   |   |   |                                                                                                         |
|              |      | 08 00    |       |   |   |   |                                                                                                         |
|              |      | 10 41    |       |   |   |   |                                                                                                         |
|              |      | 13 37    |       |   |   |   |                                                                                                         |
|              |      | 00 02 30 |       |   |   |   | 3400                                                                                                    |
|              |      | 07 53    |       |   |   |   |                                                                                                         |
|              |      | 08 03 01 |       |   |   |   |                                                                                                         |
|              |      | 09 21    |       |   |   |   |                                                                                                         |
|              |      | 20 30    |       |   |   |   |                                                                                                         |
|              |      | 22 10    |       |   |   |   |                                                                                                         |
|              |      | 00 18 00 |       |   |   |   | Amplitude 0.5 mm                                                                                        |
|              |      | 00 48 00 |       |   |   |   | Slight Phases not clear                                                                                 |
|              |      | 01 01 24 |       |   |   |   | Feeble Phases not clear                                                                                 |
|              |      | 01 08 23 |       |   |   |   | Trends                                                                                                  |
|              |      | 01 30 10 |       |   |   |   | Slight                                                                                                  |
| 05 SHILLONG  | Z    | 01 01 01 |       |   |   |   | 100 Feeble                                                                                              |
|              |      | 23 01    |       |   |   |   |                                                                                                         |
|              |      |          |       |   |   |   | 4480 1000<br>Magnitudes: 2.5 (ISC)<br>2.5 (ISC)                                                         |
|              |      |          |       |   |   |   | 8h 52m 53s (Shillong)<br>8h 52m 58s (U.S.C.G.S.)<br>8h 52m 58s (Moskva)                                 |
|              |      | 01 01 51 |       |   |   |   | 2050 Feeble                                                                                             |
|              |      | 02 12    |       |   |   |   |                                                                                                         |
|              |      | 03 41    |       |   |   |   |                                                                                                         |
|              |      | 05 20    |       |   |   |   |                                                                                                         |
|              |      | 02 28    |       |   |   |   |                                                                                                         |
|              |      | 02 39    |       |   |   |   |                                                                                                         |
|              |      | 03 10    |       |   |   |   |                                                                                                         |
| 05 SHILLONG  | Z    | 01 01 58 |       |   |   |   | 2410 Feeble                                                                                             |
|              |      | 01 01 29 |       |   |   |   |                                                                                                         |



| DATE  | STATION                                            | COMPT | PHASE  | G. M. T.    | REMARKS | DATE                                                   | STATION                                                 | COMPT | PHASE | G. M. T.      | REMARKS                          |
|-------|----------------------------------------------------|-------|--------|-------------|---------|--------------------------------------------------------|---------------------------------------------------------|-------|-------|---------------|----------------------------------|
| March |                                                    |       |        | h. m. s. km |         | March                                                  |                                                         |       |       | h. m. s. km   |                                  |
| 1956  |                                                    |       |        |             |         | 1956                                                   |                                                         |       |       |               |                                  |
| 10    | Epc: 1.8°N, 125.2°E. Mollieca Passage              |       |        |             |         | 13                                                     | SHILLONG                                                | E     | e     | 13 33 01      | Slight. Beginn-<br>ing, doubtful |
|       | - H. = 21h 37m 12s (Shillong)                      |       |        |             |         | Contd.                                                 |                                                         |       |       |               |                                  |
|       | 9°N, 125°E. - H. = 21h 37m 01s (U.S.C.G.S)         |       |        |             |         | BOMBAY                                                 | N, E                                                    | e     | e     | 13 33 04      | Moderate.                        |
|       | Magnitude: 6 (Moskva), 6.5 (Uppsala, Kiruna).      |       |        |             |         |                                                        |                                                         | e     | e     | 36 17         | Distant.                         |
|       |                                                    |       |        |             |         |                                                        |                                                         | e     | e     | 54 37         |                                  |
|       | SHILLONG                                           | Z     | iP     | 21 44 49    | 4420    | Probably deep.                                         | MADRAS                                                  | E     | e     | 13 33 32      | Slight                           |
|       |                                                    |       | i      | 45 05       |         |                                                        |                                                         | e     | e     | 38 55         |                                  |
|       |                                                    | E     | PP     | 46 25       |         |                                                        | DEHRA DUN                                               | N, E  | i     | 13 36 20      | Slight. Phases<br>not clear.     |
|       |                                                    |       | eS     | 50 53       |         |                                                        |                                                         |       |       |               |                                  |
|       |                                                    |       | i      | 51 22       |         |                                                        | 13 MADRAS                                               | E     | e     | 14 09 17      | Slight, distant                  |
|       | CHATRA                                             | Z     | iP     | 21 45 22    |         | Feeble                                                 | KODAIKANAL                                              | E     | e     | 14 30 42      | Tremor                           |
|       |                                                    |       | i      | 47 02       |         |                                                        | HYDERABAD                                               | E     | M     | 14 33 47      | Per. = 23 secs<br>Data 7         |
|       | COLOMBO                                            | E     | P      | 21 45 25    | 5060    |                                                        | COLOMBO                                                 | E     | L     | 14 36 20      |                                  |
|       |                                                    |       | S      | 52 07       |         |                                                        |                                                         | M     | 42 35 | Amp. = 0.6 mm |                                  |
|       |                                                    |       | L      | 22 03 34    |         |                                                        | 13 POONA                                                | Z     | i     | 23 44 07      | Tremor                           |
|       |                                                    |       | M      | 06 09       |         | Amp. = 0.5 mm                                          | 14 SHILLONG                                             | Z     | e     | 04 01 25      | Slight, near.                    |
|       | MADRAS                                             | E     | iP     | 21 45 34    | 5140    | Moderate. Initial<br>ground movement<br>towards 'West' | CHATRA                                                  | Z     | eP    | 04 02 15      | 670 Feeble                       |
|       |                                                    |       | i      | 45 49       |         |                                                        |                                                         | iS    | 03 26 |               |                                  |
|       |                                                    |       | i      | 46 31       |         |                                                        | 14 MADRAS                                               | E     | iP    | 11 03 46      | Feeble, very<br>near.            |
|       |                                                    |       | PP     | 47 28       |         |                                                        |                                                         | e     | 05 50 |               |                                  |
|       |                                                    |       | PPP    | 48 10       |         |                                                        | SHILLONG                                                | Z     | eP    | 11 04 21      | Slight.<br>Compression           |
|       |                                                    |       | e      | 49 34       |         |                                                        | POONA                                                   | Z     | e     | 11 05 20      | 2150                             |
|       |                                                    |       | eS     | 52 21       |         |                                                        |                                                         | eS    | 08 58 |               |                                  |
|       |                                                    |       | PS     | 52 25       |         |                                                        | BOMBAY                                                  | E     | eP    | 11 05 35      | 2450 Feeble                      |
|       |                                                    |       | PPS    | 52 32       |         |                                                        |                                                         | eS    | 09 34 |               |                                  |
|       |                                                    |       | SS?    | 55 26       |         |                                                        |                                                         | Lq    | 10 01 |               |                                  |
|       |                                                    |       | SSS    | 56 48       |         |                                                        |                                                         | e     | 10 08 |               |                                  |
|       | HYDERABAD                                          | E     | iP     | 21 45 51    | 5410    | Slight. Initial<br>ground movement<br>towards 'West'   |                                                         | SS    | 10 12 |               |                                  |
|       |                                                    |       | iS     | 52 53       |         |                                                        |                                                         | SSS   | 10 29 |               |                                  |
|       |                                                    |       | L      | 22 01 00    |         |                                                        |                                                         | Lr    | 11 07 |               |                                  |
|       | POONA                                              | Z     | iP     | 21 46 27    | 5850    | Slight                                                 | DEHRA DUN                                               | N, E  | e     | 11 06 02      | Feeble. Phases<br>not clear.     |
|       |                                                    | E     | eS     | 53 54       |         |                                                        |                                                         | e     | 10 50 |               |                                  |
|       | DEHRA DUN                                          | N, E  | eP     | 21 46 32    | 5830    | Slight                                                 | MADRAS                                                  | E     | eP    | 11 15 53      | Feeble                           |
|       |                                                    | N     | PP     | 48 28       |         |                                                        | POONA                                                   | Z     | e     | 11 20 18      | Feeble. Phases<br>not clear.     |
|       |                                                    |       | PPP    | 49 40       |         |                                                        |                                                         |       |       |               |                                  |
|       |                                                    |       | iS     | 53 59       |         |                                                        | 14 COLOMBO                                              | E     | L     | 16 34 50      |                                  |
|       |                                                    |       | PPS    | 54 22       |         |                                                        |                                                         | M     | 38 45 | Amp. = 0.3 mm |                                  |
|       |                                                    |       | Lq/SSS | 59 20       |         |                                                        | 14 Epc: East Pakistan. Felt at Bogra, Shillong, Gauhati |       |       |               |                                  |
|       |                                                    |       | M      | 22 05 13    |         |                                                        | Barharwa (Bihar). - H. = 16h 39m 43s (U.S.C.G.S)        |       |       |               |                                  |
|       | BOMBAY                                             | N, E  | eP     | 21 46 34    | 6020    | Slight                                                 | 25.2°N, 90.8°E. - H. = 16h 39m 49s (Shillong)           |       |       |               |                                  |
|       |                                                    | E     | PcP    | 47 23       |         |                                                        | Magnitude: 5 (Shillong)                                 |       |       |               |                                  |
|       |                                                    |       | PP     | 48 40       |         |                                                        | SHILLONG                                                | Z, E  | iP    | 16 40 17      | 150 Compression                  |
|       |                                                    |       | eS     | 54 10       |         |                                                        |                                                         | E     | iSg   | 40 35         |                                  |
|       |                                                    |       | PS     | 54 22       |         |                                                        | CHATRA                                                  | Z     | iP    | 16 40 42      | 450                              |
|       |                                                    |       | e      | 56 17       |         |                                                        |                                                         | Z, E  | iS    | 41 30         |                                  |
|       | 11 SHILLONG                                        | Z     | iP     | 03 18 47    |         | Slight                                                 | BOKARO                                                  | N, E  | eP    | 16 41 33      |                                  |
|       | 11 POONA                                           | Z     | i      | 08 10 56    |         | Tremor                                                 |                                                         | e     | 41 39 |               |                                  |
|       | 11 SHILLONG                                        | Z     | eP     | 12 24 14    | 270     | Slight                                                 |                                                         | e     | 41 44 |               |                                  |
|       |                                                    |       | iSg    | 23 51       |         |                                                        |                                                         | e     | 42 22 |               |                                  |
|       | CHATRA                                             | Z     | iP     | 12 24 14    | 800     | Feeble                                                 |                                                         | M     | 42 41 |               |                                  |
|       |                                                    |       | iS     | 25 38       |         |                                                        | DEHRA DUN                                               | N, E  | eP    | 16 42 39      | Phases<br>not clear.             |
|       | 11 CHATRA                                          | Z     | iP     | 13 52 10    | 150     | Feeble                                                 |                                                         | i     | 44 40 |               |                                  |
|       |                                                    |       | iS     | 52 29       |         |                                                        | MADRAS                                                  | E     | iP    | 16 43 41      |                                  |
|       | 11 SHILLONG                                        | Z     | eP     | 15 15 16    |         | Slight                                                 |                                                         | i     | 46 15 |               |                                  |
|       | 11 SHILLONG                                        | Z     | iP     | 16 31 03    |         | Slight                                                 | POONA                                                   | Z     | eP    | 16 43 52      | Phases not<br>clear              |
|       | 11 CHATRA                                          | Z     | eP     | 22 47 47    | 260     | Feeble                                                 |                                                         | e     | 46 40 |               |                                  |
|       |                                                    |       | iS     | 48 17       |         |                                                        | BOMBAY                                                  | E     | e     | 16 45 37      |                                  |
|       | 12 SHILLONG                                        | Z     | eP     | 00 52 14    |         | Slight                                                 |                                                         | e     | 47 08 |               |                                  |
|       | 12 SHILLONG                                        | Z     | eP     | 11 29 22    |         | Slight                                                 |                                                         | e     | 47 35 |               |                                  |
|       | 12 SHILLONG                                        | Z     | eP     | 17 39 02    |         | Slight                                                 |                                                         | M     | 49 00 |               |                                  |
|       | 13 SHILLONG                                        | Z     | e      | 02 57 53    |         | Slight                                                 |                                                         |       |       |               |                                  |
|       | 13 SHILLONG                                        | Z     | eP     | 09 34 25    |         | Rerefraction                                           |                                                         |       |       |               |                                  |
| 13    | Epc: 7°N, 82°W. Off South Coast of Panama          |       |        |             |         |                                                        |                                                         |       |       |               |                                  |
|       | - H. = 13h 13m 10s (U.S.C.G.S)                     |       |        |             |         |                                                        |                                                         |       |       |               |                                  |
|       | Magnitude: 7 (Pasadena), 6.9 (Takubaya, Berkeley), |       |        |             |         |                                                        |                                                         |       |       |               |                                  |
|       | 6.8 (Uppsala, Kiruna).                             |       |        |             |         |                                                        |                                                         |       |       |               |                                  |
|       | POONA                                              | Z     | PP1    | 13 32 51    |         | Slight. Very<br>long distance.                         |                                                         |       |       |               |                                  |
|       |                                                    |       | PK2    | 32 58       |         |                                                        |                                                         |       |       |               |                                  |



| DATE       | STATION                                                                                             | COMPT | PHASE | G. M. T. | Δ    | REMARKS                                  | DATE       | STATION                                                                                                            | COMPT    | PHASE    | G. M. T. | Δ        | REMARKS                   |                      |
|------------|-----------------------------------------------------------------------------------------------------|-------|-------|----------|------|------------------------------------------|------------|--------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|---------------------------|----------------------|
|            |                                                                                                     |       |       | h. m. s. | km   |                                          |            |                                                                                                                    |          |          | h. m. s. | km       |                           |                      |
| March 1956 |                                                                                                     |       |       |          |      |                                          | March 1956 |                                                                                                                    |          |          |          |          |                           |                      |
| 18         | DEHRA DUN                                                                                           | N, E  | eP    | 08 23 54 |      |                                          | 20         | SHILLONG                                                                                                           | Z        | iP       | 04 24 46 |          | Slight Compression        |                      |
| Contd.     |                                                                                                     | N     | i     | 29 22    |      |                                          | 20         | SHILLONG                                                                                                           | Z        | iP       | 06 24 10 |          | Slight, local Rarefaction |                      |
|            |                                                                                                     |       | Lq/SS | 31 37    |      |                                          | 20         | SHILLONG                                                                                                           | Z        | iP       | 09 52 21 |          | Slight Compression        |                      |
|            |                                                                                                     |       | SSS   | 32 23    |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
|            |                                                                                                     |       | Lr    | 33 25    |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
|            |                                                                                                     |       | M     | 36 06    |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
| 18         | POONA                                                                                               | Z     | e     | 08 40 42 |      | Tremor                                   |            |                                                                                                                    |          |          |          |          |                           |                      |
| 18         | DEHRA DUN                                                                                           | N, E  | e     | 15 58 15 |      | Tremor                                   |            | CHATRA                                                                                                             | Z        | iP       | 09 53 40 | 220      | Feeble                    |                      |
|            | CHATRA                                                                                              | Z     | eP    | 15 58 41 | 670  | Feeble                                   |            |                                                                                                                    | iS       | 54 06    |          |          |                           |                      |
|            |                                                                                                     |       | iS    | 59 52    |      |                                          | 20         | SHILLONG                                                                                                           | Z        | eP       | 10 29 21 |          | Slight                    |                      |
| 19         | SHILLONG                                                                                            | Z     | iP    | 09 46 08 |      | Rarefaction                              | 20         | SHILLONG                                                                                                           | Z        | eP       | 11 35 41 |          | Slight Rarefaction        |                      |
| 19         | SHILLONG                                                                                            | Z     | eP    | 10 00 18 |      | Compression                              | 20         | SHILLONG                                                                                                           | Z        | eP       | 16 26 41 |          | Slight, distant           |                      |
| 19         | DEHRA DUN                                                                                           | N, E  | e     | 12 17 40 |      | Tremor                                   | 20         | SHILLONG                                                                                                           | Z        | iP       | 16 32 25 | 160      | Slight, local Compression |                      |
| 19         | CHATRA                                                                                              | Z     | eP    | 14 20 34 | 160  | Feeble                                   |            |                                                                                                                    | Sg       | 32 45    |          |          |                           |                      |
|            |                                                                                                     | E, Z  | iS    | 20 54    |      |                                          | 20         | SHILLONG                                                                                                           | Z        | e        | 22 06 54 |          | Very feeble               |                      |
|            | SHILLONG                                                                                            | Z     | e     | 14 21 06 |      | Slight, near.                            | 20         | SHILLONG                                                                                                           | Z        | iP       | 22 10 08 |          | Slight                    |                      |
| 19         | CHATRA                                                                                              | Z     | iP    | 14 46 57 | 190  | Feeble                                   | 20         | SHILLONG                                                                                                           | Z        | eP       | 22 14 31 | 210      | Slight                    |                      |
|            |                                                                                                     |       | iS    | 47 20    |      |                                          |            |                                                                                                                    | Sg       | 14 56    |          |          |                           |                      |
| 19         | DEHRA DUN                                                                                           | N, E  | e     | 17 00 22 |      | Tremor                                   | 21         | SHILLONG                                                                                                           | Z        | iP       | 01 08 21 |          | Slight                    |                      |
|            | SHILLONG                                                                                            | Z     | e     | 17 01 16 |      | Slight                                   | 21         | DEHRA DUN                                                                                                          | N, E     | eP       | 05 00 24 | 3140     | Slight                    |                      |
| 19         | Epc: 6°S, 150°E. New Britain<br>- H = 17h 35m 57s (U.S.C.G.S)<br>Magnitude = 6.4 (Uppsala, Kiruna). |       |       |          |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
|            | SHILLONG                                                                                            | Z, E  | eP    | 17 46 38 | 7470 | Moderate Compression<br>Depth = 250 KmCa |            | POONA                                                                                                              | Z        | i        | 05 01 10 |          | Tremor                    |                      |
|            |                                                                                                     | E     | pP    | 47 31    |      |                                          |            | SHILLONG                                                                                                           | Z        | iP       | 05 02 18 |          | Slight                    |                      |
|            |                                                                                                     |       | sP    | 48 34    |      |                                          |            | BOMBAY                                                                                                             | E        | e        | 05 06 07 |          | Surface waves             |                      |
|            |                                                                                                     |       | e     | 48 58    |      |                                          |            |                                                                                                                    | e        | 13 43    |          |          |                           |                      |
|            |                                                                                                     |       | iS    | 54 09    |      |                                          |            | DEHRA DUN                                                                                                          | N, E     | e        | 05 36 05 |          | Feeble. Phases not clear  |                      |
|            |                                                                                                     |       | PS    | 55 34    |      |                                          |            |                                                                                                                    | i        | 36 37    |          |          |                           |                      |
|            |                                                                                                     |       | sS    | 56 44    |      |                                          |            | 21                                                                                                                 | SHILLONG | Z        | eP       | 10 04 27 |                           | Slight, very distant |
|            | COLONBO                                                                                             | E     | e     | 17 46 47 | 9510 |                                          |            | 21                                                                                                                 | SHILLONG | Z        | iP       | 12 50 59 |                           | Slight Compression   |
|            |                                                                                                     |       | S     | 57 19    |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
|            |                                                                                                     |       | L     | 18 18 29 |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
|            |                                                                                                     |       | M     | 25 34    |      | Amp. = 0.2 mm                            |            |                                                                                                                    |          |          |          |          |                           |                      |
|            | BOKARO                                                                                              | N, E  | e     | 17 47 11 |      | Slight. Probably distant.                |            | 21                                                                                                                 | CHATRA   | Z        | ePg      | 21 24 15 | 90                        | Feeble               |
|            |                                                                                                     |       | e     | 56 00    |      |                                          |            |                                                                                                                    | iSg      | 24 25    |          |          |                           |                      |
|            | KODAIKANAL                                                                                          | E     | e     | 17 47 35 |      | Tremor                                   | 21         | CHATRA                                                                                                             | Z        | iPg      | 23 47 05 | 110      | Feeble                    |                      |
|            | MADRAS                                                                                              | E     | eP    | 17 48 04 |      | Slight, distant                          |            |                                                                                                                    | iSg      | 47 18    |          |          |                           |                      |
|            |                                                                                                     |       | i     | 57 23    |      |                                          | 22         | Epc: 3½°S, 79°W. Equador. - H = 06h 33m 55s (USCGS)<br>Magnitude: 6½ (Pasadena), 6½ (Berkeley).<br>h about 100 Km. |          |          |          |          |                           |                      |
|            | POONA                                                                                               | Z     | eP    | 17 48 05 |      | Slight                                   |            | POONA                                                                                                              | Z        | iPKP     | 06 53 26 |          | Phases not clear          |                      |
|            |                                                                                                     |       | e     | 57 52    |      |                                          |            |                                                                                                                    |          |          |          |          |                           |                      |
|            | DEHRA DUN                                                                                           | N, E  | e     | 17 48 16 |      | Feeble. Phases not clear                 |            | DEHRA DUN                                                                                                          | N, E     | e        | 06 53 30 |          | Feeble. Phases not clear  |                      |
|            |                                                                                                     |       | e     | 58 08    |      |                                          |            |                                                                                                                    | i        | 57 31    |          |          |                           |                      |
|            | BOMBAY                                                                                              | N     | e     | 17 49 21 |      | Slight                                   |            | BOMBAY                                                                                                             | N, E     | iPKP     | 06 53 34 |          | Slight                    |                      |
|            |                                                                                                     |       | e     | 54 43    |      |                                          |            |                                                                                                                    | c        | 54 00    |          |          |                           |                      |
| 19         | POONA                                                                                               | Z     | i     | 18 15 07 |      | Tremor                                   |            |                                                                                                                    | e        | 57 09    |          |          |                           |                      |
|            | SHILLONG                                                                                            | Z     | e     | 18 15 18 |      | Slight                                   |            |                                                                                                                    | N        | 57 06    |          |          |                           |                      |
| 19         | SHILLONG                                                                                            | Z     | iP    | 19 40 09 |      | Compression                              |            |                                                                                                                    | E        | 57 32    |          |          |                           |                      |
| 19         | SHILLONG                                                                                            | Z     | i     | 21 06 42 |      | Slight                                   |            | SHILLONG                                                                                                           | Z        | N, E     | 57 42    |          |                           |                      |
| 19         | SHILLONG                                                                                            | Z     | i     | 21 18 29 |      | Slight                                   |            |                                                                                                                    | iPKP     | 06 53 43 |          |          | Slight Rarefaction        |                      |
| 19         | CHATRA                                                                                              | Z     | iP    | 21 28 43 | 160  | Feeble                                   |            | CHATRA                                                                                                             | Z        | e        | 06 53 41 |          | Slight                    |                      |
|            |                                                                                                     |       | iS    | 29 03    |      |                                          |            |                                                                                                                    | E, Z     | i        | 54 29    |          |                           |                      |
| 19         | CHATRA                                                                                              | Z     | eP    | 22 04 09 | 860  | Feeble                                   |            | HYDERABAD                                                                                                          | E        | e        | 06 53 42 |          | Slight                    |                      |
|            |                                                                                                     |       | iS    | 05 38    |      |                                          |            |                                                                                                                    | e        | 58 27    |          |          |                           |                      |
| 19         | DEHRA DUN                                                                                           | N, E  | e     | 22 24 19 |      | Tremor                                   |            | BOKARO                                                                                                             | N, E     | e        | 06 53 45 |          | Feeble                    |                      |
|            |                                                                                                     |       | e     | 54 23    |      |                                          |            |                                                                                                                    | e        | 59 00    |          |          |                           |                      |
|            | SHILLONG                                                                                            | Z     | iP    | 22 24 54 |      | Compression                              |            | MADRAS                                                                                                             | E        | eP       | 06 53 54 | 6470     | Moderate                  |                      |
| 20         | DEHRA DUN                                                                                           | N, E  | e     | 00 38 44 |      | Tremor                                   |            |                                                                                                                    | PcP      | 54 31    |          |          |                           |                      |
| 20         | SHILLONG                                                                                            | Z     | iP    | 02 31 49 |      | Slight Rarefaction                       |            |                                                                                                                    | i        | 54 53    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | PP       | 57 19    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | ScP      | 58 32    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | eS       | 07 01 55 |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | ScS      | 03 25    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | SS       | 05 20    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | SSS      | 08 14    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | Lq       | 08 46    |          |          |                           |                      |
|            |                                                                                                     |       |       |          |      |                                          |            |                                                                                                                    | Lr       | 11 45    |          |          |                           |                      |







*Earthquake Reports  
(Non Instrumental Reports)*

*Following is the list of Earthquakes that were reported by voluntary observers from different stations during the month of March 1956.*

| PLACE                      | DATE<br>G M T | TIME<br>G M T<br>h. m. | No. OF<br>SHOCK | DURATION OF<br>SHOCKS IN<br>SECS. | INTENSITY IN<br>R.F. SCALE | REMARKS                                                                 |
|----------------------------|---------------|------------------------|-----------------|-----------------------------------|----------------------------|-------------------------------------------------------------------------|
| SHILLONG                   | 02            | 22 27                  | 1               | 3                                 | III                        |                                                                         |
| SRINAGAR                   | 08            | 05 07                  | 1               | 3                                 | V                          |                                                                         |
| SHILLONG                   | 14            | 16 40                  | 1               | 10                                | III                        |                                                                         |
| DAIT LYNGKOT<br>(SHILLONG) | 14            | 16 40                  | 1               | 35                                | IV                         |                                                                         |
| GAUNATI                    | 14            | 16 40                  | 2               | 15                                | V                          | Direction S-W.                                                          |
| SRINAGAR                   | 15            | 01 25                  | 1               | 5                                 | III                        |                                                                         |
| SHILLONG                   | 21            | 12 50                  | 1               | 3                                 | -                          | Direction N-E<br>Felt only by a<br>few specially<br>situated observers. |
| SHILLONG                   | 23            | 19 00                  | 1               | 3                                 | IV                         |                                                                         |





GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



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Director General of Observatories

Instruments and their constants

| STATION    | INSTRUMENTS   | COMPONENT | PERIOD<br>IN<br>SECONDS  | STATIC<br>MAGNIFI-<br>CATION | DAMPING RATIO | PAPER SPEED<br>IN<br>mm/min |
|------------|---------------|-----------|--------------------------|------------------------------|---------------|-----------------------------|
| BOKARO     | Wood-Anderson | E         | 0.8                      | 960                          | 0.8           | 60.0                        |
|            | Wood-Anderson | N         | 0.8                      | 1000                         | 0.8           | 60.0                        |
|            | Milne-Shaw    | N         | 12.0                     | 250                          | 20:1          | 16.0                        |
|            | Milne-Shaw    | E         | 12.0                     | 250                          | 20:1          | 16.0                        |
| BOMBAY     | Sprengnether  | E         | $T_0=T_g=7$ secs         | -                            | -             | 30                          |
|            | Milne-Shaw    | N         | 12                       | 350                          | 20:1          | 16                          |
|            | Milne-Shaw    | E         | 12                       | 350                          | 15:1          | 8                           |
| CHAIRA     | Benioff       | Z         | $T_0=0.72$<br>$T_g=0.45$ | Critical                     | -             | 60                          |
|            | Milne-Shaw    | E         | 12.0                     | 250                          | 20:1          | 16                          |
|            | Wood-Anderson | E         | 1.0                      | 1000                         | 30:1          | 60                          |
| COLOMBO    | Milne-Shaw    | E         | 12.1                     | 250                          | 19:1          | 8                           |
| GHINA DUN  | Milne-Shaw    | N         | 12                       | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 0.8                      | 800                          | 60:1          | 60                          |
|            | Wood-Anderson | E         | 0.8                      | 950                          | 60:1          | 60                          |
| HYDERABAD  | Milne-Shaw    | N         | 12                       | 254                          | 20:1          | 8                           |
|            | Milne-Shaw    | E         | 12                       | 254                          | 20:1          | 8                           |
| KODAIKANAL | Milne-Shaw    | E         | 10.0                     | 250                          | 20:1          | 8                           |
| MADRAS     | Sprengnether  | E         | $T_0=T_g=7.2$            | -                            | -             | 30                          |
| NEW DELHI  | Milne-Shaw    | N         | 12                       | 320                          | 20:1          | 8                           |
|            | Omori-Ewing   | E         | 30                       | 30                           | 1             | 12                          |
| POONA      | Sprengnether  | Z         | $T_0=T_g=1.6$            | -                            | 2.1:1         | 30                          |
|            | Milne-Shaw    | N         | 12                       | 300                          | 20:1          | 8                           |
|            | Wood-Anderson | E         | 4                        | 1100                         | 20:1          | 16                          |
| SHILLONG   | Benioff       | Z         | $T_g=0.18$ $T_0=1.0$     | -                            | -             | 60                          |
|            | Sprengnether  | E         | $T_0=T_g=7.8$            | Critical                     | -             | 30                          |
|            | Milne-Shaw    | N         | 12                       | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 4                        | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | E         | 0.8                      | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | N         | 0.8                      | 1000                         | Critical      | 30                          |

| DATE       | STATION                                   | COMPT   | PHASE                                               | G. M. T.<br>h. m. s.                                                    | Δ<br>km | REMARKS                 |
|------------|-------------------------------------------|---------|-----------------------------------------------------|-------------------------------------------------------------------------|---------|-------------------------|
| April 1956 |                                           |         |                                                     |                                                                         |         |                         |
| 01         | SHILLONG                                  | Z       | iP                                                  | 00 54 38                                                                |         | Slight Compression      |
| 01         | SHILLONG                                  | Z       | i                                                   | 01 58 50                                                                |         | Slight, near            |
| 01         | Epc: North West Coast of Northern Sumatra |         |                                                     |                                                                         |         |                         |
|            |                                           |         |                                                     | M = 06h 37m 08s (U.S.C.G.S)                                             |         |                         |
|            |                                           |         |                                                     | M = 06h 37m 08s (B.C.I.S)                                               |         |                         |
|            |                                           |         |                                                     | M = 06h 37m 09s (Shillong)                                              |         |                         |
|            | MADRAS                                    | E       | iP<br>iS<br>e<br>e                                  | 06 41 32<br>44 44<br>45 09<br>45 15                                     | 1920    | Slight Phases not clear |
|            | SHILLONG                                  | Z, E    | eP<br>PP<br>PPP<br>iS<br>eS<br>Lq<br>SSS<br>Lr<br>M | 06 42 11<br>42 39<br>42 55<br>46 14<br>46 39<br>47 11<br>47 40<br>49 35 | 2480    | Slight                  |
|            | POONA                                     | Z       | e                                                   | 06 42 53                                                                |         | Slight                  |
|            | BOMBAY                                    | N, E    | e                                                   | 06 43 29<br>46 24                                                       |         | Feeble                  |
|            | DEHRA DUN                                 | N, E    | eP<br>eS                                            | 06 43 44<br>48 47                                                       | 3410    | Feeble Phases not clear |
|            | BOKARO                                    | N, E    | i                                                   | 06 46 29<br>46 59                                                       |         | Slight                  |
| 01         | SHILLONG                                  | Z       | iP                                                  | 06 46 15                                                                |         | Slight Rarefaction      |
| 01         | SHILLONG                                  | Z       | eP                                                  | 08 58 46                                                                |         | Slight                  |
| 01         | SHILLONG                                  | Z, N, E | iPg<br>iSg                                          | 09 22 18<br>22 26                                                       | 70      | Slight, felt.           |
|            | CHATRA                                    | Z       | eP<br>iS                                            | 09 23 21<br>24 19                                                       | 550     | Feeble                  |
| 01         | SHILLONG                                  | Z       | eP                                                  | 10 51 26                                                                |         | Slight                  |
| 01         | SHILLONG                                  | Z       | eP                                                  | 11 42 31                                                                |         | Slight, near            |
| 01         | SHILLONG                                  | Z       | iP                                                  | 12 26 17                                                                |         | Slight Compression      |
| 01         | SHILLONG                                  | Z       | iP                                                  | 12 46 54                                                                |         | Slight Compression      |
| 01         | SHILLONG                                  | Z       | e                                                   | 13 26 26<br>26 41                                                       |         | Slight, local           |
| 01         | SHILLONG                                  | Z       | eP<br>iPg/P<br>i<br>PP<br>iSg/S<br>eS               | 13 31 16<br>31 17<br>31 19<br>31 25<br>31 32<br>31 33                   | 130     | Slight                  |
| 01         | SHILLONG                                  | Z<br>E  | iP<br>eP                                            | 15 44 44                                                                |         | Slight Rarefaction      |
|            | CHATRA                                    | Z       | iP<br>iS                                            | 15 45 47<br>47 32                                                       | 1020    | Feeble                  |
| 01         | SHILLONG                                  | Z       | e                                                   | 16 07 37                                                                |         | Slight                  |
| 01         | CHATRA                                    | Z       | iP                                                  | 18 26 32                                                                | 590     | Slight                  |
|            | SHILLONG                                  | Z, N, E | iS                                                  | 27 34                                                                   |         |                         |
|            | SHILLONG                                  | Z, N, E | eP                                                  | 18 27 12                                                                |         | Slight, near            |
| 01         | SHILLONG                                  | Z       | iPg<br>iSg                                          | 20 05 55<br>05 57                                                       | 20      | Slight                  |
|            | DEHRA DUN                                 | N, E    | e                                                   | 20 06 31                                                                |         | Tremor                  |
| 01         | SHILLONG                                  | Z       | eP                                                  | 23 15 08                                                                |         | Slight                  |

| DATE       | STATION                              | COMPT     | PHASE                                                                   | G. M. T.<br>h. m. s.                                                                                                    | Δ<br>km | REMARKS                                                        |
|------------|--------------------------------------|-----------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------|
| April 1956 |                                      |           |                                                                         |                                                                                                                         |         |                                                                |
| 02         | SHILLONG                             | Z         | e                                                                       | 00 33 49                                                                                                                |         | Slight                                                         |
| 02         | SHILLONG                             | Z, E      | iP<br>eP<br>eS<br>eSg                                                   | 01 19 02<br>19 34<br>19 40                                                                                              | 280     | Slight Ground movement East Rarefaction                        |
|            | CHATRA                               | Z<br>Z, E | iP<br>iS                                                                | 01 19 59<br>21 21                                                                                                       | 790     | Feeble                                                         |
|            | DEHRA DUN                            | N, E      | e                                                                       | 01 24 28                                                                                                                |         | Tremor                                                         |
| 02         | SHILLONG                             | Z         | eP                                                                      | 05 57 10                                                                                                                |         | Slight                                                         |
| 02         | SHILLONG                             | Z         | iPg                                                                     | 07 11 35                                                                                                                |         | Slight, local                                                  |
| 02         | Epc: 2°N, 97°E. Off Coast of Sumatra |           |                                                                         |                                                                                                                         |         |                                                                |
|            |                                      |           |                                                                         | H = 10h 49m 57s (Shillong)                                                                                              |         |                                                                |
|            |                                      |           |                                                                         | 2°N, 97°E H = 10h 49m 56s (U.S.C.G.S)                                                                                   |         |                                                                |
|            |                                      |           |                                                                         | 3°N, 98°E H = 10h 50m 00s (Moskva)                                                                                      |         |                                                                |
|            |                                      |           |                                                                         | Magnitude = 6 1/2 (Shillong, Uppala, Kiruna) 6 (Moskva)                                                                 |         |                                                                |
|            | COLONBO                              | E         | P<br>S<br>L<br>M                                                        | 10 53 57<br>57 26<br>11 00<br>01 21                                                                                     | 2110    | Amp. = 5.0 mm                                                  |
|            | MADRAS                               | E         | iP<br>PP<br>PPP<br>i<br>iS<br>Lq<br>PcP<br>SS<br>SSS<br>Lr<br>M         | 10 54 31<br>54 50<br>55 04<br>56 37<br>58 08<br>58 20<br>58 31<br>58 46<br>59 01<br>59 19<br>11 01 01<br>02 00<br>05 17 | 2190    | Ground movement East.                                          |
|            | KODAIKANAL                           | E         | eP<br>PP<br>PPP<br>S<br>SS<br>SSS<br>Lq<br>Lr<br>M                      | 10 54 46<br>55 08<br>55 18<br>58 40<br>59 20<br>59 55<br>59 57<br>11 00 19<br>01 43                                     | 2380    | Ground movement West                                           |
|            | SHILLONG                             | Z, N, E   | iP<br>PP<br>PPP<br>N<br>N, E<br>iS<br>Lq<br>SS<br>SSS<br>Lr<br>PcS<br>M | 10 55 08<br>55 40<br>55 59<br>58 30<br>59 22<br>59 59<br>11 00 16<br>00 36<br>01 08<br>02 07<br>03 10                   | 2650    | Ground movement 'Northwest' Compression                        |
|            | HYDRABAD                             | E         | iP<br>PP<br>PcP<br>iS<br>SS<br>L<br>M                                   | 10 55 11<br>55 49<br>58 28<br>59 29<br>11 00 16<br>02 13<br>03 58                                                       | 2710    | Ground movement West<br>Per = 16 sec<br>Δ = 16                 |
|            | BOKARO                               | N, E      | iP<br>pP<br>PP<br>PPP<br>iS<br>eS<br>Lq<br>SS<br>SSS<br>Lr<br>M         | 10 55 13<br>55 22<br>55 54<br>56 05<br>59 32<br>59 47<br>11 00 17<br>00 39<br>00 54<br>01 28<br>03 28                   | 2730    | Ground movement 'North and West'<br>Per = 32.5 sec<br>Δ = 41.8 |
|            | CHATRA                               | Z<br>Z, E | iP<br>i                                                                 | 10 55 33<br>11 00 02                                                                                                    |         |                                                                |









| DATE       | STATION                                                                                             | COMPT           | PHASE         | G.                         | M. | T. | Δ    | REMARKS                           | DATE       | STATION                                                                                 | COMPT    | PHASE                                  | G.                                                                                  | M. | T.   | Δ                           | REMARKS               |
|------------|-----------------------------------------------------------------------------------------------------|-----------------|---------------|----------------------------|----|----|------|-----------------------------------|------------|-----------------------------------------------------------------------------------------|----------|----------------------------------------|-------------------------------------------------------------------------------------|----|------|-----------------------------|-----------------------|
|            |                                                                                                     |                 |               | h.                         | m. | s. | km   |                                   |            |                                                                                         |          |                                        | h.                                                                                  | m. | s.   | km                          |                       |
| April 1956 |                                                                                                     |                 |               |                            |    |    |      |                                   | April 1956 |                                                                                         |          |                                        |                                                                                     |    |      |                             |                       |
| 12         | SHILLONG                                                                                            | Z               | e             | 05                         | 10 | 29 |      | Slight                            | 14         | CHATRA                                                                                  | Z        | ePg<br>iSg                             | 05 28 31<br>28 38                                                                   |    | 50   | Feeble                      |                       |
| 12         | SHILLONG                                                                                            | Z               | i             | 05                         | 24 | 27 |      | Rarefaction                       | 14         | MADRAS                                                                                  | E        | e                                      | 05 59 21                                                                            |    |      | Slight                      |                       |
|            | POONA                                                                                               | Z               | i             | 05                         | 24 | 46 |      | Tremor                            | 14         | SHILLONG                                                                                | Z        | e                                      | 06 01 27                                                                            |    |      | Slight                      |                       |
|            |                                                                                                     |                 | i             | 25                         | 10 |    |      |                                   | 14         | SHILLONG                                                                                | Z        | e                                      | 08 38 39                                                                            |    |      | Slight                      |                       |
|            | DEHRA DUN                                                                                           | N,E             | e             | 05                         | 25 | 01 |      | Tremor                            | 14         | SHILLONG                                                                                | Z        | iP                                     | 15 23 45                                                                            |    |      | Slight<br>Compression       |                       |
| 12         | CHATRA                                                                                              | Z               | iP<br>iS      | 10 23 36<br>23 56          |    |    | 160  | Feeble                            | 14         | SHILLONG                                                                                | Z        | e                                      | 16 35 12                                                                            |    |      | Slight                      |                       |
| 12         | SHILLONG                                                                                            | Z               | iP            | 10 24 09                   |    |    |      | Slight<br>Rarefaction             | 14         | SHILLONG                                                                                | Z        | i                                      | 20 55 23                                                                            |    |      | Slight                      |                       |
| 12         | SHILLONG                                                                                            | Z               | e             | 10 57 43                   |    |    |      | Slight                            | 15         | Epc: 39°N, 72°E. Pamir Region. - H <sub>2</sub> 12h 46m 04s (B.C.I.S)                   |          |                                        |                                                                                     |    |      |                             |                       |
| 12         | SHILLONG                                                                                            | Z               | iP            | 14 59 34                   |    |    |      | Slight<br>Compression             |            | DEHRA DUN                                                                               | N,E      | eP<br>iS                               | 12 48 32<br>50 26                                                                   |    | 1110 | Feeble. Phases<br>not clear |                       |
| 12         | SHILLONG                                                                                            | Z               | iP<br>iSg     | 16 11 45<br>11 55          |    |    | 100  | Slight                            |            | POONA                                                                                   | Z        | eP<br>e<br>S                           | 12 53 46<br>54 20<br>57 05                                                          |    | 2000 | Slight                      |                       |
| 12         | CHATRA                                                                                              | Z<br>Z,E        | eP<br>iS      | 16 42 35<br>43 32          |    |    | 540  | Feeble                            |            | MADRAS                                                                                  | E        | eP<br>e<br>e<br>w<br>e<br>e<br>eS<br>e | 12 57 03<br>57 22<br>57 30<br>13 00 21<br>00 28<br>00 44<br>01 01<br>01 29<br>02 31 |    | 2850 | Slight                      |                       |
| 12         | SHILLONG                                                                                            | Z               | i             | 18 31 48                   |    |    |      | Slight                            | 15         | BOMBAY                                                                                  | E        | e                                      | 13 56 34                                                                            |    |      | Slight                      |                       |
| 12         | MADRAS                                                                                              | E               | iP<br>i<br>e  | 19 24 35<br>25 09<br>26 15 |    |    |      | Very feeble                       |            |                                                                                         |          | e                                      | 58 04                                                                               |    |      |                             |                       |
| 12         | MADRAS                                                                                              | E               | i             | 19 35 54                   |    |    |      | Very feeble                       | 16         | Epc: 3½°S, 102°E. Near South Coast of Sumatra. - H <sub>2</sub> 10h 46m 42s (U.S.C.G.S) |          |                                        |                                                                                     |    |      |                             |                       |
|            | SHILLONG                                                                                            | Z               | PP            | 19 36 24                   |    |    |      | Slight<br>Compression             |            | MADRAS                                                                                  | E        | iP<br>e<br>e<br>i<br>e                 | 10 52 31<br>52 46<br>53 25<br>53 40<br>54 11                                        |    |      | Feeble                      |                       |
| 12         | Epc: 37°N, 50°E. Northern Iran. - H <sub>2</sub> 22h 34m 44s (U.S.C.G.S)<br>Magnitude: 5½ (Moskva). |                 |               |                            |    |    |      |                                   |            |                                                                                         |          |                                        |                                                                                     |    |      |                             |                       |
|            | DEHRA DUN                                                                                           | N,E             | eP<br>i<br>i  | 22 40 03<br>44 30<br>46 03 |    |    |      | Feeble. Phases<br>not clear       |            | SHILLONG                                                                                | Z        | iP                                     | 10 52 57                                                                            |    |      |                             | Slight<br>Compression |
|            | BOMBAY                                                                                              | N,E<br>E<br>N,E | eP<br>e<br>eS | 22 40 38<br>45 11<br>45 22 |    |    | 3110 | Slight                            | 16         | CHATRA                                                                                  | Z<br>Z,E | iPg<br>iSg                             | 10 53 25<br>53 31                                                                   |    | 40   | Feeble                      |                       |
|            | POONA                                                                                               | Z               | eP            | 22 40 48                   |    |    |      | Slight. Other<br>phases not clear |            | POONA                                                                                   | Z        | i                                      | 10 53 42                                                                            |    |      | Tremor                      |                       |
|            | CHATRA                                                                                              | Z<br>E<br>Z,E   | eP<br>eP<br>i | 22 41 26<br>41 46          |    |    |      | Feeble                            |            | DEHRA DUN                                                                               | N,E      | e                                      | 11 24 27                                                                            |    |      | Tremor                      |                       |
|            | SHILLONG                                                                                            | Z               | iP            | 22 41 58                   |    |    |      | Slight<br>Rarefaction             | 16         | SHILLONG                                                                                | Z        | iP                                     | 18 58 47                                                                            |    |      | Slight<br>Compression       |                       |
| 12         | SHILLONG                                                                                            | Z               | iP            | 23 45 34                   |    |    |      | Slight<br>Rarefaction             | 16         | DEHRA DUN                                                                               | N,E      | e                                      | 23 26 36                                                                            |    |      | Tremor                      |                       |
| 13         | SHILLONG                                                                                            | Z               | iP            | 00 05 36                   |    |    |      | Slight<br>Compression             | 17         | SHILLONG                                                                                | Z        | e                                      | 02 12 47                                                                            |    |      | Slight                      |                       |
|            | CHATRA                                                                                              | Z               | eP<br>iS      | 00 06 35<br>07 34          |    |    | 560  | Feeble                            | 17         | SHILLONG                                                                                | Z        | iP                                     | 07 25 17                                                                            |    |      | Slight<br>Compression       |                       |
| 13         | POONA                                                                                               | Z               | e             | 05 01 13                   |    |    |      | Tremor                            | 17         | SHILLONG                                                                                | Z        | e                                      | 08 35 49                                                                            |    |      | Tremor, near.               |                       |
| 13         | SHILLONG                                                                                            | Z               | eP            | 05 42 11                   |    |    |      | Slight<br>Rarefaction             | 17         | SHILLONG                                                                                | Z        | e                                      | 08 53 06                                                                            |    |      | Tremor, near                |                       |
| 13         | SHILLONG                                                                                            | Z               | e             | 07 15 41                   |    |    |      | Tremor                            | 17         | CHATRA                                                                                  | Z<br>Z,E | iP<br>iS                               | 09 02 34<br>02 54                                                                   |    | 160  | Feeble                      |                       |
| 13         | SHILLONG                                                                                            | Z               | iP            | 08 04 32                   |    |    |      | Slight<br>Compression             | 17         | KODAIKANAL                                                                              | E        | e                                      | 09 19 28                                                                            |    |      | Tremor                      |                       |
| 13         | SHILLONG                                                                                            | Z               | iP            | 16 42 24                   |    |    |      | Slight<br>Compression             | 17         | SHILLONG                                                                                | Z        | iP                                     | 10 52 12                                                                            |    |      | Slight<br>Compression       |                       |
| 13         | SHILLONG                                                                                            | Z               | i<br>i        | 18 00 13<br>00 30          |    |    |      | Slight                            | 17         | SHILLONG                                                                                | Z        | e                                      | 11 53 59                                                                            |    |      | Tremor                      |                       |
| 13         | SHILLONG                                                                                            | Z               | eP            | 18 25 55                   |    |    |      | Slight                            | 17         | SHILLONG                                                                                | Z        | eP                                     | 12 23 20                                                                            |    |      | Feeble                      |                       |
| 13         | SHILLONG                                                                                            | Z               | iP            | 19 29 55                   |    |    |      | Slight<br>Compression             | 17         | SHILLONG                                                                                | Z        | eP                                     | 12 56 21                                                                            |    |      | Slight<br>Compression       |                       |
| 14         | SHILLONG                                                                                            | Z               | i             | 03 31 42                   |    |    |      | Compression                       | 17         | SHILLONG                                                                                | Z        | Pg<br>Sg                               | 15 24 25<br>24 29                                                                   |    | 30   | Slight                      |                       |
|            |                                                                                                     |                 |               |                            |    |    |      |                                   | 17         | SHILLONG                                                                                | Z        | Pg<br>Sg                               | 19 20 31<br>20 40                                                                   |    | 80   | Slight                      |                       |

| DATE       | STATION                                                                                                                                                                                           | COMPT                      | PHASE                                         | G. M. T.                                                                | $\Delta$ | REMARKS                                            | DATE       | STATION                                                                     | COMPT      | PHASE                                               | G. M. T.                                                                         | $\Delta$ | REMARKS                                                             |                     |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------------------------|-------------------------------------------------------------------------|----------|----------------------------------------------------|------------|-----------------------------------------------------------------------------|------------|-----------------------------------------------------|----------------------------------------------------------------------------------|----------|---------------------------------------------------------------------|---------------------|
|            |                                                                                                                                                                                                   |                            |                                               | h. m. s.                                                                | km       |                                                    |            |                                                                             |            |                                                     | h. m. s.                                                                         | km       |                                                                     |                     |
| April 1956 |                                                                                                                                                                                                   |                            |                                               |                                                                         |          |                                                    | April 1956 |                                                                             |            |                                                     |                                                                                  |          |                                                                     |                     |
| 17         | SHILLONG                                                                                                                                                                                          | Z                          | Pg<br>Sg                                      | 21 06 07<br>06 21                                                       | 120      | Slight                                             | 18         | SHILLONG                                                                    | Z          | iP                                                  | 21 30 03                                                                         |          | Slight<br>Rarefaction                                               |                     |
| 17         | SHILLONG                                                                                                                                                                                          | Z                          | eP                                            | 21 22 30                                                                |          | Slight<br>Compression                              | 19         | SHILLONG                                                                    | Z          | iP<br>P*<br>Pg<br>iS<br>S*<br>Sg                    | 08 54 43<br>54 47<br>54 58<br>55 27<br>55 55<br>55 42                            | 400      | Slight<br>Compression                                               |                     |
| 17         | SHILLONG                                                                                                                                                                                          | Z                          | iP                                            | 22 15 38                                                                |          | Slight<br>Compression                              | 19         | SHILLONG                                                                    | Z          | e                                                   | 10 36 14                                                                         |          | Tremor                                                              |                     |
| 17         | SHILLONG                                                                                                                                                                                          | Z                          | iP                                            | 22 24 08                                                                |          | Slight<br>Compression                              | 19         | DEHRA DUN                                                                   | N,E        | e                                                   | 15 53 31                                                                         |          | Tremor                                                              |                     |
| 18         | Epc: Southern Tibet.- H = 01h 56m 49s (U.S.C.G.S)<br>28.5°N, 90°E. - H = 01h 57m 13s (SHILLONG)                                                                                                   |                            |                                               |                                                                         |          |                                                    |            | 19                                                                          | COLOMBO    | E                                                   | P                                                                                | 17 10 20 |                                                                     | Localised<br>Tremor |
|            | CHATRA                                                                                                                                                                                            | Z                          | eP<br>iS                                      | 01 57 51<br>58 22                                                       | 270      | Slight                                             |            | MADRAS                                                                      | E          | iP<br>PP<br>PPP<br>Lq<br>iS<br>Lr<br>SS<br>SSS<br>M | 17 10 36<br>10 42<br>10 51<br>11 35<br>11 42<br>11 46<br>11 52<br>12 00<br>12 13 | 620      | Slight<br>Ground movement<br>'East'                                 |                     |
|            | SHILLONG                                                                                                                                                                                          | Z,E                        | iP<br>Pg<br>PPP<br>Lq<br>Lr<br>iS<br>S*<br>Sg | 01 58 07<br>58 17<br>58 21<br>58 37<br>58 44<br>58 47<br>58 55<br>59 03 | 370      | Slight<br>Rarefaction<br>Ground movement<br>'West' |            | BOMBAY                                                                      | N,E        | eP<br>eS                                            | 17 12 39<br>15 11                                                                | 1500     | Slight                                                              |                     |
|            | DEHRA DUN                                                                                                                                                                                         | N,E                        | e<br>i                                        | 01 59 13<br>02 00 53                                                    |          | Feeble. Phases<br>not clear                        |            |                                                                             | N          | M                                                   | 17 38                                                                            |          | Per. = 7 secs<br>$\mu = 1$                                          |                     |
|            | POONA                                                                                                                                                                                             | Z                          | i<br>i                                        | 02 00 57<br>03 52                                                       |          | Slight. Probably<br>multiple                       |            | POONA                                                                       | Z<br>Z,N,E | iP1<br>iP2                                          | 17 12 45<br>14 46                                                                |          | Double shock.<br>Phases mixed up                                    |                     |
|            | BOMBAY                                                                                                                                                                                            | E                          | e<br>e<br>e                                   | 02 04 11<br>04 32<br>06 41                                              |          | Feeble, near                                       | 19         | SHILLONG                                                                    | Z,E<br>E   | iP<br>PP<br>PPP<br>iS<br>Lq<br>SSS<br>i<br>Lr<br>M  | 17 13 21<br>13 33<br>13 41<br>16 49<br>15 56<br>17 23<br>17 32<br>17 46<br>19 25 | 2090     | Slight<br>Rarefaction?                                              |                     |
|            | MADRAS                                                                                                                                                                                            | E                          | e<br>e<br>i                                   | 02 04 21<br>04 40<br>05 20                                              |          | Very slight                                        |            | NEW DELHI                                                                   | N          | i<br>e                                              | 17 13 55<br>17 52                                                                |          |                                                                     |                     |
| 18         | SHILLONG                                                                                                                                                                                          | Z                          | iP                                            | 03 05 13                                                                |          | Slight<br>Compression                              |            | DEHRA DUN                                                                   | N,E        | e<br>i                                              | 17 14 11<br>18 17                                                                |          | Feeble. Phases<br>not clear                                         |                     |
| 18         | Epc: 52°N, 178°W. Andeanof Islands. Aleutian Islands<br>H = 11h 00m 13s (U.S.C.G.S)<br>52°N, 178°W. - H = 11h 00m 18s (B.C.I.S)<br>Magnitude = 6% (Pasadena), 6 (Kiruna, Uppsala),<br>5% (Moskva) |                            |                                               |                                                                         |          |                                                    |            | EOKARO                                                                      | E          | e                                                   | 17 15 51                                                                         |          | Feeble                                                              |                     |
|            | DEHRA DUN                                                                                                                                                                                         | N,E                        | e                                             | 11 07 14                                                                |          | Feeble. Phases<br>not clear                        | 19         | SHILLONG                                                                    | Z          | eP                                                  | 17 16 32                                                                         |          | Slight. Doubtful<br>due mixing with<br>phases of previous<br>shock. |                     |
|            | SHILLONG                                                                                                                                                                                          | Z<br>E                     | eP<br>PcP<br>PP<br>eS<br>PS<br>PPS<br>M       | 11 11 33<br>11 55<br>14 17<br>20 41<br>20 55<br>21 33<br>38 19          | 7700     |                                                    | 20         | SHILLONG                                                                    | Z          | e                                                   | 06 20 51                                                                         |          | Tremor                                                              |                     |
|            | BOMBAY                                                                                                                                                                                            | E<br>N<br>E<br>N<br>E<br>N | e<br>e<br>e<br>e<br>e<br>e<br>M               | 11 13 41<br>13 53<br>23 30<br>24 22<br>26 25<br>26 40<br>29 37<br>54 45 |          | Per. = 18 secs<br>$\mu = 1$                        | 20         | DEHRA DUN                                                                   | N,E        | e                                                   | 10 16 33                                                                         |          | Tremor                                                              |                     |
|            | HYDERABAD                                                                                                                                                                                         | E                          | M                                             | 11 47 05                                                                |          | Per. = 15 secs<br>$\mu = 4$                        | 20         | Epc: 7½°S, 129°E. Banda Sea. - h = 150 Km Ca<br>H = 15h 15m 56s (U.S.C.G.S) |            |                                                     |                                                                                  |          |                                                                     |                     |
|            | COLOMBO                                                                                                                                                                                           | E                          | L<br>M                                        | 11 55 31<br>58 31                                                       |          | Amp. = 0.4 mm                                      |            | COLOMBO                                                                     | E          | P<br>L<br>M                                         | 15 24 49<br>34 59<br>37 04                                                       |          | Amp. = 0.3 mm                                                       |                     |
| 18         | POONA                                                                                                                                                                                             | Z                          | iP                                            | 16 18 42                                                                |          | Feeble. Phases<br>not clear                        |            | MADRAS                                                                      | E          | eP<br>e<br>e<br>i<br>e<br>e<br>e                    | 15 25 02<br>25 53<br>26 02<br>26 46<br>29 43<br>30 50<br>31 58<br>32 18          |          | Slight                                                              |                     |
|            | SHILLONG                                                                                                                                                                                          | Z                          | iP                                            | 16 19 04                                                                |          | Slight<br>Compression                              |            | CHATRA                                                                      | Z<br>E     | eP<br>eP                                            | 15 25 06                                                                         |          | Slight                                                              |                     |
| 18         | CHATRA                                                                                                                                                                                            | Z                          | iPg<br>iSg                                    | 16 52 55<br>53 04                                                       | 70       | Feeble                                             |            | POONA                                                                       | Z          | iP                                                  | 15 25 56                                                                         |          | Slight. Long<br>distance. Phases<br>not clear                       |                     |
| 18         | SHILLONG                                                                                                                                                                                          | Z                          | e                                             | 18 06 24                                                                |          | Tremor                                             |            | BOMBAY                                                                      | N,E        | e<br>i                                              | 15 26 05<br>28 24                                                                |          | Slight. Deep<br>focus                                               |                     |
| 18         | SHILLONG                                                                                                                                                                                          | Z                          | iP                                            | 19 27 24                                                                |          | Slight<br>Compression                              |            |                                                                             | E          | e                                                   | 34 56                                                                            |          |                                                                     |                     |





| DATE       | STATION   | COMPT   | PHASE            | G. M. T.<br>h. m. s. | REMARKS            | DATE       | STATION   | COMPT   | PHASE  | G. M. T.<br>h. m. s. | REMARKS                  |
|------------|-----------|---------|------------------|----------------------|--------------------|------------|-----------|---------|--------|----------------------|--------------------------|
| April 1956 |           |         |                  |                      |                    | April 1956 |           |         |        |                      |                          |
| 26         | SHILLONG  | Z       | eP               | 18 03 59             | Slight             | 28         | SHILLONG  | Z       | e      | 19 56 41             | Slight                   |
| 26         | SHILLONG  | Z       | iP*              | 20 34 54             | 140 Slight         | 28         | SHILLONG  | Z       | e      | 23 39 47             | Slight                   |
|            |           |         | Pg/P             | 34 55                | Compression        | 29         | SHILLONG  | Z       | eP     | 08 20 53             | Slight, near.            |
|            |           |         | PP               | 35 02                |                    | 29         | SHILLONG  | Z       | eP     | 10 50 56             | Slight, near.            |
|            |           |         | eS <sub>2</sub>  | 35 11                |                    | 29         | SHILLONG  | Z       | eP     | 19 22 57             | Slight Rerefraction      |
| 26         | SHILLONG  | Z, E    | eP               | 21 10 50             | 700 Slight         | 29         | SHILLONG  | Z       | e      | 20 04 20             | Slight                   |
|            |           | Z       | PP               | 11 00                |                    | 29         | SHILLONG  | Z       | e      | 21 46 32             | Slight, local            |
|            |           |         | P*               | 11 07                |                    | 29         | SHILLONG  | Z       | e      | 22 01 31             | Slight                   |
|            |           |         | Pg               | 11 22                |                    | 29         | SHILLONG  | Z       | eP     | 23 04 21             | 230 Slight               |
|            |           | Z, E    | Lq               | 11 59                |                    |            |           |         | P*     | 04 24                |                          |
|            |           |         | eS               | 12 12                |                    |            |           |         | Pg     | 04 27                |                          |
|            |           |         | Lr               | 12 20                |                    |            |           |         | eS     | 04 48                |                          |
|            |           |         | SS               | 12 22                |                    |            |           |         | S*     | 04 51                |                          |
|            |           | Z, N, E | S*               | 12 38                |                    |            |           |         | Sg     | 04 53                |                          |
|            |           |         | M/S <sub>E</sub> | 12 52                |                    | 29         | SHILLONG  | Z       | e      | 23 52 04             | Slight, local            |
| 27         | SHILLONG  | Z       | eP               | 00 27 39             | Slight             | 30         | SHILLONG  | Z, E    | iPg)   | 00 58 10             | 60 Slight. Felt          |
| 27         | SHILLONG  | Z       | eP               | 02 46 24             | Slight, near.      |            |           | N, E    | ePg)   | 58 12                | Mag. 2.4                 |
| 27         | SHILLONG  | Z       | e                | 07 26 35             | Slight             |            |           | E       | P*     | 58 16                |                          |
| 27         | SHILLONG  | Z       | eP               | 07 53 06             | Slight             |            |           | N       | iSg)   | 58 18                |                          |
| 27         | SHILLONG  | Z       | eP               | 08 18 11             | Slight             |            |           | N, E    | S*     | 58 22                |                          |
| 27         | SHILLONG  | Z       | e                | 21 00 44             | Slight             |            | CHATRA    | Z       | eP     | 00 59 18             | 400 Feeble               |
| 27         | SHILLONG  | Z       | ePg/P*           | 22 27 30             | 110 Slight         |            |           |         | iS     | 01 00 02             |                          |
|            |           |         | P                | 27 31                |                    | 30         | SHILLONG  | Z       | iP)    | 05 50 46             | 260 Slight               |
|            |           |         | eSg              | 27 43                |                    |            |           | E       | eP)    | 50 49                | Rerefraction             |
|            |           |         | S*               | 27 45                |                    |            |           | Z       | P*     | 50 55                |                          |
| 28         | DEHRA DUN | N, E    | e                | 00 16 36             | Tremor             |            |           | Z, N, E | Pg     | 51 04                |                          |
| 28         | SHILLONG  | Z       | eP               | 03 56 41             | Slight, near       |            |           | Z       | Lq     | 51 16                |                          |
| 28         | SHILLONG  | Z       | e                | 05 17 56             | Slight, local      |            |           | Z, E    | eS     | 51 19                |                          |
|            |           |         | e                | 18 08                |                    |            |           |         | S*     | 51 27                |                          |
| 28         | SHILLONG  | Z       | eP               | 06 44 38             | Slight             |            | CHATRA    | Z       | eP     | 05 51 33             | 520 Feeble               |
|            |           |         | i                | 44 39                |                    |            |           |         | iS     | 52 38                |                          |
| 28         | SHILLONG  | Z       | e                | 08 34 50             | Slight, local      | 30         | DEHRA DUN | N, E    | e      | 11 25 54             | Feeble. Phases not clear |
| 28         | SHILLONG  | Z       | i                | 09 22 14             | Slight, local.     | 30         | SHILLONG  | Z       | e      | 15 41 13             | Slight                   |
| 28         | SHILLONG  | Z       | e                | 09 53 50             | Slight, local      | 30         | SHILLONG  | Z       | e      | 16 24 41             | Slight                   |
|            |           |         | e                | 54 27                |                    | 30         | SHILLONG  | Z       | iPg/P* | 16 43 49             | 80 Slight                |
| 28         | CHATRA    | Z       | ePg              | 11 19 23             | 90 Feeble          |            |           |         | P      | 43 51                |                          |
|            |           |         | iSg              | 19 35                |                    |            |           |         | eSg    | 43 58                |                          |
|            | SHILLONG  | Z       | e                | 11 20 20             | Slight             |            |           |         | S*     | 44 00                |                          |
|            |           |         |                  |                      |                    |            |           |         | S      | 44 03                |                          |
| 28         | SHILLONG  | Z       | ePg              | 11 39 12             | 60 Slight          | 30         | SHILLONG  | Z       | e      | 19 12 21             | Slight                   |
|            |           |         | P                | 39 15                |                    | 30         | SHILLONG  | Z       | e      | 20 33 55             | Slight                   |
|            |           |         | eSg              | 39 19                |                    | 30         | SHILLONG  | Z, N, E | iPg/P* | 22 37 43             | 120 Rerefraction         |
|            |           |         | S*               | 39 21                |                    |            |           | N, E    | P      | 37 44                | Ground movement          |
|            |           |         | S                | 39 25                |                    |            |           | E       | e      | 37 52                | 'South & West'           |
|            |           |         |                  |                      |                    |            |           | N, E    | iSg/S* | 37 57                | Felt locally.            |
|            |           |         |                  |                      |                    |            |           |         | S      | 38 00                | Mag. 2.4.5               |
|            |           |         |                  |                      |                    |            |           |         | SS     | 38 09                |                          |
| 28         | SHILLONG  | Z       | e                | 15 12 27             | Slight             |            | CHATRA    | Z       | eP     | 22 38 18             | 490 Slight               |
| 28         | SHILLONG  | Z, P    | iP)              | 15 25 12             | 250 Slight. Ground |            |           |         | iS     | 39 10                |                          |
|            |           | N       | eP)              | 25 15                | movement. West     |            |           |         |        |                      |                          |
|            |           | E       | P*               | 25 18                | Compression        |            |           |         |        |                      |                          |
|            |           |         | Pg               | 25 41                |                    |            |           |         |        |                      |                          |
|            |           |         | S                | 25 43                |                    |            |           |         |        |                      |                          |
|            |           | N       | iS*)             | 25 45                |                    |            |           |         |        |                      |                          |
|            |           | N, E    | eS*              |                      |                    |            |           |         |        |                      |                          |
|            |           |         | Sg               |                      |                    |            |           |         |        |                      |                          |
|            | CHATRA    | Z       | iP               | 16 26 10             | 750 Feeble         |            |           |         |        |                      |                          |
|            |           |         | iS               | 27 28                |                    |            |           |         |        |                      |                          |
| 28         | SHILLONG  | Z       | e                | 16 39 35             | Slight             |            |           |         |        |                      |                          |

*Earthquake Reports  
(Non Instrumental Reports)*

*Following is the list of Earthquakes that were reported  
by Voluntary Observers from different stations during the  
month of April 1956.*

| PLACE AT WHICH FELT | DATE G.M.T | TIME G.M.T<br>h. m. | NO. OF SHOCK | DURATION OF SHOCKS IN SECS. | INTENSITY IN R.F. SCALE | REMARKS                       |
|---------------------|------------|---------------------|--------------|-----------------------------|-------------------------|-------------------------------|
| SHILLONG            | 01         | 09 23               | 1            | 2                           | III                     |                               |
| GAUHATI             | 01         | 09 20               | 1            | 2                           | IV                      |                               |
| DARJEELING          | 02         | 11 00               | 1            | 2                           | IV                      |                               |
| GANGTOK             | 02         | 11 03               | 1            | 6                           | IV                      |                               |
| SRINAGAR            | 07         | 04 30               | 4            | 20                          | IV                      |                               |
| SRINAGAR            | 11         | 10 33               | 2            | 5                           | IV                      | Bullet firing sound was heard |
| SHILLONG            | 12         | 16 12               | 1            | 3                           | III                     |                               |
| SHILLONG            | 17         | 15 25               | 2            | 3                           | III                     |                               |
| SHILLONG            | 23         | 21 30               | 1            | 2                           | III                     |                               |
| SHILLONG            | 26         | 15 12               | 2            | 8                           | II                      |                               |
| SHILLONG            | 30         | 01 00               | 2            | 8                           | III                     |                               |
| SHILLONG            | 30         | 22 39               | 2            | 20                          | III                     |                               |

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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

may 1952

SEISMOLOGICAL BULLETIN



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Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECONDS	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMBAY	Sprengnether	E	$T_0=T_g=7$ secs	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHITRA	Benioff	Z	$T_0=0.72$ $T_g=0.45$	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	E	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MAERAS	Sprengnether	E	$T_0-T_g=7.2$	-	-	30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Omori-Ewing	E	30	30	1	12
POONA	Sprengnether	Z	$T_0=T_g=1.6$	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	$T_g=0.18$ $T_0=1.0$	-	-	60
	Sprengnether	E	$T_0=T_g=7.8$	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30







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

May  
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13 Epic: 30°N, 70°E. West Pakistan  
H. = 07h. 50m. 30s (Shillong)  
30°N, 70°E. H. = 07h. 50m. 33s (U. S. C. G. S.)  
30°N, 70°E. H. = 07h. 50m. 34s (Quetta)  
29°N, 70°E. H. = 07h. 50m. 33s (Moskva).  
Magnitude = 5.4 (Shillong), 6.1 (Uppsala, Kiruna),  
5.4 (Moskva). Felt at Barkhan,  
Rakhni, Fort Munro.

DATE	STATION	COMPT	PHASE	G. E. T.	$\Delta$	REMARKS					
				h. m. s.	km						
NEW DELHI	N		eP	07 52 10	730	Slight					
			P*	52 23							
			iS	53 26							
			Lr	53 34							
			S*	53 48							
			Sg	54 06							
			DEHRA DUN	N, E				eP	07 52 19	790	Moderate
								PP	52 28		
								PPP	52 35		
								P*	52 38		
Pg	52 51										
Lq	53 29										
iS	53 41										
Lr	53 51										
SS	53 54										
SSS	54 04										
Sg/M	54 24										
BOMBAY	N		eP	07 53 15	1170	Slight					
			PPP	53 27							
			Lq	55 04							
			eS	55 16							
			SSS	55 43							
			M	08 05 00							
POONA	Z		eP	07 53 27	1340	Moderate					
			PP	53 37							
			PPP	53 46							
			eS	55 43							
			SS	55 55							
			SSS	56 13							
HYDERABAD	E		eP	07 53 47	1660	Moderate					
			iS	56 35							
			SS	56 53							
			M	59 43							
			CHATRA	Z				eP	07 54 10	1730	Slight
								iS	57 04		
MADRAS	E				eP	07 55 02		2190	Moderate		
					PP	55 20					
					PPP	55 34					
					iS	58 39					
			Lq	58 51							
			PcP	59 01							
SHILLONG	Z, N, E		SS	59 15							
			SSS	59 27							
			Lr	59 46							
			M	08 01 10							
			ScS	05 57							
			SHILLONG	Z, N, E		iP	07 55 05	2190	Moderate		
PPP	53 33										
eS	58 41										
Lq	58 51										
SSS	59 24										
M	08 01 31										
BANGALORE	N, E		eP	07 55 14	1610	Moderate					
			PP	54 21							
			PPP	54 39							
			Lq	56 30							
			iS	56 57							
			SS	57 10							
			L*	57 25							
			SSS	57 36							
			M	58 51							
			KODAIKANAL	E				eP	07 55 19	2500	Moderate
PP	55 49										
PcP	59 01										
iS	59 22										
Lq	59 46										

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

May  
1956

DATE	STATION	COMPT	PHASE	G. E. T.	$\Delta$	REMARKS
				h. m. s.	km	
13	KODAIKANAL	E	SS	08 01 13		
			Lr	01 52		
			PcP	02 43		
			M	03 02		
			ScS	06 14		
13	CHATRA	Z	iP	10 29 08	170	Feeble
			iS	29 29		
13	SHILLONG	Z	iP	16 43 48		Slight Compression
13	DEHRA DUN	N, E	e	17 15 42		Tremor
13	DEHRA DUN	N, E	e	21 15 24		Feeble. Phases not clear
13	SHILLONG	Z, E	iP	22 44 01	220	Slight Compression
			iS	44 27		
13	CHATRA	Z	iP	22 45 02	730	Slight
			iS	46 18		
14	DEHRA DUN	N, E	e	07 47 52		Feeble. Phases not clear
			i	49 07		
			i	49 43		
14	SHILLONG	Z	iP	16 05 02		Compression
			e	16 05 34		
14	CHATRA	Z	e	16 05 34		Feeble
14	SHILLONG	Z	iP	16 08 33		Rarefaction
14	SHILLONG	Z	eP	22 01 07		Rarefaction
			i	01 21		
14	CHATRA	Z	eP	22 02 10	640	Feeble
			iS	03 17		
15	SHILLONG	Z	e	00 08 05		Slight
15	POONA	Z	e	08 32 45		Feeble. Phases not clear
			e	33 08		
15	CHATRA	Z	eP	14 47 13	210	Slight
			iS	47 38		
15	DEHRA DUN	N, E	e	20 35 07		Tremor
15	CHATRA	Z	eP	22 06 23	200	Slight
			iS	06 47		
16	SHILLONG	Z	i	10 24 37		Slight, local
16	DEHRA DUN	N, E	e	14 20 31		Tremor
16	SHILLONG	Z	i	20 38 44		Slight
17	DEHRA DUN	N, E	e	00 09 33		Feeble. Phases not clear
			i	10 57		
			i	11 07		
			i	11 19		
17	POONA	Z	e	00 11 10		Feeble. Phases not clear.
			e	00 11 53		
17	SHILLONG	Z	iP	00 11 53		Slight Compression
			e	06 19 47		
17	POONA	Z	e	06 19 47		Tremor
			e	20 02		
17	DEHRA DUN	N, E	e	06 19 55		Tremor
			e	06 19 59		
17	SHILLONG	Z	iP	06 19 59		Slight Rarefaction
			iS	16 32		
17	CHATRA	Z	iP	17 16 10	180	Feeble
			iS	16 32		
17	CHATRA	Z	eP	20 18 26	690	Feeble
			iS	19 38		
17	SHILLONG	Z	e	20 18 55		Slight, near
17	SHILLONG	Z	iP	21 19 33		Slight Rarefaction
18	MADRAS	E	e	09 00 25		Feeble
18	MADRAS	E	e	09 31 58		Feeble







DATE STATION COMPT PHASE G. M. T. Δ  
h. m. s. km

May 1956

27 CHATRA Z eP 13 14 54 Feeble  
Contd. COLOMBO E L 13 17 54  
M 20 29 Amp. ≈ 0.6 mm

27 CHATRA Z eP 15 30 23 440 Feeble  
iS 31 11

27 Epc: 6½°S, 129½°E. Banda Sea. - h ≈ 200 Km  
- H ≈ 16h 56m 49s (U. S. C. G. S).

SHILLONG Z, E iP 17 05 17 5400 Compression  
PP 07 05 Deep focus  
iS 12 00  
PS 12 17  
e 14 50

CHATRA Z eP 17 05 50 Feeble  
i 06 11

DEHRA DUN N, E eP 17 06 50 6450 Feeble. Phases  
iS 14 51 not clear.

27 SHILLONG Z iP 18 07 16 Compression

28 POONA Z iP 00 32 10 5370 Moderate  
E PP 34 01  
PPP 35 40  
E, N eS 39 13  
PPS 39 28  
N i 39 54  
E ScS 41 13  
SS 42 43

28 SHILLONG Z eP 09 21 35 Slight  
Rarefaction

28 DEHRA DUN N, E e 09 36 07 Feeble. Phases  
e 37 26 not clear

28 SHILLONG Z e 09 54 46 Slight

CHATRA Z eP 09 55 46 700 Feeble  
iS 56 59

28 CHATRA Z eP 10 06 32 200 Feeble  
iS 06 56

28 Epc: 1°N, 121½°E. Northern Celebes. - h ≈ 100 Km  
- H ≈ 13h 23m 20s (U. S. C. G. S).

SHILLONG Z, E iP 13 30 29 3820 Rarefaction  
PP 30 52  
iS 36 18  
SS 37 01

CHATRA Z eP 13 31 07 Feeble  
i 31 44

MADRAS E iP 13 31 37 Slight. Other  
i 37 31 phases not clear  
i 38 14

DEHRA DUN N, E eP 13 32 09 5590 Slight. Other  
N eS 39 22 phases not  
SS 42 40 clear

POONA Z iP 13 32 10 5370 Moderate  
E PP 34 01 Distant  
PPP 35 40  
E, N eS 39 13  
PPS 39 28  
N i 39 54  
E ScS 41 13  
SS 42 43

HYDERABAD E eP 13 32 14 4350 Moderate  
iS 38 15  
PPS 38 50  
SSS 42 17

BOMBAY E eS 13 39 25 Slight  
N, E e 39 28  
e 40 12  
N e 42 42

28 SHILLONG Z eP 14 33 29 Slight  
Compression

29 SHILLONG Z iP 05 32 44 Slight, local

May 1956

29 SHILLONG Z iP 06 35 45 Slight  
Compression

CHATRA Z e 06 36 08 Feeble, near

29 SHILLONG Z eP 09 29 10 230 Slight, local  
Sg 29 42

29 SHILLONG Z eP 10 23 25 Slight

CHATRA Z eP 10 24 03 700 Slight  
Z, F iS 25 16

29 SHILLONG Z eP 19 22 13 Slight

30 DEHRA DUN N, E e 02 30 08 Tremor

30 DEHRA DUN N, E eP 02 58 10 310 Slight  
Lq 58 35  
iS 58 44  
S\* 58 49  
SS/Sg 58 54  
SSS 59 03

NEW DELHI N eP 02 58 24 Slight, near  
i 59 00  
i 59 22

CHATRA E eP 02 59 05 670 Slight  
iS 03 00 16

POONA Z eP 03 00 31 1330 Slight  
E eS 02 46

SHILLONG Z iP 03 00 59 Slight  
Rarefaction

BOMBAY N e 03 03 25 Feeble and  
N, E e 04 15 near.  
e 04 39  
N e 05 40  
E e 05 51  
e 06 25

30 CHATRA Z eP 04 14 34 1070 Feeble  
iS 15 24

30 SHILLONG Z eP 05 13 31 Slight

30 DEHRA DUN N, E e 06 18 12 Tremor

30 SHILLONG Z eP 10 44 11 Slight

31 CHATRA Z ePg 00 02 23 110 Feeble  
iSg 02 38

31 DEHRA DUN N, E e 09 26 35 Feeble. Phases  
not clear

CHATRA Z iP 09 27 08 650 Slight  
Z, E iS 28 16

31 SHILLONG Z eP 14 59 18 Slight  
Compression

31 SHILLONG Z eP 15 57 11 140 Slight  
Sg 57 28 local.

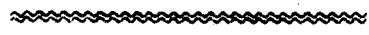
31 SHILLONG Z iP 19 03 01 Slight

Following is the list of Earthquakes that were reported by Voluntary Observers from different stations during the month of May 1956.

PLACE	DATE	TIME	NO. OF	DURATION	INTENSITY	REMARKS
	IN	IN	SHOCK	OF SHOCK	IN R.F.	
	G. M. T	G. M. T		IN SECS.	SCALE	
		h. m.				

ANGUL	02	15 30	2	5	III	Direction N.W.
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ANGUL	17	20 45	1	40		Direction South end West. Sound of motor car heard.
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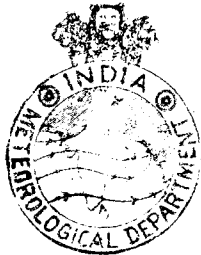






GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



Published under the direction of  
Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECOND	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMBAY	Sprengnether	E	To=Tg=7 secs	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHITRA	Benioff	Z	To=0.72 Tg =0.45	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	E	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MAERAS	Sprengnether	E	To-Tg=7.2	-	-	30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Omori-Ewing	E	30	30	1	12
POONA	Sprengnether	Z	To=Tg=1.6	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	Tg=0.18 To=1.0	-	-	60
	Sprengnether	E	To=Tg=7.8	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30





DATE	STATION	COMPT PHASE	G.	M.	T.	$\Delta$	REMARKS	DATE	STATION	COMPT PHASE	G.	M.	T.	$\Delta$	REMARKS
			h.	m.	s.	km					h.	m.	s.	km	
June 1956								June 1956							
09	SHILLONG	Z,N,E Contd.	ePKF1 i N,E PKP2	10 29 29	28 21 45	18550	Moderate	09	HYDERABAD	N,E N	iP ei	23 18 22	18 28 06		Initial ground movement towards 'South & East' Per. = 12 secs $\mu = 371$
									SHILLONG	Z,N,E N,E	iP eP PPP iS i Lq SS SSS Lr PcS M ScS	23 18 19 23 23 23 24 24 25 26 26 27	18 58 26 44 06 11 35 58 17 53 48 20 36	2570	Initial ground movement towards 'South and East' Compression
	DEHRA DUN	N,E	e i	10 37	28 44		Feeble; Phases not clear.		MADRAS	E	iP	23	19	16	Initial ground movement towards 'East'. Other phases not clear
	BOKARO	N,E	i i i	10 39 43	32 44 07		Slight		KODAIKANAL	E	iP PP PPP S Lq SS SSS Lr M	23 19 20 20 25 25 26 27 29	19 31 22 43 13 31 46 22 01 26	3080	Initial ground movement Towards 'East'
	KODAIKANAL	E	e	10	38 12		Slight; Phases not clear.		HYDERABAD	N E	M M	11 24	22 15		Per. = 24 secs $\mu = 19$ Per. = 24 secs $\mu = 18$
	HYDERABAD	N E	M M	11 24	22 15		Per. = 24 secs $\mu = 19$ Per. = 24 secs $\mu = 18$	09	SHILLONG	Z	iP	23	06 44		Slight Compression
09	SHILLONG	Z	iP	23	06 44		Slight Compression		COLOMBO	E	iP iS L M	23 20 28 35	05 05 -- --	3370	Per. = 12 secs $\mu = 34.4$ Amp. = 18.5 mm
09	Epic: 35°N, 67½°E. Afghanistan - H = 23h 13m 49s (Shillong) 35½°N, 67½°E. - H = 23h 13m 51s (U.S.C.G.S.) 35.3°N, 67.5°E. - H = 23h 13m 52s (R.C.I.S.) Serious devastation and over 2000 casualties (Radio Kabul). Magnitudes: 7.7 (Skalnate Pleso, Uppsala, Kiruna), 7½ (Moskva, Shillong, Praha), 7.4 (Hurbanovo), 7½-7½ (Pasadena).														
	DEHRA DUN	N,E N	eP PP PPP iS i SS Lr SSS Sg/M	23 16 16 18 18 18 18 18 18	16 27 36 05 18 32 40 44 31	1040		09	SHILLONG	Z	eP	23	46 07		Slight
	NEW DELHI	N	iP i i iS SS S* Sg	23 16 16 18 18 19 19	15 22 53 59 14 27 06 39	1090	Initial ground movement towards 'South'	09	SHILLONG	N,E N	eP e i e	23 56 56 59	04 17 09 28		Slight
	POONA	Z,N,E N,E E N E N	iP e M Mn M M	23 17 21 23 21 21 23	17 56 15 05 36		Initial ground movement towards 'South and East' Compression Per. = 17.5 secs $\mu = 750$	10	SHILLONG	Z,N	eP	23	58 45	2500	Slight
	CHÁTRA	Z Z,E	iP i	23 21	18 50			10	SHILLONG	N	eS	00	02 58		
	BOKARO	N,E	iP PP PPP iS SS SSS Lr M	23 18 18 18 22 22 22 22 24	18 28 39 52 08 19 36 55 31	2220	Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	eP	00	08 54		Slight
	DEHRA DUN	N,E N	eP e i e	01 03 04 04	01 59 14 22		Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	eP	00	42 05		Slight
	NEW DELHI	N	iP i i	01 04 05	04 06 48		Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	eP	01	00 02		Slight
	POONA	Z	iE eS M	01 03 11	05 38 30 30	2930	Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	eP	01	01 19		Slight
	SHILLONG	Z	iP eP eS SS M	01 06 40 41 44	00 40 25 05	2570	Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	e	02	13 34		Slight
	DEHRA DUN	N,E N	eP e e e i	01 03 04 04 07	03 59 14 22 01		Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	iP	03	23 38		Slight Compression.
	BOKARO	N,E	iP PP PPP iS SS SSS Lr M	23 18 18 18 22 22 22 22 24	18 28 39 52 08 19 36 55 31		Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	e	02	13 34		Slight
	POONA	Z,N,E N,E E N	iP e M Mn M	23 17 21 23 21 21 23	17 56 15 05 36		Per. = 12 secs $\mu = 33$	10	SHILLONG	Z	iP	03	23 38		Slight Compression.

DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS
June				h. m. s.	km	June				h. m. s.	km
<p>10 Afghanistan Aftershock                      Ep: 03h 33m 08s (U.S.C.G.S)                      Ep: 03h 32m 58s (Moskva)                      Magnitude: 5 (Moskva).</p>						<p>10 SHILLONG Z 1P 11:34:42 Slight Compression</p>					
DEHRA DUN	N,E	e		03:35:36	1050 Phases not clear	10 SHILLONG	Z	e		11:54:07	Slight, near
		iS		37:24				i		54:14	
		i		38:30				i		54:31	
CHITRA	Z	iP		03:37:24		10 DEHRA DUN	N,E	e		13:19:16	Feeble, phases not clear.
		i		38:06		SHILLONG	Z	e		13:19:43	Slight
BOMBAY	N	eP		03:37:35		10 SHILLONG	Z	eP		16:25:01	Slight
		e		40:20		10 SHILLONG	Z	eP		17:21:37	Slight
		e		42:09		DEHRA DUN	N,E	e		17:21:52	Tremor
		e		42:27		10 SHILLONG	Z	eP		21:41:33	Slight
NEW DELHI	N	e		03:37:45		10 DEHRA DUN	N,E	e		22:42:28	Feeble, Phases not clear
		i		38:44		SHILLONG	Z	eP		22:43:47	Slight Compression
SHILLONG	Z	iP		03:38:10	2630 Compression	10 DEHRA DUN	N,E	e		23:46:05	Feeble, Phases not clear
	N,E	eP		38:41		SHILLONG	Z	eP		23:48:41	Slight Compression
	E	PP		42:23		11 SHILLONG	Z	e		01:21:08	Slight
	N	iS		42:27		11 Ep: Afghanistan Aftershock. 35°N, 67°E.					
	N,E	i		42:27							
	E	Lq		42:59							
		SS		43:21							
		M		45:43							
POONA	Z	i		03:41:44	Phases not clear	DEHRA DUN	N,E	eP		02:59:45	Phases not clear
MADRAS	E	eP		03:43:10	Other phases not clear			i		03:01:54	
		e		43:23				i		02:50	
		i		46:17				i		03:06	
HYDERABAD	E	e		03:43:52		BOMBAY	N,E	eP		03:01:09	2020
<p>10 Ep: 02h 57m 15s (U.S.C.G.S)                      Ep: 04h 22m 08s (U.S.C.G.S)                      Magnitude: 5.6 (Uppsala, Kiruna). 4N (Moskva).</p>								e		02:12	
SHILLONG	Z,E	eP		04:29:39	4240 Slight		N	e		04:20	
	Z	e		31:44			E	eS		04:30	
	N,E	eS		35:33				e		05:35	
	E	SSS		38:59		POONA	Z	iP		03:01:18	2060
CHITRA	Z	iP		04:30:14	Feeble, near.		E	PP		01:35	
DEHRA DUN	N,E	eP		04:31:30	Tremor			iS		04:42	
10 DEHRA DUN	N,E	e		06:32:13	Feeble, phases not clear.			SS		05:03	
SHILLONG	Z,E	eP		06:34:50	Slight Rarefaction.			SSS		05:16	
10 DEHRA DUN	N,E	e		07:03:21	Feeble, Phases not clear			PeP		05:56	
		e		04:55				M		06:47	
SHILLONG	Z	eP		07:05:28	Compression			SeS		09:20	
10 SHILLONG	Z	e		08:29:45	Slight	NEW DELHI	N	iP		03:01:38	Near
10 SHILLONG	Z	eP		08:32:15	180 Slight			i		02:15	
		R		32:16				i		02:42	
		Pg		32:17		HYDERABAD	N	eP		03:01:47	
		S/S		32:37				e		05:39	
		eSg		32:38			N,E	e		08:55	
10 DEHRA DUN	N,E	e		09:29:13	Tremor		N	e		12:03	
SHILLONG	Z	e		09:30:01	Slight	SHILLONG	Z,E	iP		03:02:19	2620 Initial ground
10 SHILLONG	Z	eP		10:16:01	Slight		N	eP		02:56	movement towards
DEHRA DUN	N,E	e		10:16:01	Tremor		E	PP		02:56	'East'
10 DEHRA DUN	N,E	e		10:38:14	Feeble, Phases not clear			iS		06:31	
SHILLONG	Z	eP		10:40:03	Slight Rarefaction		N	eS		06:31	
10 DEHRA DUN	N,E	e		10:52:16	Tremor		E	Lq		07:08	Compression
SHILLONG	Z	eP		10:52:34	Slight			SS		07:25	
10 SHILLONG	Z	e		11:16:48	Slight			SSS		07:36	
DEHRA DUN	N,E	e		11:17:00	Tremor		N,E	M		10:01	
						MADRAS	E	eP		03:02:47	2790
								PP		03:37	
								PPP		03:48	
								eS		07:10	
								Lq		07:59	
								SS		08:25	
								SSS		08:36	
								Lr		09:16	
								ScP		09:34	
								M		11:15	
						KODAIKANAL	E	e		03:10:27	Tremor
						COLOMBO	E	L		03:14:15	Amp: 0.3 mm
								M		16:00	



DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
June 1956				h. m. s.	km		June 1956				h. m. s.	km	
14	DEHRA DUN	N,E	e	12 22 17			17	SHILLONG	Z	iP/Pg iS/Sg	15 04 12 04 24	100	Slight
14	MADRAS	E	e	13 12 03		Slight, distant	17	CHATRA	Z	iP iS	16 05 05 05 55	470	Feeble
15	SHILLONG	Z	eP Pg eSg	05 43 27 43 32 43 57	220	Slight	17	SHILLONG	Z	iP Pg iSg	17 43 45 43 47 44 07	180	Compression
	CHATRA	Z	iP iS	05 44 23 45 47	800	Feeble	17	CHATRA	Z	iP iS	18 44 06 44 35	250	Feeble
15	CHATRA	Z Z,E	iP iS	08 21 48 22 50	590	Slight	17	DEHRA DUN	N,E	e	23 51 11		Tremor
15	DEHRA DUN	N,E N	eP PP Lq iS SS SSS	08 41 18 41 24 41 43 41 50 42 04 42 17	280	Slight	18	DEHRA DUN	N,E	e	12 10 24		Tremor
	SHILLONG	Z	eP	08 42 45		Slight	18	SHILLONG	Z	iP P* Pg eS Sg	14 18 18 18 20 18 24 18 48 18 54	240	Slight Rarefaction
	BOKARO	N,E	e i	08 44 37 44 48		Slight		CHATRA	Z Z,E	iP iS	14 19 15 20 36	780	Slight
	POONA	Z	e	08 45 49		Feeble. Phases not clear		DEHRA DUN	N,E	e	14 23 55		Tremor
	MADRAS	E	eP	08 46 22		Feeble	18	DEHRA DUN	N,E	e	19 39 56		Tremor
15	DEHRA DUN	N,E	e	09 12 46		Feeble. Phases not clear	18	CHATRA	Z	iP iS	20 26 35 27 25	470	Feeble
16	Epc: 28°N, 131°E. Ryukyu Islands H: 06h 19m 22s (U.S.C.G.S) Magnitude: 5.9 (Moskva), 5.9 (Uppsala, Kiruna).							SHILLONG	Z	iP Pg Sg	20 41 08 41 10 41 25	130	
	SHILLONG	Z E	eP iS Lq Lr M	06 26 19 31 46 33 14 35 46 38 26	3800		19	SHILLONG	Z	iP	00 25 38		Slight
	BOKARO	E N,E	e iS	06 27 10 33 14	4430			CHATRA	Z	e	00 26 05		Feeble, near.
	HYDERABAD	E N,E E N	e iS M M	06 27 31 35 21 51 31 51 43	5500	Per. = 13 secs Δ = 4 Per. = 16 secs Δ = 6	COLOMBO	E	e e	00 31 21 35 06			
	POONA	Z E	iP eS	06 28 45 36 11	5840		DEHRA DUN	N,E	e i	00 43 54 44 56			
	BOMBAY	N N,E N	eP eS M	06 29 00 36 30 53 30	5910	Per. = 15 secs Δ = 3	DEHRA DUN	N,E	e i	10 43 37 46 14			
	DEHRA DUN	N,E	e	06 34 30		Phases not clear	20	CHATRA	Z	ePg iSg	17 44 26 44 43	130	Feeble
	MADRAS	E	i	06 35 28		Other phases not clear.	21	COLOMBO	E	e e e	19 58 00 20 06 05 07 32		
16	CHATRA	Z	iP iS	07 28 25 28 57	280		21	SHILLONG	E	iP i iS i	20 40 07 40 35 40 57 46 20 46 33	4560	Slight
16	SHILLONG	Z	eP Pg S* eSg	13 19 44 19 49 20 14 20 19	270	Slight		COLOMBO	E	L M	20 57 25 21 01 30		Amp. = 0.5 mm
17	SHILLONG	Z	iP P* Pg Sg	02 07 50 07 53 07 55 08 24	260	Slight Rarefaction	22	MADRAS	E	e e	15 22 16 24 57		Slight
	CHATRA	Z	iP iS	02 07 56 08 22	220	Feeble	22	SHILLONG	Z E N	iP i i i	20 03 34 04 15 04 16 04 18		Slight, local
17	DEHRA DUN	N,E	e	03 21 07		Tremor		CHATRA	Z	iP iS	20 04 22 05 18	530	Feeble
17	SHILLONG	Z	iPg iSg	05 32 41 32 44	20	Slight	23	SHILLONG	N	iPg iSg	02 20 45 20 57	100	Slight Local.
17	CHATRA	Z	iP iS	08 42 43 43 05	180	Feeble							



DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
June 1956				h. m. s.	km		June 1956				h. m. s.	km	
23	Epc: 55°N, 166°E. Kamchatka. - H <sub>2</sub> 02h 18m 00s (Shillong) 56½°N, 163¾°E. - H <sub>2</sub> 02h 18m 02s (U.S.C.G.S) Magnitudes: 6% (Pasadena), 6%-6½% (Berkeley), 6.9 (Skainate Please), 6.8 (Uppsala, Kiruna).						24	Epc: Indian Ocean. About 700 Kms. North of Prince Edward Island. - H <sub>2</sub> 12h 55m 02s (U.S.C.G.S). 40°S, 36°E. - H <sub>2</sub> 12h 55m 00s (B.C.I.S).					
	SHILLONG	Z,N,E	iP	02 28 03	6560	Initial ground movement towards 'West' Compression.		POONA	Z,N	eP	13 05 56	7420	Slight
		E	i(PcP)	28 53					N	eS	14 48		
			iS	36 09						Lr	25 48		
		N	eS	36 09				BOMBAY	N	eP	13 05 50	7420	Slight
		E	i(PPS)	36 37						e	14 51		
			Lr	45 41					N,E	e	29 --		
			M	48 11		Per <sub>2</sub> : 15 secs $\mu = 36$		SHILLONG	Z	iP	13 07 22		Slight Rarefaction
	CHATRA	Z	iPg	02 28 15				COLOMBO	E	e	13 25 20		
			i	28 31						e	27 05		
	DEHRA DUN	N,E	eP	02 28 30	6890			HYDERABAD	E	M	13 29 14		Per <sub>2</sub> : 15 secs $\mu = 4$
		N	PP	30 46									
			PPP	32 27				24 SHILLONG	Z	iP	18 30 36		Slight Compression
			iS	36 58									
			PS	37 25				24 SHILLONG	Z	iP	21 09 43		Slight Rarefaction
			PPS	37 46									
			SS	41 17				DEHRA DUN	N,E	e	21 11 08		Slight. Phases not clear
			SSS	44 03					N	i	21 15		
			Lq	45 02				POONA	Z	eP	21 11 10		Slight
			Lr	47 42					N	e	21 29		
			M	52 50				COLOMBO	E	eP	21 12 00		
	NEW DELHI	N	eP	02 28 34	7330	Moderate				e	20 20		
			iS	37 21				BOKARO	N	i	21 19 49		Slight
			i	38 49				BOMBAY	N,E	e	21 21 42		Slight and deep focus.
			i	42 01									
			SSS	44 49				25 Epc: Eastern Iran. - H <sub>2</sub> 12h 52m 07s (U.S.C.G.S) 31½°N, 59°E. - H <sub>2</sub> 12h 52m 04s (B.C.I.S) 30½°N, 60°E. - H <sub>2</sub> 12h 51m 54s (Moskva).					
			Lr	48 35				DEHRA DUN	N,E	eP	12 56 10		Slight. Phases not clear.
			M	53 28		Per <sub>2</sub> : 15 secs $\mu = 14$				SS	13 00 57		
	HYDERABAD	E	eP	02 29 34	8070	Moderate		NEW DELHI	N	e	13 00 21		Slight
			iS	38 59						iS	00 42		
			PS	39 39						i	01 51		
			SS	44 00				26 DEHRA DUN	N,E	e	11 57 13		Tremor
			L	52 42				26 DEHRA DUN	N,E	e	18 03 12		Tremor
			M	59 05		Per <sub>2</sub> : 15 secs $\mu = 14$		27 DEHRA DUN	N,E	e	02 57 05		Tremor
	POONA	Z,N,E	iP	02 29 43	8210	Initial ground movement towards 'West and South' Compression		27 CHATRA	Z	iPg	07 11 53	100	Feeble
		E	PP	32 33						iSg	12 07		
			eS	39 15				SHILLONG	Z	eP	07 31 44		Slight
			PPS	40 02				27 CHATRA	Z	iP	08 55 28	210	Feeble
			Lq	49 15						iS	55 53		
			Lr	52 37				27 SHILLONG	Z	iP	15 30 21		Slight Compression
			M	58 40									
		N	M	03 07 --		Per <sub>2</sub> : 17.3 secs $\mu = 20.4$		27 SHILLONG	Z	eP	15 53 21	140	Slight, local
	BOMBAY	N,E	eP	02 29 45	8300					Sg	53 38		
			PcP	29 59				27 SHILLONG	Z	eP	16 28 25		Slight, local
			eS	39 21									
		E	PS	40 06				27 SHILLONG	Z	iP	19 03 10		Slight Rarefaction
		N	PPS	40 11									
		E	PPS	40 29				27 SHILLONG	Z	eP	21 11 33		Slight
		N	M	59 46		Per <sub>2</sub> : 19 secs $\mu = 22$ Per <sub>2</sub> : 21 secs $\mu = 8$		28 SHILLONG	Z	iP	04 43 54		Feeble, distant
		E	M	59 47				28 SHILLONG	Z	eP	09 16 21		Slight, local
	MADRAS	E	iP	02 29 48	8380	Initial ground movement towards 'West'		28 SHILLONG	Z	eP	22 38 27		Slight, distant
			PcP	29 55				28 DEHRA DUN	N,E	i	23 24 13		Slight. Phases not clear
			PP	32 53									
			PPP	34 42				COLOMBO	E	e	23 35 14		
			eS	39 28						e	47 21		
			ScS	39 44						e	58 56		
			PS	40 13						e	00 04 06		
			PPS	40 26									
			SS	44 58									
			SSS	48 47									
			Lr	55 25									
			M	03 01 20									
	BOKARO	N	iS	02 37 13	7110	'P' not clear. Per <sub>2</sub> : 22.5 secs $\mu = 4$							
			M	51 25									
23	CHATRA	Z	iPg	03 53 39	100	Feeble							
			iSg	53 22									
23	SHILLONG	Z	e	13 55 29									
24	SHILLONG	Z	iP	05 53 13		Slight Compression.							

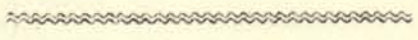
DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km						h. m. s.	km	
June 1956							June 1956						
28	SHILLONG	Z	e	23 43 40		Slight	29	SHILLONG	Z	eP	14 24 53	110	Slight, local
Contd.	HYDERABAD	E	H	23 57 22		Peri 21 secs L = 10				Sg	25 05		
29	SHILLONG	Z	iP	02 24 51		Slight, distant Compression	29	SHILLONG	Z	eP	14 54 38		Slight, local
	DEHRA DUN	N, E	i	02 29 01		Slight, Phases not clear.		CHATRA	Z	i	17 50 11		Feeble
			i	34 46			29	DEHRA DUN	N, E	e	18 27 59		Feeble, Phases not clear
	COLOMBO	E	L	02 47 17									
			M	51 04		Amp = 0.4 mm	30	DEHRA DUN	N, E	e	03 10 55		Feeble, Phases not clear
29	SHILLONG	Z	eP	04 17 43		Slight		SHILLONG	Z	iP	03 13 20		Slight Distant.
29	SHILLONG	Z	eP	05 52 10		Slight							
29	DEHRA DUN	N, E	eP	06 10 40	1030	Slight	30	SHILLONG	Z	eP	04 58 23	220	Slight, local.
		N	PPP	10 55						Sg	58 53		
			iS	12 26									
			SS	12 38									
			Lr	12 43									
			SSS	12 50									
			M	13 25									
29	SHILLONG	Z	eP	08 28 21		Slight							
29	SHILLONG	Z	eP	12 07 25	110	Slight, local	30	CHATRA	Z	iPg	11 42 50	100	Feeble
			Sg	07 37						iSg	43 03		

Earthquake reports

(Non Instrumental Reports)

The following is the list of earthquakes that were reported by Voluntary Observers from different stations during the month of June 1956.

PLACE AT WHICH FELT	DATE IN G. M. T.	TIME IN G. M. T. h. m.	NO. OF SHOCKS	DURATION OF SHOCK IN SECS.	INTENSITY IN R. F. SCALE.	REMARKS
SHILLONG	12	00 00	1	10	II	
SHILLONG	12	03 15	1	20	V	
GAUHATI	12	03 13	1	10	V	Direction 'Northeast'
DHUBRI	12	03 13	-	30	V	
LAITLYNGKOT NEAR SHILLONG	12	03 13	1	80	V	Direction 'Southwest'
AGARTALA	12	03 15	1	30	IV	
SHILLONG	17	16 04	2	15	IV	



GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



Published under the direction of  
Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECOND	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMBAY	Sprengnether	E	To=Tg=7 secs	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHITRA	Benioff	Z	To=0.72 Tg=0.45	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	E	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MADRAS	Sprengnether	E	To=Tg=7.2	-	-	30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Omori-Ewing	E	30	30	1	12
POONA	Sprengnether	Z	To=Tg=1.6	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	Tg=0.18 To=1.0	-	-	60
	Sprengnether	E	To=Tg=7.8	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
JULY 1956				h. m. s.	km		JULY 1956				h. m. s.	km	
01	CHATRA	Z	iP	00 44 05	60	Slight	02	DEHRA DUN	N, E	e	11 16 43		Feeble. Phases not clear.
		Z, E	iS	44 13			Centd.			i	17 39		
01	SHILLONG	Z	eP	08 46 25	150	Slight, local		SHILLONG	Z, E	eP	11 16 46		Slight Compression
			Sg	46 45									
01	SHILLONG	Z	iP	11 45 16		Feeble	03	SHILLONG	Z	e	15 51 17		Slight, local.
01	CHATRA	Z	iPg	13 49 44	110	Feeble				e	51 31		
			iSg	49 58			CHATRA	Z	iP	15 59 45	340	Feeble	
01	SHILLONG	Z	eP	16 35 40		Feeble			iS	16 00 23			
01	SHILLONG	Z	iP	19 37 22		Slight	03	SHILLONG	Z	e	16 00 38		Slight
01	SHILLONG	Z	eP	20 14 59		Slight	03	SHILLONG	Z	e	20 30 16		Slight
01	SHILLONG	Z	iP	21 41 25		Slight Rarefaction	03	SHILLONG	Z	ePg/P*	20 43 53	100	Slight
01	CHATRA	Z	iP	21 42 17	670	Feeble			eSg	44 05			
			iS	43 28			03	Epc: 36.5°N, 70.5°E. Hindukush. h = 220 Km. 36.4°N, 71°E. - h = 250 Km. H = 23h 26m 13s (Shillong) H = 23h 26m 17s (U.S.C.G.S) H = 23h 26m 19s (B.C.I.S) Magnitude: 5.2 (Kiruna, Uppsala), 6 (Moskva), Felt at Srinagar and Gulmarg.					
02	CHATRA	Z	iP	00 56 40	260	Feeble		DEHRA DUN	N, E	eP	23 28 16	870	
			iS	57 10					N	PP	28 24		
02	SHILLONG	Z	eP	08 39 16		Slight				PPP	28 30		
02	SHILLONG	Z	iP	14 35 04		Slight, distant Compression				Lq	29 34		
02	DEHRA DUN	N, E	e	14 36 38		Tremor				iS	29 45		
02	SHILLONG	Z	iP	17 24 00		Slight				SS/Lr	29 57		
03	Epc: 28°N, 84°E. Nepal									SSS	30 08		
										Sg/M	30 35		
				H = 10h 17m 57s (U.S.C.G.S)				NEW DELHI	N	iP	23 28 36	1090	Initial ground movement towards North
				H = 10h 17m 56s (B.C.I.S)						PP	28 44		
										P*	28 58		
	CHATRA	Z	iP	10 18 48	400	Slight				Lq	30 16		
		Z, E	iS	19 32						iS	30 28		
	BOKARO	N, E	eP	10 19 16	790	Slight				SSS	30 50		
			Lq	20 31						S*	31 06		
			iS	20 38						Sg	31 28		
			SS	20 49				CHATRA	Z	iP	23 29 59	1810	
			Lr	20 53						iS	32 58		
			SSS	21 04				BOMBAY	N, E	iP	23 30 12	1830	
			M	21 25					N	e	31 05		
	DEHRA DUN	N, E	eP	10 19 33	580	Slight			N, E	eS	33 16		
		N	iS	20 35					E	i	33 23		
			Lr	20 39					N, E	i	33 26		
			SS	20 45						SS	33 33		
			SSS	20 56				BOKARO	N, E	iP	23 30 12	1960	
			Sg/M	21 07						eS	33 21		
	SHILLONG	Z, E	eP	10 19 44	790	Slight		POONA	Z	iP	23 30 14	2000	
		E	PP	19 53					E	PP	30 30		
			P*	19 59						eS	33 24		
			Pg	20 16						SS	33 44		
			Lq	20 54						SSS	33 57		
			eS	21 06					N, E	Lr	34 10		
			SS/Lr	21 16					E	M	35 33		
			S*/SSS	21 25				HYDERABAD	E, N	eP	23 30 39	2080	
			i	21 44					N	e	31 38		
		N, E	Sg/M	21 48					E	eS	34 05		
	NEW DELHI	N	e	10 21 00		Slight, near			E	M	36 40		Per. = 6 secs L = 4
			i	21 32					N	M	36 43		Per. = 9 secs L = 4
			i	21 43									
			i	21 59				SHILLONG	Z, N, E	eP	23 30 41	2360	
	BOMBAY	N, E	eP	10 21 43	1700	Slight			E, N	PP	31 03		
			eS	24 34					Z, E	pP	31 24		
	POONA	Z	eP	10 23 47		Slight. Phases not clear			Z, N, E	eP	31 45		
									E	i	33 41		
									N, E	iS	34 18		
										Lq	34 37		
	HYDERABAD	N	e	10 24 27		Per. = 6 secs L = 4			E	SS	34 57		
			M	25 48					N	SSS	35 02		
	MADRAS	E	eP	10 24 35		Slight			N, E	Lr	35 31		
			i	25 29					E	PcS	38 07		
			i	26 15									
02	CHATRA	Z	iP	11 15 50	450	Slight		MADRAS	E	eP	23 31 25	2450	
		Z, E	iS	16 39						PP	31 58		
										PPP	32 09		
										PcP	35 11		
										iS	35 24		
										Lq	35 44		

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	
				h. m. s.	km						h. m. s.	km		
July 1956							July 1956							
03	MADRAS	E	SS	23 36 04			07	SHILLONG	Z	e	17 46 01		Slight, distant	
Contd.	Contd.		SSS	36 25			07	POONA	Z, E	i	21 07 00		Feeble shock.	
			Lr	36 49					E	e	07 31		Phases not clear	
			M/PcP	39 01				SHILLONG	Z	eP	21 09 05		Slight	
03	SHILLONG	Z	eP	23 50 50		Slight		SHILLONG	Z	eP	00 37 01		Slight	
04	SHILLONG	Z	i	02 20 37		Slight, local		CHATRA	Z	eP	00 37 05	770	Feeble	
04	SHILLONG	Z	eP	03 35 23		Slight, distant			iS	38 25				
04	Epc: 7°S, 153½°E. Salomon Islands							08	CHATRA	Z	iP	06 10 19		Feeble
	-H = 03h 42m 50s (U.S.C.G.S)									i	10 50			
	SHILLONG	Z, E	iP	03 54 03	7710	Slight, Initial ground movement towards 'West' Compression.		08	DEHRA DUN	N, E	e	15 50 07		Feeble. Phases not clear
		N, E	eS	04 03 10										
	CHATRA	Z	i	03 54 30		Feeble		08	CHATRA	Z	iP	18 11 54	960	Feeble
04	SHILLONG	Z	eP	04 24 04		Slight			iS	13 33				
04	SHILLONG	Z, E	eP	07 30 22		Slight, distant		08	CHATRA	Z	iP	20 49 20	640	Feeble
			i	30 23					iS	50 27				
04	POONA	Z	i	11 28 09		Tremor	09	Epc: 38°N, 24°E. Near Athens in Greece						
	SHILLONG	Z	eP	11 28 33		Slight		-H = 03h 11m 30s (Shillong)						
04	SHILLONG	Z	e	13 53 13		Slight		37°N, 26°E. Aegean Sea. -H = 03h 11m 35s (U.S.C.G.S)						
04	SHILLONG	Z	e	14 59 08		Slight		36.9°N, 26°E. -H = 03h 11m 38s (B.C.I.S)						
								Magnitude: 7.7 (Uppsala, Kiruna), 7½ (Pasadena),						
								7.4 (Hurbanovo), 7¼-7½ (Shillong).						
								42 killed and several towns destroyed.						
04	CHATRA	Z	iP	22 43 36	370	Feeble		DEHRA DUN	N, E	eP	03 19 43	4880		
			iS	44 17					N	e	21 10			
04	SHILLONG	Z	e	23 03 11		Slight, local				e	21 51			
			e	03 12						iS	26 15			
			e	03 23						PS	26 30			
			e	03 26						PPS	26 43			
04	SHILLONG	Z	e	23 51 53		Slight				SS	30 01			
										SSS	30 33			
05	SHILLONG	Z	e	03 49 42		Slight, near		NEW DELHI	N	iP	03 19 53	4890	Initial ground movement towards 'North'	
05	SHILLONG	Z	e	12 03 40		Slight, local			PP	21 23				
			e	03 55					PPP	22 00				
05	SHILLONG	Z	e	14 13 26		Slight			iS	26 26				
									SS	29 45				
05	SHILLONG	Z	e	15 23 12		Slight, near			ScS	30 01				
		Z, E	eP	15 23 12					Lq	30 23				
		Z	i	24 50					SSS	30 39				
	CHATRA	Z	iP	15 23 59	920	Feeble			Lr	32 38			Per: 21 secs	
			iS	25 34					M	36 06			Δ = 242	
05	SHILLONG	Z	iP	21 29 39		Slight Compression		BOMBAY	N, E	eP	03 19 56	5150		
05	SHILLONG	Z	e	23 08 02		Slight, local				i	20 05			
06	SHILLONG	Z	eP	00 02 26		Slight, near			PP	22 01				
06	CHATRA	Z	i	00 02 51		Feeble, near			PPP	23 06				
06	SHILLONG	Z	eP	01 04 20		Slight Compression			iS	26 43				
								E	i	28 00				
06	SHILLONG	Z	eP	08 34 32		Slight			ScS	29 19				
									SS	29 50				
06	SHILLONG	Z	ePg/P*	17 49 55	130	Slight			N	SS	30 07			
			P	49 56					N, E	SSS	30 52			
			PP	50 03					N	Lr	32 53			
			eSg	50 11					N, E	M	40 10		Per: 23 secs	
			S	50 13					N	M	40 10		Δ = 269	
07	SHILLONG	Z	iPg	01 30 28		Slight, local			E	M	40 52		Per: 22 secs	
													Δ = 356	
07	SHILLONG	Z	e	07 44 41		Slight, near		POONA	Z, N, E	iP	03 20 00	5210	Great	
			e	44 54					Z	PcP	21 14			
	DEHRA DUN	N, E	e	10 35 04		Slight. Phases not clear			Z, N	PP	21 50			
			i	38 44						PPP	22 44			
			i	42 54					Z	PeS	24 59			
	SHILLONG	Z	eP	10 37 05		Slight, distant			Z, N, E	S	26 51			
		N	e	43 58					Z	PS	27 00			
07	SHILLONG	Z	e	11 15 40		Slight, near				PPS	27 06			
									Z, N	SS	30 05			
									N	M	36 44		Per: 24.4 secs	
													Δ = 291	
								HYDERABAD	E, N	iP	03 20 37	5660	Initial ground movement towards 'North' and 'West'	
										PP	22 46			
										PPP	23 41			
										iS	27 53			
										SS	31 56			
										Lq	32 50			
										Lr	34 53			

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	
				h. m. s.	km		
July 1956	09 HYDERABAD Contd. Contd.	N	M	03 40 23		Per= $\pm$ 18 secs $\Delta$ =231	
		E	M	40 26		Per= $\pm$ 18 secs $\Delta$ =162	
	CHATRA	Z	iP i	03 20 52 22 15			
BOKARO	E	iP		03 20 53	6220		
		PcP		21 42			
		PP		22 49			
		PPP		24 02			
		PcS		25 34			
		iS		28 25			
		PS		28 34			
		PPS		28 43			
		SS		32 10			
		Lq		34 19			
		SSS		34 28			
		Lr		37 05			
		M		41 43			
							Per= $\pm$ 18.7 secs $\Delta$ =147
		MADRAS	E	iP		03 21 95	6110
PcP				21 57			
PP				23 07			
PPP				24 32			
iS				28 46			
SS				32 37			
SSS				35 02			
M		41 28					
SHILLONG	Z	iP		03 21 24	6670	Great	
		PP		23 17			
	N	iS		29 20			
		SS		33 05			
COLOMBO	E	iP		03 21 29			
		i		29 33			
		e		41 56			
		e		49 53			
09	DEHRA DUN	N, E	e	05 09 47		Tremor	
09	SHILLONG	Z	e	09 54 48		Slight	
09	Epc: 20°N, 73°E. Near Coast of Haiti - H = 09h 56m 13s (U.S.C.G.S) Magnitude = 6.4-6.5 (Pasadena), 6.4 (Berkeley) 6 (Moskva, Hurlerovo).						
	SHILLONG	Z	e	10 15 05		Distant	
	CHATRA	Z	iP i	10 15 20 17 32			
	POONA	Z	i i	10 17 29 18 36		Phases not clear	
	COLOMBO	E	e e	11 12 21 16 06			
09	SHILLONG	Z	e	11 40 31		Slight	
09	SHILLONG	Z	e i e	15 52 53 53 07 53 09		Slight, local	
09	SHILLONG	Z	eP	17 14 01		Slight R <sup>+</sup> refraction	
09	SHILLONG	Z	e	17 51 46		Slight	
09	CHATRA	Z	e	20 23 07		Feeble	
	SHILLONG	Z	e	20 23 38		Slight	
09	SHILLONG	Z	eP	20 41 14		Slight	
09	SHILLONG	Z	e	20 57 45		Slight	
09	SHILLONG	Z	eP	21 38 26		Slight Rarefaction	
09	SHILLONG	Z	eP PP Pg PPP Lq S eSg	23 01 19 01 26 01 28 01 31 01 42 01 55 02 03	300	Slight	

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
				h. m. s.	km	
July 1956	09 CHATRA Contd.	Z	iP iS	23 02 29 03 43	700	Feeble
		10 SHILLONG	Z	eP	00 01 08	
	10 SHILLONG	Z	e e e e	01 45 44 45 52 46 22 46 25		Slight, local
10	SHILLONG	Z	iP	03 10 08		Slight
10	SHILLONG	Z	eP	15 31 41		Slight
10	CHATRA	Z	iPg iSg	18 02 51 03 02	80	Feeble
	SHILLONG	Z	iP	18 07 16		Slight
10	CHATRA	Z	e	18 07 41		Feeble
10	Epc: 36°N, 71½°E. Hindukush. - h = 100 KmCa - H = 22h 08m 23s (U.S.C.G.S) 36°N, 71½°E. - h = 100 KmCa - H = 22h 08m 29s (Quetta) Felt at Peshawar and Rawalpindi. Magnitude = 5.4 (Quetta).					
	DEHRA DUN	N, E	eP	22 10 23	810	
			PP Lq iS Lr SS SSS Sg/M	10 30 11 33 11 47 11 56 11 59 12 10 12 29		
	NEW DELHI	N	e i i i i	22 12 19 12 25 12 32 12 38 12 46		Near
	SHILLONG	Z	iP	22 12 57		
	POONA	Z	iP	22 16 08		Phases not clear
11	SHILLONG	Z	iP P* Pg iS Sg	06 24 19 24 22 24 29 24 53 25 02	300	Slight
11	SHILLONG	Z	eP	18 56 25		Slight
	KODAIKANAL	E	eP PP PPP eS SS SSS Lr M	18 57 37 57 46 57 49 59 52 19 00 07 00 19 00 34 01 37	1320	Slight. Initial ground movement towards 'East'
	MADRAS	E	i	18 58 35		Slight
12	SHILLONG	Z	iP	00 02 03		Slight
12	SHILLONG	Z	eP	05 01 46		Slight
12	SHILLONG	Z	iPg iSg	14 10 17 10 33	100	Slight
12	Epc: 22.2°N, 93.5°E. Assam Burma Border - H = 15h 01m 26s (Shillong) 23°N, 94°E. - H = 15h 01m 17s (U.S.C.G.S) Magnitude = 6.4 (Shillong), 6.3 (Upponi, Patana), 6-6.4 (Quetta), 5.4 (Moskva). Felt at Shillong, Guwahati, Chappareekh and Newgong.					
	SHILLONG	Z	iP E	15 02 19 02 58	360	Compression
	CHATRA	Z, E	iP iS	15 03 15 04 34	740	
	BOKARO	N, E	iP	18 03 16	770	
			PP	03 23		
			PPP	03 29		
			P*	03 31		
			Pg	03 47		
			Lq	04 25		

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
July 1956				h. m. s.	km		July 1956				h. m. s.	km	
12	BOKARO Contd. Contd.	N,E	IS Lr SS SSS S <sup>o</sup> Sg/M	15 04 36 04 43 04 49 04 58 05 01 05 29			12	SHILLONG	Z	eP	21 44 24		Slight
	HYDERABAD	E,N N N,E E N	eP i e e e	15 04 57 07 57 09 21 10 18 11 06			13	NEW DELHI	N	iP iS SS S <sup>o</sup>	00 17 06 18 46 19 01 19 15	960	Slight
	MADRAS	E	iP PP PPP iS SS SSS Lr M	15 05 09 05 25 05 31 07 58 08 23 08 36 08 53 11 05	1630	Initial ground movement towards 'East'	13	MADRAS	E	eP e	06 48 00 50 12		Feeble
	NEW DELHI	N	e e i i e iS SS SSS Lr	15 05 11 05 24 05 32 05 40 05 50 08 04 08 08 08 28 08 46 08 50	1700	Beginning not clear	13	SHILLONG	Z	eP	06 48 37		Slight
	DEHRA DUN	N,E N	eP PP PPP Lq iS SS SSS Lr M	15 05 12 05 24 05 32 07 57 08 06 08 25 08 37 08 48 10 09	1730		13	POONA	Z	i i	13 55 36 55 58		Tremor
	POONA	Z,E N N,E N	iP PP Lq/iS SS SSS Lr M PeP PeS	15 05 49 06 06 09 11 09 22 09 39 09 56 10 19 11 19 13 51	2120		14	Ep: 36°N, 71°E. Hindukush - H = 00h 14m 05s (B.C.I.S.)					
	KODAIKANAL	E	e e e e	15 05 58 06 22 06 31 09 55		Phases not clear	DEHRA DUN	N,E	eP PP PPP Lq iS SS SSS Lr M	00 16 49 17 01 18 22 18 33 18 36 18 44 19 17	900	Slight	
	BOMBAY	N N,E N N,E N N,E N N N N	eP iP PP PPP e e Lq SS SSS Lr M M	15 06 00 06 20 06 31 06 35 09 35 09 42 09 51 10 09 10 21 10 38 13 29 13 30	2250		CHATRA	Z	iP iS	00 18 35 21 34	1810	Feeble	
	COLONBO	E	P S L M	15 06 02 09 52 13 00 13 40	2330	Amp. = 1.0 mm	SHILLONG	Z	eP e i	00 18 56 18 59 19 24		Slight	
12	SHILLONG	Z	iP P <sup>o</sup> Pg Sg	19 13 36 13 40 13 45 14 14	270	Slight	15	SHILLONG	Z	eP Sg	06 07 09 07 50	290	Slight
	CHATRA	Z	iP iS	19 14 30 15 52	790	Feeble	15	SHILLONG	Z	eP	06 14 33	200	Slight
12	CHATRA	Z	iP iS	20 43 46 44 10	200	Feeble	15	SHILLONG	Z	iP	10 05 45		Slight, distant Rarefaction
	SHILLONG	Z	eP Pg S <sup>o</sup> eSg	20 43 59 44 08 44 39 44 44	310	Slight	15	SHILLONG	Z	iP	12 59 35		Slight Rarefaction
							15	CHATRA	Z	i	13 00 03		Feeble
							15	SHILLONG	Z	i	18 47 37		Slight
							15	CHATRA	Z	e	18 48 00		Feeble; near
							15	SHILLONG	Z	eP	19 16 54		Slight; distant
							15	SHILLONG	Z	iP Sg	21 20 17 20 37	150	Slight; local Rarefaction
							16	DEHRA DUN	N,E	e	07 55 04		Tremor
							16	NEW DELHI	N	eP PP PPP iS SS SSS Lr M	13 11 24 11 39 11 49 14 44 15 07 15 22 15 44 17 30	2010	Great
							16	Ep: 21.8°N, 96.3°E. Central Burma - H = 15h 07m 00s (Shillong) 22°N, 95°E. - H = 100 KmCa. - H = 15h 07m 10s (U.S.C.G.S.) Magnitude = 7 (Pasadena), 6.9 (Uppsala, Kiruna), 6.8 (Roma), 6% (Moskva, Skalnate Pleso), 6% (Shillong). 52 Persons killed. Brick buildings at 'Saging' suffered damage.					
							SHILLONG	Z,N	iP PP PPP Lq iS e SSS M	15 08 22 08 29 08 40 09 13 09 24 09 39 09 54 10 01	590	Compression Initial ground movement towards 'North'	
							CHATRA	Z Z,E	iP iS	15 09 20 11 15	920		
							BOKARO	N,E	iP PP PPP Lq iS Lr/SS	15 09 20 09 27 09 35 10 52 11 11 11 20	1090		





DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS	
July 1956							July 1956							
17	POONA Contd. Contd.	N	SSS Lr	07 55 37 57 46			18	BOKARO Contd. Contd.	N,E	PS PPS SS SSS/Lq Lr M	06 35 48 35 59 39 18 41 11 43 41 48 22		Per: 18.7 secs $\Delta$ : 29	
	BOMBAY	N,E E N N,E E N N,E E N,E E	eP i e PP PcS iS PPS i ScS SS SSS i	07 43 25 44 59 45 10 45 45 46 28 48 10 50 48 51 08 52 25 53 32 54 27 55 28 55 37		6500 Deep focus		CHATRA	Z Z,E	iP i	06 28 34 29 39			
	DEHRA DUN	N,E N	eP PP PPP iS PS PPS SS SSS/Lq Lr M	07 43 30 45 19 46 18 50 57 51 06 51 19 54 29 56 21 58 34 08 03 05		6580		MADRAS	E	iP pP PcP PP PPP i iS PPS i SS ScS Lr/SSS M	06 28 39 29 21 29 38 30 39 31 38 32 44 35 58 36 28 36 46 37 40 38 12 40 42 49 15		5900 Initial ground movement towards 'West'	
	NEW DELHI	N	iP i i i i i	07 43 32 50 56 51 19 52 34 53 45 55 43				KODAIKANAL	E	iP PP PPP eS PPS e Lq Lr M	06 28 55 30 58 32 01 36 25 36 40 39 55 41 40 44 10 48 31		5910 Initial ground movement towards 'East'        Per: 20 secs $\Delta$ : 65	
17	CHATRA	Z	iP iS	09 45 55 46 11		120 Feeble		HYDERABAD	N,E	iP PP e iS SS Lq Lr M	06 28 58 30 38 33 12 36 35 39 35 41 22 44 36 49 10		6030 Initial ground movement towards 'North and West'	
17	SHILLONG	Z	iP	12 55 09		Slight			N N,E N	Lq Lr M	41 22 44 36 49 10		Per: 20 secs $\Delta$ : 33 Per: 18 secs $\Delta$ : 24	
17	DEHRA DUN	N,E	e	14 27 41		Tremor		POONA	Z,N,E E	iP PcP PP PPP PcS N,E iS E PS PPS N,E ScS E Lq Lr	06 29 30 30 11 31 41 33 07 34 13 37 31 37 49 37 57 38 07 43 11 45 54		Initial ground movement towards 'North and West' Compression	
	SHILLONG	Z	iP	17 14 32		Slight			N,E	eP e PPP iS PS PPS e SSS Lq Lr M	06 29 36 31 40 33 09 37 44 37 45 37 58 41 20 43 28 43 41 46 26 51 08		6810	
17	CHATRA	Z	e i	17 14 58 15 13		Feeble		DEHRA DUN	N,E N	eP e PPP iS PS PPS e SSS Lq Lr M	06 29 36 31 40 33 09 37 44 37 45 37 58 41 20 43 28 43 41 46 26 51 08			
17	CHATRA	Z	iPg iSg	20 47 49 48 03		100 Feeble		BOMBAY	N,E N N,E N N,E N E N E N	iP PcP PP PP PPS iS PS PcS iS PPS PPS ScS SSS Lq Lq Lr Lr M	06 29 37 30 21 30 31 31 52 32 36 32 43 33 25 34 28 37 49 38 19 38 28 39 30 44 25 44 46 45 26 47 52 48 16 53 31		6890 Deep focus            Per: 15 secs Amp: 3.5	
18	SHILLONG	Z,N N	iP pP PP PPP iS PS PPS sS SS SSS M	06 28 02 28 25 29 47 30 29 34 39 34 07 34 17 35 19 37 58 38 58 44 47		5170 Initial ground movement towards 'North' Compression.             Per: 15 secs Amp: 3.5								
	COLOMBO	E	P e e e	06 28 28 35 53 44 51 51 31										
	BOKARO	N,E	iP PcP PP PPP PcS iS	06 28 31 29 46 30 27 31 38 33 31 35 33		5590 Initial ground movement towards 'South and West'								Per: 20 secs $\Delta$ : 24 Per: 16 secs $\Delta$ : 18



DATE	STATION	COMPT	PHASE	G.	M.	T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G.	M.	T.	Δ	REMARKS	
July 1956				h.	m.	s.	km		July 1956				h.	m.	s.	km		
22	SHILLONG	Z	iP	15	20	53		Slight Rarefaction	25	BOMBAY	N, E	e	05	13	51		Feeble and near	
	CHATRA	Z	iP iS	15	21	56 23 16	1370	Feeble				e	14	25				
22	SHILLONG	Z	iP	18	15	41		Slight Compression		POONA	Z, E	eP eS	05	14	07 15 22		720 Slight.	
	CHATRA	Z	iP iS	18	16	36 17 39	600	Feeble		NEW DELHI	N	e e i i	05	16	18 16 27 16 36 16 43 16 49		Slight	
	DEHRA DUN	N, E	e i i	12	48	52 49 03 50 24		Slight. Phases not clear		DEHRA DUN	N, E	e i	05	16	28 17 31		Feeble. Phases not clear	
23	SHILLONG	Z	iP	13	31	07		Feeble. Compression		SHILLONG	Z	iP	05	16	49			
23	CHATRA	Z	iP iS	14	27	51 28 15	200	Feeble		MADRAS	E	eP PP Lq eS Lr SS SSS M	05	18	11 18 19 19 21 19 30 19 36 19 40 19 49 20 10		770 Slight	
	SHILLONG	Z	iP	14	36	40		Slight, distant										
23	CHATRA	Z	i	14	37	11		Feeble, near										
23	SHILLONG	Z	eP Sg	15	40	35 40 58	170	Slight, local		26	SHILLONG	Z	iP	00	01	19		Slight
23	SHILLONG	Z	eP	19	12	40		Feeble		26	SHILLONG	Z	iP	06	21	46		Slight
	POONA	Z	e	19	46	01				26	SHILLONG	Z	iP	06	25	08		Slight
	BOMBAY	N	e e e	19	49	06 58 43 21 01 28		Slight		26	MADRAS	E	e	10	53	37		Slight
		E	e	06	23					26	CHATRA	Z	i	12	59	59		Feeble, near
23	KODAIKANAL	E	e	20	52	24		Tremor		26	SHILLONG	Z	iP	16	50	58		Slight
	COLOMBO	E	e e	20	54	56 21 01 31				26	CHATRA	Z	iP iS	22	28	11 28 43		280 Feeble
23	SHILLONG	Z	eP	22	07	44		Feeble		27	CHATRA	Z	iP iS	10	04	47 05 06		150 Feeble
23	CHATRA	Z	i	23	34	21		Feeble, near		27	SHILLONG	Z	iP	21	46	06		Slight
24	Epc: 31°N, 92°E. Tibet - H = 02h 14m 42s (B.C.I.S)										CHATRA	Z	i	21	46	40		Feeble
	SHILLONG	Z	eP	02	15	19		Slight		27	CHATRA	Z	iPg iSg	22	07	27 07 41		100 Feeble
	CHATRA	Z	iP iS	02	16	28 17 41	700	Feeble		27	SHILLONG	Z	iP	23	33	06		Slight
	BOKARO	N, E	i i	02	19	56 20 56		Slight		CHATRA	Z	iPg iSg	23	33	40 33 54		100 Feeble	
	BOMBAY	N, E	e e e e	02	26	44 28 00 29 26 29 41 29 52		Feeble and near.		28	SHILLONG	Z	iP	02	12	45		Slight
24	Epc: 30°N, 139°E. South of Honshu, Japan - H = 500 KmCa. - H = 13h 00m 18s (U.S.C.G.S)										CHATRA	Z	eP iS	02	13	16 14 01		410 Feeble
	SHILLONG	Z	iP	13	06	21		Slight Rarefaction		POONA	Z	i i	02	14	14 15 36		Tremor	
	DEHRA DUN	N, E	e	13	15	25		Tremor		28	CHATRA	Z	iPg iSg	11	18	52 19 05		100 Feeble
24	SHILLONG	Z	eP	15	00	12		Slight		28	SHILLONG	Z	iP	17	22	12		Slight Rarefaction
24	COLOMBO	E	e e e	18	10	59 21 31 24 36				CHATRA	Z	iP iS	17	23	13 24 12		560 Feeble	
24	SHILLONG	Z	iP	19	03	23		Slight		28	CHATRA	Z	i	19	17	26		Feeble. Near
	DEHRA DUN	N, E	e	19	06	14		Feeble. Phases not clear.		28	SHILLONG	Z	iP	21	00	02		Slight Rarefaction
	KODAIKANAL	E	e	19	23	38		Tremor		CHATRA	Z	iP iS	21	00	35 01 25		470 Feeble	
25	SHILLONG	Z	iP	03	36	48		Slight		29	Epc: 9°S, 85°E. Indian Ocean - H = 07h 13m 44s (U.S.C.G.S) 8°S, 85°E. - H = 07h 13m 44s (B.C.I.S) Magnitude: 4½ (Moskva).							
25	HYDERABAD	E	M	04	16	58		Per.: 5 secs μ = 2		KODAIKANAL	E	eP eS SS M	07	18	37 22 19 23 01 25 25	2250	Initial ground movement towards West Per.: 10 secs μ = 5	





GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



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Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECOND	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMEAY	Sprengnether	E	To=Tg=7 secs	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHATRA	Benioff	Z	To=0.7? Tg=0.45	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	E	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MAERAS	Sprengnether	E	To-Tg=7.2	-	-	30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Omori-Ewing	E	30	30	1	12
POONA	Sprengnether	Z	To=Tg=1.6	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	Tg=0.18 To=1.0	-	-	60
	Sprengnether	E	To=Tg=7.8	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30



DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
				h. m. s.	km						h. m. s.	km	
August 1956							August 1956						
01	SHILLONG	Z	eP/P* Pg eSg/S*/S	04 19 27 19 28 19 47	160	Slight	04	SHILLONG	Z	eP P* Pg S S* eSg	06 27 35 27 41 27 43 28 20 28 32 28 42	430	Slight
01	SHILLONG	Z	e	07 17 20 18 19		Slight, distant	Contd.						
01	DEHRA DUN	N, E	e	09 37 00 38 36		Feeble, Phases not clear	04	Epc: 5% S, 150% E. New Britain. h = 250 Km H = 09h 49m 02s (U.S.C.G.S) Magnitude = 6.4-6% (Pasadena), 6-6% (Berkeley).					
	SHILLONG	N	e	09 52 37 52 56 53 31		Slight, near		SHILLONG	Z N	iP e	09 59 32 10 08 31 12 18 15 40 21 14		Compression
	CHATRA	Z Z, E	iP iS	09 53 07 54 49	990	Feeble	04	SHILLONG	Z	e	10 11 14		Slight
01	CHATRA	Z	iP iS	21 55 04 56 16	690	Feeble	04	SHILLONG	Z	e	13 38 07		Slight
02	SHILLONG	Z	eP	07 26 44		Slight, distant	04	SHILLONG	Z	iP Pg eSg	17 39 22 39 24 39 49	200	Slight Compression
02	SHILLONG	Z	e	07 30 49		Slight	04	SHILLONG	Z	eP	18 54 33		Slight Rarefaction
02	SHILLONG	Z	e	10 57 08		Slight, local	04	SHILLONG	Z	e	18 55 43		Slight
02	SHILLONG	Z	e	10 57 52		Slight, local	04	SHILLONG	Z	iP	19 37 27		Slight Compression
02	COLOMBO	E	e	17 50 50 51 50 53 10			04	SHILLONG	Z	eP P* eSg	20 45 07 45 08 45 10	30	Slight
	SHILLONG	Z N	e	17 51 17 56 29 58 01 18 00 09 02 32		Slight, distant	04	SHILLONG	Z	e	22 19 58		Slight
	KODAIKANAL	E	e	17 52 01		Tremor	05	SHILLONG	Z	e	06 56 06 56 33		Slight, near
02	SHILLONG	Z	e	17 56 30		Slight	05	SHILLONG	Z N	eP e	09 17 26 35 10		Slight, distant
02	HYDERABAD	E	M	18 01 30		Perce. 12 secs [L] 2.3	05	SHILLONG	Z	iPg	14 37 15		Slight, local
	SHILLONG	Z	e	18 03 55		Slight, local	05	SHILLONG	Z	eP	17 08 14		Slight Rarefaction
02	SHILLONG	Z	e	21 21 50		Slight	05	SHILLONG	Z	e	17 22 08		Slight
02	CHATRA	Z	iPg iSg	22 16 10 16 19	70	Feeble	05	SHILLONG	Z	e	19 35 55		Slight
03	DEHRA DUN	N, E	e	00 52 03 52 59		Feeble, Phases not clear	05	SHILLONG	Z	e	23 47 47		Slight
	CHATRA	Z	iP iS	00 54 04 55 48	1010	Feeble	06	SHILLONG	Z	e	07 58 45		Slight, near
	SHILLONG	Z	e	00 54 49		Slight, distant	06	SHILLONG	Z	eP	09 28 06		Slight
	POONA	Z	e	00 57 34		Slight, phases not clear.	06	SHILLONG	Z	eP	10 37 58		Slight, near
03	SHILLONG	Z	eP P* Pg eSg	01 31 33 31 34 31 37 31 59	190	Slight Compression	06	SHILLONG	Z	iP	12 36 20		Slight Compression
	CHATRA	Z	iP iS	01 32 34 33 50	740	Feeble	06	SHILLONG	Z	e	14 53 38		Slight
03	SHILLONG	Z	eP/P* Pg eSg	04 06 25 06 26 06 40	130	Slight	06	SHILLONG	Z	e	17 24 56		Slight, near
03	SHILLONG	Z	e	14 42 48 43 04		Slight	06	SHILLONG	Z	eP	17 29 15		Slight
03	SHILLONG	Z	ePg eSg	22 14 24 14 37	110	Slight	06	SHILLONG	Z	iP	17 32 04		Slight
04	SHILLONG	Z	eP Pg Lq S S* Sg	00 56 24 56 44 57 09 57 23 57 31 57 45	560	Slight	06	SHILLONG	Z	eP	19 54 54		Slight, distant
04	CHATRA	Z	iP iS	06 27 33 28 17	400	Feeble	06	SHILLONG	Z	eP	26 59 34		Slight
							06	SHILLONG	Z	eP	21 58 35		Slight
							07	SHILLONG	Z, N	eP e	00 30 40 30 42		Slight, near
							07	CHATRA	Z Z, E	iP iS	00 31 31 32 53	790	Slight
							07	DEHRA DUN	N, E	e	00 33 30 36 14		Feeble, Phases not clear
							08	CHATRA	Z	iP iS	01 47 14 48 41	840	Feeble

DATE	STATION	COMP	PHASE	G. M. T. h. m. s. ka	REMARKS
August 1956					
08	POONA	Z	i	19 37 31	Tremor
08	Epc: 32°N, 67°E. Southern Afghanistan - H: 23h 02m 10s (U.S.C.G.S) 31°N, 67°E. - H: 23h 02m 10s (P.C.I.S)				
	DEHRA DUN	N,E	eP	23 04 35	1080 Slight
		N	iS	06 25	
			SS	06 43	
			SSS	06 58	
			M	07 39	
	NEW DELHI	N	eP	23 04 39	1110 Slight
			Lq	06 22	
			iS	06 33	
			SS	06 51	
			SSS	07 06	
			M	07 49	
	POONA	Z	eP	23 05 37	1780 Slight
		E	PPP	05 43	
			eS	08 35	
			SS	08 58	
			Lr	09 19	
			M	10 43	
	SHILLONG	Z	iP	23 07 15	2480 Slight
			eS	11 17	
	HYDERABAD	E	e	23 07 48	Slight
			e	11 48	
			e	14 22	
	BOMBAY	N,E	eS	23 08 47	Slight
		E	e	09 34	
		N	e	09 45	
		E	e	10 32	
		N,E	e	10 46	
		E	M	13 57	Per: 7 secs μ = 2
		N	M	13 56	Per: 9 secs μ = 3
	BOKARO	N,E	i	23 09 33	Slight
			eS	09 53	
	MADRAS	E	e	23 12 50	Slight
			e	13 27	
			e	14 25	
			e	14 34	
			e	14 59	
	KODAIKANAL	E	e	23 14 36	Tremor
09	DEHRA DUN	N,E	e	00 46 21	Tremor
09	SHILLONG	Z	iP	07 00 57	Slight
09	SHILLONG	Z	iP	20 35 53	Slight
09	CHATRA	Z	e	20 36 31	Feeble, near
09	Epc: 15°S, 176°W. Samoa Islands Region. - h: 250 Km. - H: 23h 00m 42s (U.S.C.G.S)				
	SHILLONG	Z	iP	23 13 59	Slight
	POONA	Z	eP	23 18 54	Slight, distant Phases not clear
			i	19 50	
	COLOMBO	E	e	23 19 00	
			e	26 52	
			e	39 30	
			e	41 50	
	HYDERABAD	E	eP	23 19 20	
			e	21 02	
			e	24 58	
			e	26 39	
			e	30 12	
			e	33 23	
	BOMBAY	E	e	23 19 46	Slight
		N,E	e	27 31	
			e	29 43	
		E	e	30 42	
			e	31 26	

DATE	STATION	COMP	PHASE	G. M. T. h. m. s. ka	REMARKS
August 1956					
09	DEHRA DUN	N,E	e	23 19 55	Slight, Phases not clear
			i	27 03	
			i	29 13	
			i	30 58	
			i	36 50	
	BOKARO	N	i	23 25 55	Slight
			i	33 12	
11	CHATRA	Z	eP	20 30 04	650 Feeble
			eS	31 12	
12	Epc: 34°N, 138°E. Near South Coast of Honshu, Japan. - H: 16h 59m 33s (U.S.C.G.S) 34°N, 138°E. - h: 60 Km. - H: 16h 59m 39s (B.C.I.S) Magnitude: 6.4 (Roma), 6.4-6.4 (Pasadena), 6.3 (Uppsala, Kiruna).				
	SHILLONG	Z	eP	17 07 20	4580
		E	iS	13 34	
	BOKARO	N,E	eP	17 08 12	5210 Initial ground movement towards 'North and East'
			PP	08 59	
			eS	15 03	
			PPS	17 16	
			Lr	21 59	
		N	M	25 45	Per: 30 secs μ = 37
		E	M	25 45	Per: 21 secs μ = 19
	DEHRA DUN	N	eP	17 08 44	5720
			PP	10 45	
			iS	16 04	
			PS	16 12	
			PPS	16 29	
			SS	21 15	
			Lr	23 35	
			M	27 26	
	HYDERABAD	E	iP	17 09 18	6300 Initial ground movement towards 'East'
			iS	17 11	
			SS	20 45	
			L	28 41	
			M	33 23	Per: 13 secs μ = 7
	MADRAS	E	eP	17 09 30	
			e	10 01	
			i	12 54	
			e	13 05	
			e	17 19	
	POONA	Z	eP	17 09 32	6650 Distant
		N	eS	17 43	
			SS	21 22	
			SSS	24 03	
			Lr	26 59	
			Mn	38 39	Per: 13 secs μ = 8.2
	BOMBAY	N,E	eP	17 09 49	6690 Phases not clear.
			eS	18 02	
		E	PPS	18 46	
		N	PPS	18 52	
		E	M	37 45	Per: 16 secs μ = 5
		N	M	39 23	Per: 15 secs μ = 7
	COLOMBO	E	e	17 09 53	
			e	18 03	
			e	30 11	
			e	33 31	
	KODAIKANAL	E	e	17 10 04	Tremor
12	DEHRA DUN	N	e	20 28 35	Tremor
13	CHATRA	Z	eP	16 19 03	650 Feeble
			iS	20 11	
13	CHATRA	Z	eP	18 41 28	730 Feeble
			iS	42 44	
13	CHATRA	Z	eP	20 24 29	920 Feeble
			iS	26 04	



DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	
August 1956							August 1956							
				h. m. s.	km						h. m. s.	km		
15	POONA	Z, E	iP	11 00 14	5810	Moderate, distant.	15	DEHRA DUN	N, E	e	19 03 13		Tremor	
Contd.		N	PcP	01 32			17	DEHRA DUN	N, E	e	11 58 20		Tremor	
			PPP	02 55			17	CHATRA	Z	eP	19 43 42	780	Feeble	
		N, E	eS	05 37						iS	45 03			
		N	PPS	07 23			18	DEHRA DUN	N, E	e	05 54 55		Tremor	
		N	SS	07 40			19	BOMBAY	N, E	e	04 20 29		Slight	
		E	SSS	10 40			19	DEHRA DUN	N, E	e	13 17 47		Tremor	
		N	Lr	12 35			19	MADRAS	E	e	18 30 25		Slight	
	DEHRA DUN	N, E	eP	11 00 23	5890	Moderate	19	CHATRA	Z	iPg	21 15 11	130	Feeble	
		N	eP	01 59						iSg	15 28			
			iS	07 36			20	POONA	Z	e	01 45 32		Probably a near shock. Phases not clear.	
			PPS	07 58			20	CHATRA	Z	iP	08 05 36	370	Feeble	
			SS	11 14						iS	06 17			
			Lq	12 24			20	NEW DELHI	N	i	20 11 41		Slight, near	
			SSS	12 35						i	11 45			
			Lr	15 03						i	11 48			
			M	18 38			20	DEHRA DUN	N, E	e	20 11 55		Feeble; Phases not clear	
	BOMBAY	N, E	eP	11 00 25	5910	Slight, deep.				i	12 19			
			e	01 45			20	DEHRA DUN	N, E	e	22 35 44		Slight. Phases not clear	
		E	eS	07 41						i	37 47			
		N	eS	07 46				NEW DELHI	N	e	22 36 46			
		N, E	PPS	08 10						e	37 18			
		N	e	08 27						i	37 31			
		E	i	08 41						i	37 43			
15	POONA	Z	i	12 12 26		Tremor		POONA	Z	i	22 40 21		Tremor	
	CHATRA	Z	e	12 12 55				MADRAS	E	e	22 44 00		Slight	
15	Epc: 46°N, 151°E. Kurile Islands H: 13h 12m 10s (U.S.C.G.S) Magnitude: 6.3 (Uppsala, Kiruna), 6% (Pasadena, Roma), 6.0 (Skalnate Pleso, Hurbanevo).							21	POONA	N	e	00 19 30		Slight; Distant Phases not clear
	SHILLONG	Z, E	iP	13 21 16	5710		21	SHILLONG	Z	eP	09 08 13		Slight	
		E	iS	28 35			21	SHILLONG	Z	eP	09 33 25		Slight, near.	
			PS	28 41			21	SHILLONG	Z	eP	11 35 30		Slight, distant	
			PPS	28 53			22	SHILLONG	Z	eP	11 38 51		Slight	
	BOKARO	N, E	iP	13 22 00	6230		22	SHILLONG	Z	e	12 06 35		Slight	
			iS	29 49						i	06 38			
	DEHRA DUN	N, E	eP	13 22 08	6360		22	SHILLONG	Z	e	15 11 20		Slight	
		N	iS	30 03			22	SHILLONG	Z	e	15 13 20		Slight, local	
			PPS	30 23			22	SHILLONG	Z	e	16 09 03		Slight	
			M	43 27			22	SHILLONG	Z	eP	17 20 36		Slight, distant	
	NEW DELHI	N	iP	13 22 20	6480			NEW DELHI	N	e	17 56 03		Slight, near	
			PcP	23 05						i	56 38			
			iS	30 22			22	DEHRA DUN	N, E	eP	18 55 38	110	Slight	
			SeS	32 06						PPP	55 49			
			M	44 13						iS	55 52			
	HYDERABAD	E	eP	13 23 00	7180	Initial ground movement towards 'West'				SS	56 02			
			PP	25 25						SSS	56 15			
			eS	31 40				SHILLONG	Z	e	18 55 39		Slight	
			PS	32 01			22	DEHRA DUN	N, E	eP	19 24 43	110	Slight	
			SeS	33 03						iS	24 56			
			SS	36 10						SS	25 06			
			Lq	39 27										
			M	48 18		Per. = 15 secs $\mu = 5$	22	SHILLONG	Z, N, E	eP	19 37 31	410	Slight. Felt.	
	MADRAS	E	e	13 23 09						Pg	37 46			
			e	32 09						eS	38 15			
	POONA	Z, E	iP	13 23 16	7550	Distant				Sg	38 31			
		E	PcP	23 30						SSS	38 25			
			PPP	27 35				CHATRA	Z	iP	19 38 18	1160	Slight	
		N, E	eS	32 15						iS	40 17			
		E	PPS	33 11										
		N	SS	36 52										
			SSS	39 49										
			PKPS1	45 45		Per. = 16.5 secs $\mu = 7.3$								
			Mn	55 56										
	BOMBAY	N, E	eP	13 23 20	7660									
			e	32 36										
			eS	32 40										
			M	55 49		Per. = 14 secs $\mu = 3$ Per. = 14 secs $\mu = 4$								
		N	M	59 24										
15	MADRAS	E	e	14 00 34		Slight								



DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS	
1956				h. m. s.	km	1956				h. m. s.	km	
22	HYDERABAD	E	e	19 39 43		23	CHATRA	Z	iP iS	17 33 21 33 42	170 Feeble	
Contd.			M	53 24	Per.: 9 secs $\mu = 2$		SHILLONG	Z	eP P* eSg	17 33 29 33 31 34 03	230 Slight	
22	Epc: Northern Assam. - H: 19h 40m 15s (U.S.C.G.S)						23	SHILLONG	Z	e	17 48 13	Slight
	SHILLONG	Z,N,E	eP	19 41 16	410 Slight. Felt locally.		23	SHILLONG	Z	eP/Pg eSg	21 08 42 08 59	70 Slight
		N,E	Pg	41 30			23	SHILLONG	Z	eP*/Ps eSg	21 08 49 09 01	70 Slight
			eS	42 01			23	SHILLONG	Z	eP	18 57 41	Slight
			S*	42 09			23	SHILLONG	Z	eP	18 59 06	Slight
			Sg	42 15			23	SHILLONG	Z	eP	22 13 13	Slight
	BOKARO	N,E	eP	19 41 18	Slight		23	SHILLONG	Z,E	eP	23 22 28	Slight, near
			i	45 17			24	SHILLONG	Z	eP	00 08 08	Slight
			e	46 12			24	SHILLONG	Z	eP	00 13 11	Slight
			e	46 15			24	SHILLONG	Z	eP	03 36 50	Slight
	DEHRA DUN	N,E	eP	19 42 34	Moderate		24	SHILLONG	Z	eP	04 00 02	Slight
		N	e	43 21			24	Epc: 53°N, 172°E. In the Aleutians. - H: 04h 27m 33s (U.S.C.G.S) - H: 04h 27m 31s (B.C.I.S) Magnitude: 6.6 (Roma, Uppsala, Kiruna), 6% (Pasadena).				
			i	48 30			SHILLONG	Z,E	iP eP	04 38 11	6920 Initial ground movement towards 'West and South' Compression	
			e	49 44				N,E	PcP	38 47		
			e	50 49				N,E	PP	40 49		
			e	51 39				E	PPP	42 00		
	NEW DELHI	N	e	19 44 09	Slight			N	PcS	42 46		
			e	48 21				N,E	eS	46 37		
			i	48 53				N	PS	46 53		
	MADRAS	E	e	19 44 57	Slight			N	PPS	47 07		
	POONA	Z	i	19 45 12	Slight. Other phases not clear			E	ScS	47 46		
	BOMBAY	N,E	eP	19 45 21	Slight			N,E	SS	50 37		
		E	e	49 28				N,E	Lq	54 06		
		N	e	50 20				M	Lr	57 49		
		N,E	i	52 09				M	M	05 00 49	Per.: 21 secs $\mu = 75$	
	COLOMBO	E	e	19 45 25			DEHRA DUN	N,E	eP	04 38 37	7730	
			e	55 30				N	PP	41 16		
			e	57 55					PPP	42 57		
22	DEHRA DUN	N,E	eP	20 19 36	120 Slight				iS	47 44		
			iS	19 52					PS	48 11		
			SS	20 01					PPS	48 22		
23	SHILLONG	Z	eP	00 00 39	Slight, near				SS	51 57		
	CHATRA	Z	eP	00 01 25	1170 Feeble				SSS	55 20		
			iS	03 25					M	05 05 47		
23	SHILLONG	Z	eP	04 57 10	Slight		NEW DELHI	N	eP	04 38 52	7870	
23	SHILLONG	Z	eP	05 17 04	Slight				PP	41 25		
23	DEHRA DUN	N,E	e	09 25 22	Feeble. Phases not clear				PPP	43 23		
	SHILLONG	Z	e	09 27 53	Slight				eS	48 07		
23	SHILLONG	Z	eP	12 12 05	Slight				PS	48 37		
23	Epc: 15°S, 68°W. Bolivia. - h: 100 KmCa - H: 13h 48m 30s (U.S.C.G.S) Magnitude: 6.6 (Uppsala, Kiruna), 6% (Pasadena).								SS	52 28		
	POONA	Z	iP	14 08 04	Other phases not clear				i	54 43		
	DEHRA DUN	N,E	e	14 08 15					M	05 06 01		
	SHILLONG	Z,N	PKP1	14 08 30	17700		HYDERABAD	E	eP	04 39 41	8770	
		N,E	PKP2	09 09					PP	42 47		
			PP	12 47					PPP	44 31		
			SS	32 19					eS	49 40		
			M	15 18 17					PS	50 20		
23	COLOMBO	E	L	15 06 20					PPS	50 35		
			M	12 00	Amp.: 0.6 mm				SS	54 27		
	DEHRA DUN	N,E	e	15 08 34	Feeble. Phases not clear				SSS	58 49		
	MADRAS	E	e	15 08 41	Slight				Lq	05 01 23		
	SHILLONG	Z	e	15 09 33	Slight				Lr	04 44		
	HYDERABAD	E	M	15 19 17	Per.: 16 secs $\mu = 4$				M	10 41	Per.: 15 secs $\mu = 14$	
	POONA	Z	iP	04 39 47	8820				PP	42 58		
		N	PP	42 58					PPP	44 51		
			iS	49 47					iS	49 47		
			PS	50 42					PS	50 42		
			PPS	50 58					PPS	50 58		
			SSS	58 41					SSS	58 41		



*Earthquake Reports  
(Non Instrumental Reports)*

Following is the list of earthquakes that were reported by Voluntary Observers from different stations during the month of August 1956.

PLACE IN WHICH FELT	DATE IN G.M.T.	TIME IN G.M.T. h. m.	NO. OF SHOCKS	DURATION OF SHOCKS IN SECS.	INTENSITY IN R.F. SCALE	REMARKS
SHILLONG	20	02 42	1	2	III	
DIGBOI	22	19 37	1	few secs	III	
MOHANBARI	22	19 40	1	3 to 5	V	
JIJIBARI (Lakhimpur)	22	19 35	1	5	V	
DIBRUGARH	22	19 37	2	1-20 secs	V	
PASIGHAT	22	19 38	1	4 to 5	V	
PASIGHAT	22	19 42	1		V	
PASIGHAT	23	00 00	1	2 to 3	V	

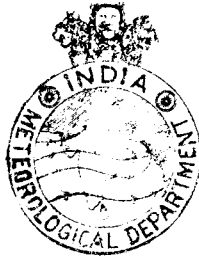
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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



Published under the direction of  
*Shri S. Basu, M.Sc., F.N.I.,*  
Director General of Observatories

Instruments and their constants

| STATION    | INSTRUMENTS   | COMPONENT | PERIOD<br>IN<br>SECOND | STATIC<br>MAGNIFI-<br>CATION | DAMPING RATIO | PAPER SPEED<br>IN<br>mm/min |
|------------|---------------|-----------|------------------------|------------------------------|---------------|-----------------------------|
| BOKARO     | Wood-Anderson | E         | 0.8                    | 960                          | 0.8           | 60.0                        |
|            | Wood-Anderson | N         | 0.8                    | 1000                         | 0.8           | 60.0                        |
|            | Milne-Shaw    | N         | 12.0                   | 250                          | 20:1          | 16.0                        |
|            | Milne-Shaw    | E         | 12.0                   | 250                          | 20:1          | 16.0                        |
| DUMAY      | Sprengnether  | E         | To=Tg=7 secs           | -                            | -             | 30                          |
|            | Milne-Shaw    | N         | 12                     | 350                          | 20:1          | 16                          |
|            | Milne-Shaw    | E         | 12                     | 350                          | 15:1          | 8                           |
| CH'ATRA    | Benioff       | Z         | To=0.72<br>Tg =0.45    | Critical                     | -             | 60                          |
|            | Milne-Shaw    | E         | 12.0                   | 250                          | 20:1          | 16                          |
|            | Wood-Anderson | E         | 1.0                    | 1000                         | 30:1          | 60                          |
| COLOMBO    | Milne-Shaw    | E         | 12.1                   | 250                          | 19:1          | 8                           |
| DEHRA DUN  | Milne-Shaw    | N         | 12                     | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 0.8                    | 800                          | 60:1          | 60                          |
|            | Wood-Anderson | E         | 0.8                    | 950                          | 60:1          | 60                          |
| HYDERABAD  | Milne-Shaw    | N         | 12                     | 254                          | 20:1          | 8                           |
|            | Milne-Shaw    | E         | 12                     | 254                          | 20:1          | 8                           |
| KODAIKANAL | Milne-Shaw    | E         | 10.0                   | 250                          | 20:1          | 8                           |
| MAERAS     | Sprengnether  | E         | To=Tg=7.2              | -                            | -             | 30                          |
| NEW DELHI  | Milne-Shaw    | N         | 12                     | 320                          | 20:1          | 8                           |
|            | Omori-Ewing   | E         | 30                     | 30                           | 1             | 12                          |
| POONA      | Sprengnether  | Z         | To=Tg=1.6              | -                            | 2.1:1         | 30                          |
|            | Milne-Shaw    | N         | 12                     | 300                          | 20:1          | 8                           |
|            | Wood-Anderson | E         | 4                      | 1100                         | 20:1          | 16                          |
| SHILLONG   | Benioff       | Z         | Tg=0.18 To=1.0         | -                            | -             | 60                          |
|            | Sprengnether  | E         | To=Tg=7.8              | Critical                     | -             | 30                          |
|            | Milne-Shaw    | N         | 12                     | 250                          | 20:1          | 8                           |
|            | Wood-Anderson | N         | 4                      | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | E         | 0.8                    | 1000                         | Critical      | 30                          |
|            | Wood-Anderson | N         | 0.8                    | 1000                         | Critical      | 30                          |

| DATE           | STATION                                                                | COMPT | PHASE | G. M. T.<br>h. m. s. | $\Delta$<br>km | REMARKS                       | DATE           | STATION                                                                                                                                                              | COMPT    | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km | REMARKS                 |                         |
|----------------|------------------------------------------------------------------------|-------|-------|----------------------|----------------|-------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------------------|----------------|-------------------------|-------------------------|
| September 1956 |                                                                        |       |       |                      |                |                               | September 1956 |                                                                                                                                                                      |          |          |                      |                |                         |                         |
| 01             | SHILLONG                                                               | Z     | iP    | 00 30 56             |                | Slight                        | 09             | Epc: 3°N, 129°E. Halmahera. -h ±150 Km<br>- H ± 17h 35m 13s (U.S.C.G.S)                                                                                              |          |          |                      |                |                         |                         |
| 01             | SHILLONG                                                               | Z     | eP    | 04 29 07             |                | Slight                        | SHILLONG       | Z                                                                                                                                                                    | iP       | 17 42 54 |                      |                | Slight                  |                         |
| 01             | SHILLONG                                                               | Z     | eP    | 15 56 43             |                | Slight                        | COLOMBO        | E                                                                                                                                                                    | e        | 17 43 46 |                      |                |                         |                         |
|                | CHATRA                                                                 | Z     | iP    | 15 56 48             | 870            | Feeble                        |                |                                                                                                                                                                      | e        | 50 49    |                      |                |                         |                         |
|                |                                                                        | Z,E   | iS    | 58 18                |                |                               |                |                                                                                                                                                                      | e        | 01 51    |                      |                |                         |                         |
|                |                                                                        |       |       |                      |                |                               |                |                                                                                                                                                                      | e        | 04 31    |                      |                |                         |                         |
| 01             | BOKARO                                                                 | N     | e     | 16 00 24             |                | Tremor                        | MADRAS         | E                                                                                                                                                                    | e        | 17 43 49 |                      |                | Slight                  |                         |
|                | DEHRA DUN                                                              | N,E   | e     | 16 01 42             |                | Feeble.Phases not clear.      | HYDERABAD      | E                                                                                                                                                                    | e        | 17 44 06 |                      |                |                         |                         |
|                |                                                                        |       |       |                      |                |                               |                | M                                                                                                                                                                    | 51 34    |          |                      |                |                         |                         |
|                | POONA                                                                  | N     | e     | 16 08 21             |                | Slight.Phases not clear       | DEHRA DUN      | N,E                                                                                                                                                                  | e        | 17 44 37 |                      |                | Feeble.Phases not clear |                         |
|                |                                                                        |       |       |                      |                |                               |                | i                                                                                                                                                                    | 52 31    |          |                      |                |                         |                         |
| 02             | DEHRA DUN                                                              | N,E   | e     | 12 39 14             |                | Tremor                        | POONA          | Z                                                                                                                                                                    | e        | 17 44 51 |                      |                | Slight.Phases not clear |                         |
| 02             | DEHRA DUN                                                              | N,E   | e     | 19 15 56             |                | Tremor                        |                | E                                                                                                                                                                    | i        | 44 51    |                      |                |                         |                         |
| 03             | SHILLONG                                                               | Z     | eP    | 07 45 26             |                | Slight                        |                | Z                                                                                                                                                                    | i        | 44 56    |                      |                |                         |                         |
| 03             | SHILLONG                                                               | Z     | iP    | 08 38 15             |                | Slight Rarefaction            | 09             | MADRAS                                                                                                                                                               | E        | e        | 17 50 52             |                |                         | Slight                  |
| 03             | DEHRA DUN                                                              | N,E   | eP    | 09 27 05             | 660            | Slight.Other phases not clear | 09             | SHILLONG                                                                                                                                                             | Z        | iP       | 18 09 37             |                |                         | Slight                  |
|                |                                                                        | N     | iS    | 28 14                |                |                               | 09             | SHILLONG                                                                                                                                                             | Z        | iP       | 18 12 11             |                |                         | Slight                  |
|                |                                                                        |       | Lr    | 28 22                |                |                               | DEHRA DUN      | N,E                                                                                                                                                                  | e        | 18 14 03 |                      |                | Tremor                  |                         |
|                |                                                                        |       | SS    | 28 25                |                |                               | 10             | SHILLONG                                                                                                                                                             | Z        | iP       | 08 01 01             |                |                         | Slight                  |
| 03             | SHILLONG                                                               | Z     | iP    | 17 32 16             |                | Slight                        | CHATRA         | Z                                                                                                                                                                    | iP       | 08 01 43 | 560                  |                | Feeble                  |                         |
| 03             | SHILLONG                                                               | Z     | eP    | 18 37 33             |                | Slight,local                  |                | Z,E                                                                                                                                                                  | iS       | 02 42    |                      |                |                         |                         |
| 04             | SHILLONG                                                               | Z     | eP    | 18 53 49             |                | Slight,local                  | 10             | CHATRA                                                                                                                                                               | Z        | iP       | 09 14 49             | 150            |                         | Feeble                  |
| 05             | CHATRA                                                                 | Z     | eP    | 08 41 34             | 430            | Feeble                        |                |                                                                                                                                                                      | iS       | 15 08    |                      |                |                         |                         |
|                |                                                                        | Z,E   | iS    | 42 21                |                |                               | 10             | SHILLONG                                                                                                                                                             | Z        | eP       | 12 08 52             | 200            |                         | Slight,local            |
| 05             | SHILLONG                                                               | Z     | iP    | 15 07 49             |                | Slight,local                  |                |                                                                                                                                                                      | Sg       | 09 18    |                      |                |                         |                         |
| 05             | SHILLONG                                                               | Z     | eP    | 18 19 31             |                | Slight,distant                | 10             | Epc: 0°, 101½°E. Central Sumatra. -h ±250 Km<br>- H ± 12h 31m 54s (U.S.C.G.S)                                                                                        |          |          |                      |                |                         |                         |
| 06             | Epc: Dodecanese Islands Region<br>35°N, 25°E. Magnitude: ± 5% (Athens) |       |       |                      |                |                               |                | SHILLONG                                                                                                                                                             | Z        | iP       | 12 37 15             |                |                         | Slight Rarefaction      |
|                |                                                                        |       |       |                      |                |                               |                |                                                                                                                                                                      |          |          |                      |                |                         |                         |
|                |                                                                        |       |       |                      |                |                               |                |                                                                                                                                                                      |          |          |                      |                |                         |                         |
|                | CHATRA                                                                 | Z     | eP    | 11 55 50             |                |                               | MADRAS         | E                                                                                                                                                                    | e        | 12 37 35 |                      |                | Slight                  |                         |
|                |                                                                        |       | i     | 56 08                |                |                               | CHATRA         | Z                                                                                                                                                                    | iP       | 12 37 43 |                      |                | Feeble                  |                         |
|                | SHILLONG                                                               | Z     | eP    | 11 56 21             |                |                               |                |                                                                                                                                                                      | i        | 38 42    |                      |                |                         |                         |
| 06             | DEHRA DUN                                                              | N,E   | e     | 12 54 04             |                | Feeble.Phases not clear       | POONA          | Z                                                                                                                                                                    | i        | 12 38 09 |                      |                | Slight.Phases not clear |                         |
|                |                                                                        |       | i     | 55 25                |                |                               |                | e                                                                                                                                                                    | 38 58    |          |                      |                |                         |                         |
| 06             | SHILLONG                                                               | Z     | eP    | 13 00 12             |                | Slight                        | BOMBAY         | N,E                                                                                                                                                                  | eP       | 12 38 19 | 3490                 |                | Slight                  |                         |
| 07             | CHATRA                                                                 | Z     | iPg   | 13 18 40             | 100            | Feeble                        |                | eS                                                                                                                                                                   | 43 27    |          |                      |                |                         |                         |
|                |                                                                        |       | iSg   | 18 53                |                |                               |                | e                                                                                                                                                                    | 46 --    |          |                      |                |                         |                         |
| 07             | SHILLONG                                                               | Z     | iP    | 14 44 24             |                | Slight                        | 10             | DEHRA DUN                                                                                                                                                            | N,E      | e        | 14 17 29             |                |                         | Feeble.Phases not clear |
|                | CHATRA                                                                 | Z     | iPg   | 14 58 17             | 110            | Feeble                        |                | i                                                                                                                                                                    | 18 51    |          |                      |                |                         |                         |
|                |                                                                        |       | iSg   | 58 32                |                |                               | 10             | SHILLONG                                                                                                                                                             | Z        | iP       | 16 31 31             |                |                         | Slight Rarefaction      |
| 08             | SHILLONG                                                               | Z     | iP    | 00 46 28             |                | Slight,local                  | 10             | CHATRA                                                                                                                                                               | Z        | iP       | 18 24 39             | 170            |                         | Feeble                  |
| 08             | CHATRA                                                                 | Z     | iP    | 07 04 14             | 810            | Feeble                        |                | Z,E                                                                                                                                                                  | iS       | 25 00    |                      |                |                         |                         |
|                |                                                                        |       | iS    | 05 38                |                |                               | SHILLONG       | Z                                                                                                                                                                    | eP       | 18 25 09 |                      |                | Slight                  |                         |
| 08             | DEHRA DUN                                                              | N,E   | e     | 15 41 57             |                | Feeble.Phases not clear       | 10             | SHILLONG                                                                                                                                                             | Z        | eP       | 22 52 02             |                |                         | Slight                  |
|                |                                                                        |       | i     | 43 29                |                |                               | CHATRA         | Z                                                                                                                                                                    | eP       | 22 59 33 | 350                  |                | Feeble                  |                         |
|                | CHATRA                                                                 | Z     | iP    | 15 43 39             | 1920           | Feeble                        |                | iS                                                                                                                                                                   | 23 00 12 |          |                      |                |                         |                         |
|                |                                                                        |       | iS    | 46 51                |                |                               | 11             | SHILLONG                                                                                                                                                             | Z        | iP       | 00 19 15             |                |                         | Slight                  |
|                | SHILLONG                                                               | Z     | iP    | 15 44 26             |                | Slight                        | 11             | Epc: 16½°S, 178°E. Fiji Islands.<br>- H ± 02h 32m 28s (U.S.C.G.S)<br>16½°S, 178½°E. - H ± 02h 32m 30s (B.C.I.S)<br>Magnitude: ± 6.3 (Uppsala, Kiruna), 6 (Pasadena). |          |          |                      |                |                         |                         |
| 08             | CHATRA                                                                 | Z     | eP    | 17 04 07             |                | Feeble                        |                |                                                                                                                                                                      |          |          |                      |                |                         |                         |
|                |                                                                        |       | i     | 06 37                |                |                               | SHILLONG       | Z,E                                                                                                                                                                  | eP       | 02 45 49 |                      |                |                         |                         |
|                | POONA                                                                  | Z     | e     | 17 05 38             |                | Slight.Phases not clear       |                | N                                                                                                                                                                    | e        | 51 44    |                      |                |                         |                         |
|                |                                                                        |       | e     | 05 57                |                |                               |                | E                                                                                                                                                                    | e        | 56 39    |                      |                |                         |                         |
|                |                                                                        |       | i     | 06 28                |                |                               |                | N,E                                                                                                                                                                  | e        | 57 51    |                      |                |                         |                         |
|                |                                                                        | E     | i     | 06 30                |                |                               |                |                                                                                                                                                                      | e        | 58 20    |                      |                |                         |                         |
|                | DEHRA DUN                                                              | N,E   | e     | 17 07 08             |                | Tremor                        | 11             | DEHRA DUN                                                                                                                                                            | N,E      | e        | 03 12 41             |                |                         | Tremor                  |
| 08             | SHILLONG                                                               | Z     | iP    | 18 18 45             |                | Slight                        | 11             | SHILLONG                                                                                                                                                             | Z        | eP       | 05 59 45             |                |                         | Slight Compression      |

| DATE                  | STATION                                                                                                                                                                                                    | COMPT   | PHASE | G. M. T. | Δ    | REMARKS                                | DATE | STATION                                                                                                                   | COMPT    | PHASE | G. M. T. | Δ     | REMARKS            |  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|----------|------|----------------------------------------|------|---------------------------------------------------------------------------------------------------------------------------|----------|-------|----------|-------|--------------------|--|
|                       |                                                                                                                                                                                                            |         |       | h. m. s. | km   |                                        |      |                                                                                                                           |          |       | h. m. s. | km    |                    |  |
| <b>September 1956</b> |                                                                                                                                                                                                            |         |       |          |      |                                        |      |                                                                                                                           |          |       |          |       |                    |  |
| 11                    | DEHRA DUN                                                                                                                                                                                                  | N, E    | e     | 07 09 38 |      | Tremor                                 | 12   | SHILLONG                                                                                                                  | Z        | iP    | 20 09 18 |       | Slight Rarefaction |  |
| 11                    | POONA                                                                                                                                                                                                      | Z       | i     | 10 14 17 |      | Tremor                                 | 12   | SHILLONG                                                                                                                  | Z        | eP    | 20 56 01 | 470   | Slight             |  |
| 11                    | Epc: 17°S, 169°E. New Hebrides.<br>H: 15h 44m 04s (U.S.C.G.S)                                                                                                                                              |         |       |          |      |                                        |      | 12                                                                                                                        | SHILLONG | Z     | P*       | 56 06 |                    |  |
|                       | SHILLONG                                                                                                                                                                                                   | Z, E    | eP    | 15 56 50 | 9610 | Slight                                 |      |                                                                                                                           |          | Pg    | 56 18    |       |                    |  |
|                       |                                                                                                                                                                                                            | E       | PcP   | 56 56    |      |                                        |      |                                                                                                                           |          | Lq    | 56 42    |       |                    |  |
|                       |                                                                                                                                                                                                            | N, E    | eS    | 07 23    |      |                                        |      |                                                                                                                           |          | eS    | 56 52    |       |                    |  |
|                       |                                                                                                                                                                                                            | E       | PS    | 08 04    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | eP    | 02 16 39 | 140   | Slight             |  |
|                       | COLOMBO                                                                                                                                                                                                    | E       | SKS   | 16 07 47 |      |                                        |      |                                                                                                                           |          | Pg    | 16 42    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | e     | 16 19    |      |                                        |      |                                                                                                                           |          | eSg   | 17 01    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | e     | 36 54    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | iPg   | 05 05 39 | 30    | Slight Rarefaction |  |
|                       |                                                                                                                                                                                                            |         | e     | 39 59    |      |                                        |      |                                                                                                                           |          | eSg   | 05 42    |       |                    |  |
|                       | BOMBAY                                                                                                                                                                                                     | E       | eSKS  | 16 08 46 |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | ePg   | 09 41 36 | 120   | Slight             |  |
|                       |                                                                                                                                                                                                            |         | M     | 48 --    |      |                                        |      |                                                                                                                           |          | P     | 41 38    |       |                    |  |
|                       |                                                                                                                                                                                                            |         |       |          |      |                                        |      |                                                                                                                           |          | eSg   | 40 50    |       |                    |  |
| 11                    | DEHRA DUN                                                                                                                                                                                                  | N, E    | e     | 21 13 05 |      | Feeble Phases not clear                | 13   | SHILLONG                                                                                                                  | Z        | eP    | 10 50 06 |       | Slight, near       |  |
| 11                    | Epc: 48°N, 156°E. Northern Kurile Islands<br>H: 21h 04m 00s (Shillong)<br>49°N, 155°E. H: 21h 03m 56s (U.S.C.G.S)<br>48°N, 156°E. H: 100 Km<br>H: 21h 04m 12s (J.M.A., Japan).<br>Magnitude: 6% (Pasadena) |         |       |          |      |                                        |      | CHATRA                                                                                                                    | Z        | eP    | 10 51 08 | 710   | Feeble             |  |
|                       | SHILLONG                                                                                                                                                                                                   | Z, N, E | eP    | 21 13 23 | 9530 |                                        |      |                                                                                                                           |          | iS    | 52 22    |       |                    |  |
|                       |                                                                                                                                                                                                            | E       | PcP   | 14 29    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | e     | 14 13 06 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | PP    | 15 28    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | eP    | 14 43 03 |       | Slight             |  |
|                       |                                                                                                                                                                                                            |         | PPP   | 16 30    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | eP    | 16 31 24 |       | Slight, near       |  |
|                       |                                                                                                                                                                                                            |         | PcS   | 18 24    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | eP    | 17 44 47 | 430   | Slight             |  |
|                       |                                                                                                                                                                                                            | N, E    | eS    | 20 52    |      |                                        |      |                                                                                                                           |          | P*    | 44 52    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | PS    | 21 05    |      |                                        |      |                                                                                                                           |          | Pg    | 45 02    |       |                    |  |
|                       |                                                                                                                                                                                                            | E       | PPS   | 21 12    |      |                                        |      |                                                                                                                           |          | Lq    | 45 20    |       |                    |  |
|                       |                                                                                                                                                                                                            | N       | ScS   | 23 07    |      |                                        |      |                                                                                                                           | Z, E     | eS    | 45 34    |       |                    |  |
|                       |                                                                                                                                                                                                            | N, E    | SS    | 25 41    |      |                                        |      |                                                                                                                           |          | S*    | 45 44    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | Lr    | 29 52    |      |                                        |      |                                                                                                                           |          | Sg    | 45 57    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | M     | 33 16    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | e     | 18 08 26 |       | Slight, near       |  |
|                       | CHATRA                                                                                                                                                                                                     | Z       | iP    | 21 13 39 |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | e     | 18 56 44 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | i     | 14 37    |      |                                        | 13   | SHILLONG                                                                                                                  | Z        | e     | 22 07 25 |       | Slight, near       |  |
|                       | HYDERABAD                                                                                                                                                                                                  | E       | eP    | 21 15 04 | 7470 | Initial ground movement towards 'West' | 14   | SHILLONG                                                                                                                  | Z        | e     | 10 43 20 |       | Slight, near       |  |
|                       |                                                                                                                                                                                                            |         | PcP   | 15 31    |      |                                        | 14   | SHILLONG                                                                                                                  | Z        | eP    | 12 09 18 | 280   | Slight             |  |
|                       |                                                                                                                                                                                                            |         | PP    | 17 32    |      |                                        |      |                                                                                                                           |          | Pg    | 09 27    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | PcS   | 19 32    |      |                                        |      |                                                                                                                           |          | S*    | 09 52    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | eS    | 23 59    |      |                                        |      |                                                                                                                           |          | eSg   | 09 57    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | SKS1  | 24 58    |      |                                        | 14   | SHILLONG                                                                                                                  | Z        | iP    | 15 50 03 |       | Slight Compression |  |
|                       |                                                                                                                                                                                                            |         | Lq    | 32 32    |      | Per: 18 secs<br>μ = 7                  |      |                                                                                                                           |          | e     | 15 55 12 |       | Slight             |  |
|                       |                                                                                                                                                                                                            |         | Lr    | 35 46    |      |                                        |      |                                                                                                                           |          | e     | 55 47    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | M     | 41 07    |      |                                        | 14   | SHILLONG                                                                                                                  | Z        | eP    | 16 22 50 |       | Slight             |  |
|                       | POONA                                                                                                                                                                                                      | Z       | iP    | 21 15 18 | 7870 |                                        | 14   | SHILLONG                                                                                                                  | Z        | e     | 17 13 21 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            | N       | PcS   | 19 37    |      |                                        | 14   | SHILLONG                                                                                                                  | Z        | e     | 20 27 35 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | eS    | 24 33    |      |                                        | 14   | SHILLONG                                                                                                                  | Z        | e     | 20 27 35 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | PS    | 24 55    |      | Per: 19 secs<br>μ = 8                  | 14   | SHILLONG                                                                                                                  | Z        | e     | 20 27 35 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | PPS   | 25 18    |      | Per: 19 secs<br>μ = 3                  | 14   | SHILLONG                                                                                                                  | Z        | eP    | 20 32 35 |       | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | M     | 43 18    |      |                                        | 14   | CHATRA                                                                                                                    | Z        | iP    | 23 27 03 | 290   | Feeble             |  |
|                       | BOMBAY                                                                                                                                                                                                     | N, E    | eP    | 21 15 20 | 7870 |                                        |      |                                                                                                                           |          | iS    | 27 36    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | eS    | 24 35    |      |                                        | 15   | SHILLONG                                                                                                                  | Z        | eP    | 00 20 19 |       | Slight             |  |
|                       |                                                                                                                                                                                                            | N       | PPS   | 25 22    |      |                                        | 15   | SHILLONG                                                                                                                  | Z        | eP    | 00 26 54 | 210   | Slight             |  |
|                       |                                                                                                                                                                                                            | E       | M     | 43 50    |      |                                        |      |                                                                                                                           |          | P*    | 26 55    |       |                    |  |
|                       |                                                                                                                                                                                                            |         |       | 49 18    |      |                                        |      |                                                                                                                           |          | Pg    | 26 58    |       |                    |  |
|                       | COLOMBO                                                                                                                                                                                                    | E       | P     | 21 15 49 | 8180 | Amp: 0.4 mm                            |      |                                                                                                                           |          | eSg   | 27 23    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | S     | 25 19    |      |                                        | 15   | CHATRA                                                                                                                    | Z        | iPg   | 06 00 11 | 130   | Feeble             |  |
|                       |                                                                                                                                                                                                            |         | L     | 50 09    |      |                                        |      |                                                                                                                           | N, E     | iSg   | 00 28    |       |                    |  |
|                       |                                                                                                                                                                                                            |         | M     | 54 07    |      |                                        |      |                                                                                                                           |          | eP    | 06 00 50 |       | Slight, near       |  |
| 12                    | DEHRA DUN                                                                                                                                                                                                  | N, E    | e     | 01 09 18 |      | Tremor                                 | 15   | Epc: 20°S, 39°W. Northern Chile. H: 100 KmCa.<br>H: 07h 39m 04s (U.S.C.G.S).<br>Magnitude: 6% (Pasadena), 6.5 (Tokuyama). |          |       |          |       |                    |  |
| 12                    | SHILLONG                                                                                                                                                                                                   | Z       | ePg   | 14 02 41 | 30   | Slight                                 |      |                                                                                                                           |          |       |          |       |                    |  |
|                       |                                                                                                                                                                                                            |         | eSg   | 02 44    |      |                                        |      |                                                                                                                           |          |       |          |       |                    |  |
| 12                    | SHILLONG                                                                                                                                                                                                   | Z       | ePg   | 15 41 49 | 50   | Slight                                 |      |                                                                                                                           |          |       |          |       |                    |  |
|                       |                                                                                                                                                                                                            |         | eSg   | 41 55    |      |                                        |      |                                                                                                                           |          |       |          |       |                    |  |
| 12                    | Epc: Chagos Islands Region in Indian Ocean. (B.C.I.S)                                                                                                                                                      |         |       |          |      |                                        |      |                                                                                                                           |          |       |          |       |                    |  |
|                       | POONA                                                                                                                                                                                                      | Z       | i     | 17 15 58 |      | Tremor                                 |      |                                                                                                                           |          |       |          |       |                    |  |
|                       | SHILLONG                                                                                                                                                                                                   | Z       | e     | 17 18 24 |      | Feeble                                 |      |                                                                                                                           |          |       |          |       |                    |  |



| DATE           | STATION | COMPT PHASE | G. M. T. | Δ  | REMARKS |
|----------------|---------|-------------|----------|----|---------|
|                |         |             | h. m. s. | km |         |
| September 1956 |         |             |          |    |         |

|              |           |    |          |                                 |        |
|--------------|-----------|----|----------|---------------------------------|--------|
| 16<br>Contd. | HYDERABAD | E  | e        | 14 20 01                        | Slight |
|              |           |    | i        | 33 23                           |        |
|              |           |    | e        | 33 48                           |        |
|              |           |    | e        | 34 07                           |        |
|              |           |    | e        | 35 36                           |        |
| BOKAKO       | N, E      | eS | 14 30 29 | Slight, Other phases not clear. |        |
|              |           | i  | 32 32    |                                 |        |
|              |           | e  | 34 08    |                                 |        |
| MADRAS       | E         | eS | 14 32 49 | Slight                          |        |
|              |           | e  | 35 16    |                                 |        |
|              |           | i  | 35 29    |                                 |        |
|              |           | e  | 35 42    |                                 |        |
|              |           | e  | 35 50    |                                 |        |
|              |           | e  | 36 16    |                                 |        |
| KODAIKANAL   | E         | e  | 14 33 27 | Tremor                          |        |
|              |           |    |          |                                 |        |
|              |           |    |          |                                 |        |

|         |           |      |                 |          |                                |
|---------|-----------|------|-----------------|----------|--------------------------------|
| COLOMBO | E         | e    | 14 35 52        | Tremor   |                                |
|         |           | e    | 38 55           |          |                                |
|         |           | e    | 41 30           |          |                                |
| 16      | DEHRA DUN | N, E | e               | 15 39 28 | Tremor                         |
| 16      | SHILLONG  | Z    | eP              | 17 41 07 | Slight                         |
| 16      | SHILLONG  | Z    | iP              | 18 17 21 | Slight, distant<br>Rarefaction |
| 16      | SHILLONG  | Z    | eP <sub>k</sub> | 18 19 14 | Slight, local                  |

|    |           |      |            |                   |                       |
|----|-----------|------|------------|-------------------|-----------------------|
| 16 | DEHRA DUN | N, E | e          | 20 10 52          | Tremor                |
| 16 | SHILLONG  | Z    | eP         | 20 35 14          | Slight                |
| 16 | SHILLONG  | Z    | eP         | 21 12 11          | Slight<br>Compression |
| 17 | SHILLONG  | Z    | eP         | 10 47 20          | Slight                |
| 17 | SHILLONG  | Z    | e          | 11 08 12          | Feeble                |
| 17 | SHILLONG  | Z    | e          | 15 50 19          | Feeble                |
| 17 | SHILLONG  | Z    | e          | 15 55 37          | Feeble                |
| 17 | CHATRA    | Z    | iPg<br>iSg | 17 41 18<br>41 30 | 90 Feeble             |
| 17 | SHILLONG  | Z    | e          | 17 42 17          | Feeble                |

17 Epc: 5W°N, 95°E. Near North Coast of Sumatra.  
 - h: 150 Km Ca. - H: 20h 19m 07s (U.S.C.G.S)

|           |      |      |          |                           |            |
|-----------|------|------|----------|---------------------------|------------|
| COLOMBO   | E    | P    | 20 22 24 | 2460                      | Amp=0.3 mm |
|           |      | S    | 26 24    |                           |            |
|           |      | L    | 32 34    |                           |            |
|           |      | M    | 35 07    |                           |            |
| MADRAS    | E    | e    | 20 22 51 | Slight                    |            |
| SHILLONG  | Z    | eP   | 20 23 35 | Slight                    |            |
| POONA     | Z    | i    | 20 24 19 | Slight. Phases not clear. |            |
| BOMBAY    | E    | e    | 20 24 26 | Feeble and near           |            |
|           |      | N, E | 27 47    |                           |            |
| DEHRA DUN | N, E | e    | 20 25 03 | Feeble. Phases not clear  |            |
|           |      | e    | 29 51    |                           |            |

|    |                                                                                                                                                                                                                                                                                                                       |      |            |                   |            |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------|-------------------|------------|
| 17 | SHILLONG                                                                                                                                                                                                                                                                                                              | Z    | iPg<br>eSg | 23 28 57<br>29 04 | 60 Slight  |
| 18 | SHILLONG                                                                                                                                                                                                                                                                                                              | Z    | eP         | 02 38 42          | Slight     |
| 18 | SHILLONG                                                                                                                                                                                                                                                                                                              | Z    | iP         | 16 41 06          | Slight     |
| 18 | DEHRA DUN                                                                                                                                                                                                                                                                                                             | N, E | e          | 23 16 01          | Tremor     |
| 19 | CHATRA                                                                                                                                                                                                                                                                                                                | Z    | iP<br>iS   | 01 13 19<br>31 41 | 790 Feeble |
| 19 | Epc: 23.7°N, 94.8°E. Central Burma. -h: 140 Km Ca.<br>- H: 23h 47m 51s (Shillong)<br>23W°N, 94W°E. -h: 150 Km Ca.<br>- H: 23h 47m 44s (U.S.C.G.S)<br>Magnitude 2.5-5 (Shillong), 3 (Uppala, Kiruna, Skelstogen)<br>Felt at Silchar, Chaparmukh, Coxipara, Siliguri, Hailong, Gauhati, Shillong, Chittagong and Decca. |      |            |                   |            |

| DATE           | STATION | COMPT PHASE | G. M. T. | Δ  | REMARKS |
|----------------|---------|-------------|----------|----|---------|
|                |         |             | h. m. s. | km |         |
| September 1956 |         |             |          |    |         |

|              |          |              |          |                   |                                              |                                                                        |
|--------------|----------|--------------|----------|-------------------|----------------------------------------------|------------------------------------------------------------------------|
| 19<br>Contd. | SHILLONG | Z, N, E      | iP       | 23 48 37          | 290                                          | Compression.<br>Initial ground<br>movement towards<br>'North and West' |
|              |          |              | iS       | 49 11             |                                              |                                                                        |
|              | CHATRA   | Z<br>Z, N, E | iP<br>iS | 23 49 35<br>50 53 | 750                                          |                                                                        |
| BOKAKO       | N, E     | iP           | 23 49 43 | 870               | Initial ground<br>movement<br>towards 'West' |                                                                        |
|              |          | PP           | 49 47    |                   |                                              |                                                                        |
|              |          | PPP          | 49 53    |                   |                                              |                                                                        |
|              |          | Lq           | 51 02    |                   |                                              |                                                                        |
|              |          | iS           | 51 12    |                   |                                              |                                                                        |
|              |          | SS/Lr        | 51 21    |                   |                                              |                                                                        |
|              |          | SSS          | 51 34    |                   |                                              |                                                                        |
|              |          | M            | 52 00    |                   |                                              | Per: 27.5<br>11: 33                                                    |

|           |      |     |          |      |  |
|-----------|------|-----|----------|------|--|
| DEHRA DUN | N, E | iP  | 23 51 33 | 1730 |  |
|           |      | PP  | 51 46    |      |  |
|           |      | PPP | 51 53    |      |  |
|           |      | iS  | 54 17    |      |  |
|           |      | SS  | 54 33    |      |  |
|           |      | SSS | 54 45    |      |  |
|           |      | M   | 56 07    |      |  |

|           |   |    |          |                                              |
|-----------|---|----|----------|----------------------------------------------|
| HYDERABAD | E | iP | 23 51 36 | Initial ground<br>movement<br>towards 'East' |
|           |   | PP | 51 51    |                                              |
|           |   |    | 54 42    |                                              |
|           |   | e  | 55 11    |                                              |
|           |   | Lr | 56 10    |                                              |
|           |   | M  | 57 34    |                                              |

|           |   |     |          |      |  |
|-----------|---|-----|----------|------|--|
| NEW DELHI | N | eP  | 23 51 36 | 1790 |  |
|           |   | PPP | 51 52    |      |  |
|           |   | i   | 54 19    |      |  |
|           |   | iS  | 54 42    |      |  |
|           |   | SSS | 54 49    |      |  |
|           |   | i   | 55 08    |      |  |
|           |   | M   | 56 14    |      |  |

|        |   |     |          |      |                                              |
|--------|---|-----|----------|------|----------------------------------------------|
| MADRAS | E | iP  | 23 51 45 | 1840 | Initial ground<br>movement<br>towards 'East' |
|        |   | PP  | 51 54    |      |                                              |
|        |   | PPP | 52 16    |      |                                              |
|        |   | iS  | 54 49    |      |                                              |
|        |   | SS  | 54 59    |      |                                              |
|        |   | SSS | 55 17    |      |                                              |
|        |   | Lr  | 55 32    |      |                                              |
|        |   | M   | 56 07    |      |                                              |

|       |         |    |          |       |                                                                           |       |
|-------|---------|----|----------|-------|---------------------------------------------------------------------------|-------|
| POONA | Z, N, E | iP | 23 52 17 | 2120  | Initial ground<br>movement<br>towards 'South<br>and East'.<br>Rarefaction |       |
|       |         | PP | 52 44    |       |                                                                           |       |
|       |         | N  | iS       |       |                                                                           | 55 47 |
|       |         | E  | SS       |       |                                                                           | 56 06 |
|       |         | N  | SSS      |       |                                                                           | 56 11 |
|       |         | E  | Lr       |       |                                                                           | 56 41 |
|       |         | E  | i        | 56 52 |                                                                           |       |
|       |         | N  | M        | 57 58 |                                                                           |       |

|        |      |     |          |      |  |
|--------|------|-----|----------|------|--|
| BOMBAY | N, E | eP  | 23 52 30 | 2190 |  |
|        |      | PP  | 52 47    |      |  |
|        |      | eS  | 56 07    |      |  |
|        |      | Lq  | 56 19    |      |  |
|        |      | SSS | 56 44    |      |  |
|        |      |     | M        |      |  |

|            |   |     |          |      |  |
|------------|---|-----|----------|------|--|
| KODAIKANAL | E | iP  | 23 52 44 | 2270 |  |
|            |   | PPP | 53 15    |      |  |
|            |   | iS  | 55 18    |      |  |
|            |   | Lq  | 57 00    |      |  |
|            |   | SSS | 57 33    |      |  |
|            |   | Lr  | 58 00    |      |  |
|            |   | M   | 59 48    |      |  |

|         |   |   |          |  |  |
|---------|---|---|----------|--|--|
| COLOMBO | E | S | 23 56 30 |  |  |
|         |   | L | 00 01 20 |  |  |
|         |   | M | 02 05    |  |  |

|    |        |   |                     |                   |            |
|----|--------|---|---------------------|-------------------|------------|
| 20 | POONA  | N | e                   | 00 00 01          |            |
|    |        |   | e                   | 04 04             |            |
|    | BOMBAY | E | e                   | 00 02 57          |            |
| 20 | CHATRA | Z | eP<br>Z, N, E<br>iS | 12 04 26<br>05 17 | 870 Feeble |
| 20 | CHATRA | Z | iP<br>iS            | 15 16 32<br>16 51 | 150 Feeble |

|    |                                                                             |   |    |          |        |
|----|-----------------------------------------------------------------------------|---|----|----------|--------|
| 20 | Epc: 51°N, 159°E. Near South Coast of Kochi<br>- H: 20h 05m 09s (U.S.C.G.S) |   |    |          |        |
|    | SHILLONG                                                                    | Z | iP | 20 25 55 | Slight |



| DATE                  | STATION                                                      | COMPT | PHASE    | G. M. T. | △                                                | REMARKS       | DATE                                                                                                                                                                                                                                   | STATION                             | COMPT.   | PHASE    | G. M. T. | △      | REMARKS                     |               |       |  |  |
|-----------------------|--------------------------------------------------------------|-------|----------|----------|--------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------|----------|----------|--------|-----------------------------|---------------|-------|--|--|
|                       |                                                              |       |          | h. m. s. | km                                               |               |                                                                                                                                                                                                                                        |                                     |          |          | h. m. s. | km     |                             |               |       |  |  |
| <b>September 1956</b> |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| 22                    | COLOMBO                                                      | E     | e        | 16 07 01 |                                                  |               | 25                                                                                                                                                                                                                                     | CHATRA                              | Z        | ePg      | 00 45 39 | 100    | Feeble                      |               |       |  |  |
|                       |                                                              |       |          | Contd.   |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | iSg           | 45 52 |  |  |
|                       |                                                              |       | e        | 10 17    |                                                  |               | 25                                                                                                                                                                                                                                     | Epc: Afganisthan Pakistan Frontier. |          |          |          |        |                             |               |       |  |  |
|                       |                                                              |       | e        | 12 54    |                                                  |               | - H = 16h 25m 14s (B.C.I.S).                                                                                                                                                                                                           |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              |       | e        | 14 39    |                                                  |               | DEHRA DUN                                                                                                                                                                                                                              | N,E                                 | eP       | 16 27 14 | 870      | Slight |                             |               |       |  |  |
| 22                    | DEHRA DUN                                                    | N,E   | e        | 18 28 04 |                                                  | Tremor        | N                                                                                                                                                                                                                                      | iS                                  | 28 44    |          |          |        |                             |               |       |  |  |
| 23                    | CHATRA                                                       | Z     | ePg      | 06 55 52 | 100                                              | Feeble        |                                                                                                                                                                                                                                        | SS/Lr                               | 28 56    |          |          |        |                             |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | SSS           | 29 05 |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | Sg/M          | 29 33 |  |  |
| 23                    | CHATRA                                                       | Z     | iP       | 11 55 31 | 170                                              | Feeble        | NEW DELHI                                                                                                                                                                                                                              | N                                   | eP       | 16 27 17 | 930      | Slight |                             |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | iS            | 28 53 |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | i             | 29 22 |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | i             | 29 53 |  |  |
| 24                    | COLOMBO                                                      | E     | e        | 07 56 -- |                                                  |               | POONA                                                                                                                                                                                                                                  | Z                                   | eP       | 16 28 56 |          |        | Slight Phases not clear     |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| 24                    | Epc: 34°N, 69°E. Afganisthan. - H = 10h 20m 38s (U.S.C.G.S). |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| DEHRA DUN             | N,E                                                          | eP    | 10 22 38 | 880      | Moderate                                         | CHATRA        | Z                                                                                                                                                                                                                                      | eP                                  | 16 29 05 | 1850     | Feeble   |        |                             |               |       |  |  |
|                       | N                                                            | PP    | 22 48    |          |                                                  |               |                                                                                                                                                                                                                                        | iS                                  | 32 10    |          |          |        |                             |               |       |  |  |
|                       |                                                              | PPP   | 22 54    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | Lq    | 23 54    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | iS    | 24 09    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | SS    | 24 22    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | Lr    | 24 25    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | SSS   | 24 33    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | Sg/M  | 25 00    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| NEW DELHI             | N                                                            | iP    | 10 22 42 | 940      | Slight. Initial ground movement towards 'North.' | MADRAS        | E                                                                                                                                                                                                                                      | e                                   | 16 36 02 |          |          |        | Slight                      |               |       |  |  |
|                       |                                                              | PP    | 22 52    |          |                                                  | HYDERABAD     | E                                                                                                                                                                                                                                      | e                                   | 16 38 35 |          |          |        |                             |               |       |  |  |
|                       |                                                              | PPP   | 23 00    |          |                                                  | COLOMBO       | E                                                                                                                                                                                                                                      | e                                   | 16 41 05 |          |          |        |                             |               |       |  |  |
|                       |                                                              | i     | 23 12    |          |                                                  |               |                                                                                                                                                                                                                                        | e                                   | 43 15    |          |          |        |                             |               |       |  |  |
|                       |                                                              | iS    | 24 19    |          |                                                  | 25 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 18 47 05 |          |          |        | Slight, distant             |               |       |  |  |
|                       |                                                              | SS    | 24 36    |          |                                                  | 26 CHATRA     | Z                                                                                                                                                                                                                                      | e                                   | 13 57 49 |          |          |        | Feeble, near.               |               |       |  |  |
|                       |                                                              | SSS   | 24 46    |          |                                                  | 26 CHATRA     | Z                                                                                                                                                                                                                                      | e                                   | 14 53 23 |          |          |        | Tremor                      |               |       |  |  |
|                       |                                                              | Sg    | 25 17    |          |                                                  | 26 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 17 56 19 |          |          |        | Slight, distant Rarefaction |               |       |  |  |
| BOMBAY                | N                                                            | iP    | 10 24 18 | 1710     |                                                  | 26 DEHRA DUN  | N,E                                                                                                                                                                                                                                    | e                                   | 18 56 03 |          |          |        | Feeble, Phases not clear    |               |       |  |  |
|                       |                                                              | eS    | 27 10    |          |                                                  |               |                                                                                                                                                                                                                                        | i                                   | 58 57    |          |          |        |                             |               |       |  |  |
|                       |                                                              | M     | 30 50    |          |                                                  | 26 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 19 11 41 |          |          |        | Slight, local Compression   |               |       |  |  |
| POONA                 | Z,N                                                          | eP    | 10 24 22 |          | Slight, Phases not clear                         | 26 DEHRA DUN  | N,E                                                                                                                                                                                                                                    | e                                   | 20 57 03 |          |          |        | Feeble, Phases not clear    |               |       |  |  |
|                       | N,E                                                          | e     | 24 39    |          |                                                  |               |                                                                                                                                                                                                                                        | i                                   | 58 07    |          |          |        |                             |               |       |  |  |
|                       | N                                                            | e     | 27 43    |          |                                                  | 27 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 08 21 14 |          |          |        | Slight, local Rarefaction   |               |       |  |  |
|                       |                                                              | e     | 27 58    |          |                                                  | CHATRA        | Z                                                                                                                                                                                                                                      | iP                                  | 08 22 12 | 870      | Feeble   |        |                             |               |       |  |  |
| CHATRA                | Z                                                            | iP    | 10 24 31 |          | Feeble                                           |               |                                                                                                                                                                                                                                        | iS                                  | 23 42    |          |          |        |                             |               |       |  |  |
|                       | Z,N,E                                                        | i     | 27 26    |          |                                                  | SHILLONG      | Z                                                                                                                                                                                                                                      | eP                                  | 23 12 56 |          |          |        | Slight                      |               |       |  |  |
| BOKARO                | N,E                                                          | eP    | 10 24 39 | 1790     | Moderate                                         | 28 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 04 51 48 |          |          |        | Slight                      |               |       |  |  |
|                       |                                                              | PP    | 24 52    |          |                                                  | CHATRA        | Z                                                                                                                                                                                                                                      | i                                   | 04 52 23 |          |          |        | Feeble                      |               |       |  |  |
|                       |                                                              | PPP   | 25 03    |          |                                                  | 28 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 07 34 30 |          |          |        | Slight, local Compression   |               |       |  |  |
|                       |                                                              | iS    | 27 38    |          |                                                  | 28 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 09 54 47 |          |          |        | Feeble, distant             |               |       |  |  |
|                       |                                                              | SSS   | 28 23    |          |                                                  | 28 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 12 11 02 |          |          |        | Slight Rarefaction          |               |       |  |  |
|                       |                                                              | Lr    | 28 42    |          |                                                  | Per = 17 secs |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | M     | 30 10    |          |                                                  | Δ = 455       |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| SHILLONG              | Z,F                                                          | iP    | 10 25 25 | 2230     | Slight                                           | 28 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 18 42 02 |          |          |        | Slight                      |               |       |  |  |
|                       | E                                                            | iS    | 29 06    |          |                                                  | 28 DEHRA DUN  | N,E                                                                                                                                                                                                                                    | e                                   | 19 36 11 |          |          |        | Tremor                      |               |       |  |  |
|                       |                                                              | SS    | 29 59    |          |                                                  | 29 SHILLONG   | Z                                                                                                                                                                                                                                      | iP                                  | 04 16 03 |          |          |        | Slight                      |               |       |  |  |
|                       |                                                              | SSS   | 30 13    |          |                                                  | 29            | Epc: 7½°N, 94½°E, Nicobar Islands<br>- H = 09h 03m 37s (U.S.C.G.S).<br>7°N, 94½°E. - H = 09h 03m 39s (B.C.I.S).<br>5½°N, 95½°E. Off the North Coast of Sumatra.<br>- H = 09h 03m 29s (Shillong).<br>Magnitude = 6.3 (Uppsala, Kiruna). |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | M     | 32 23    |          |                                                  | COLOMBO       | E                                                                                                                                                                                                                                      | eP                                  | 09 07 06 |          |          |        |                             |               |       |  |  |
| MADRAS                | E                                                            | iP    | 10 25 45 | 2620     | Moderate, Initial ground movement towards 'West' |               |                                                                                                                                                                                                                                        | e                                   | 09 032   |          |          |        |                             |               |       |  |  |
|                       |                                                              | PPP   | 26 29    |          |                                                  |               |                                                                                                                                                                                                                                        | e                                   | 11 09    |          |          |        |                             |               |       |  |  |
|                       |                                                              | iS    | 29 57    |          |                                                  |               |                                                                                                                                                                                                                                        | e                                   | 13 06    |          |          |        |                             |               |       |  |  |
|                       |                                                              | SS    | 30 31    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | i     | 31 24    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 32 01    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 32 44    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | M     | 33 27    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| KODAIKANAL            | E                                                            | eP    | 10 26 09 | 2780     | Slight                                           |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | iS    | 30 31    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| COLOMBO               | E                                                            | e     | 10 27 25 |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | S     | 31 30    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 36 05    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 37 05    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
| HYDERABAD             | E                                                            | e     | 10 27 40 |          | Moderate                                         |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | iS    | 28 39    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 30 24    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 30 41    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | e     | 32 04    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              | M     | 33 50    |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             |               |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | Per = 11 secs |       |  |  |
|                       |                                                              |       |          |          |                                                  |               |                                                                                                                                                                                                                                        |                                     |          |          |          |        |                             | Δ = 18        |       |  |  |





| DATE              | STATION          | COMPT            | PHASE       | G. M. T.<br>h. m. s.       | $\Delta$<br>km | REMARKS                           | DATE              | STATION  | COMPT      | PHASE    | G. M. T.<br>h. m. s. | $\Delta$<br>km | REMARKS               |
|-------------------|------------------|------------------|-------------|----------------------------|----------------|-----------------------------------|-------------------|----------|------------|----------|----------------------|----------------|-----------------------|
| September<br>1956 |                  |                  |             |                            |                |                                   | September<br>1956 |          |            |          |                      |                |                       |
| 29                | BOMBAY<br>Contd. | N <sub>2</sub> E | eP<br>eS    | 23 31 02<br>39 16          | 6700           |                                   | 30                | SHILLONG | Z          | iP       | 05 23 09             |                | Slight<br>Compression |
|                   | COLOMBO          | E                | e<br>e<br>e | 23 39 23<br>55 51<br>59 01 |                |                                   |                   | CHATKA   | Z<br>Z,N,E | iP<br>iS | 05 23 49<br>25 14    | 820            | Slight                |
| 30                | POONA            | Z                | eP          | 00 00 28                   |                | Feeble shock.<br>Phases not clear | 30                | SHILLONG | Z          | eP       | 10 21 28             |                | Slight                |
| 30                | SHILLONG         | Z                | eP          | 04 31 29                   |                | Slight                            | 30                | SHILLONG | Z          | iP       | 14 50 41             |                | Slight<br>Compression |
|                   |                  |                  |             |                            |                |                                   |                   | CHATRA   | Z<br>Z,N,E | eP<br>iS | 14 51 13<br>51 50    | 330            | Feeble                |

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*Earthquake Reports  
(Non Instrumental Reports).*

Following is the list of Earthquakes that were reported by Voluntary Observers from different stations during the month of September 1956.

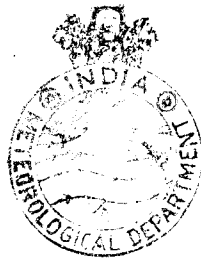
| PLACE<br>AT WHICH<br>FELT | DATE IN<br>G.M.T. | TIME IN<br>G.M.T.<br>h. m. | NO. OF<br>SHOCK<br>IN SEC | DURATION OF<br>SHOCKS IN<br>SECONDS | INTENSITY IN<br>R.F. SCALE | REMARKS |
|---------------------------|-------------------|----------------------------|---------------------------|-------------------------------------|----------------------------|---------|
| GANGTOK                   | 10                | 08 00                      | 2                         | 1                                   | IV                         |         |
| GANGTOK                   | 10                | 18 30                      | 2                         | 1                                   | IV                         |         |
| SRINAGAR                  | 16                | 08 40                      | 2                         | 3                                   | III                        |         |
| GAUHATI                   | 19                | 23 48                      | 1                         | 3                                   | IV                         |         |
| KUMBHIKGRAM               | 19                | 23 48                      | 2                         | 2                                   | IV                         |         |
| SILCHAR                   | 19                | 23 50                      | -                         | 6                                   | III                        |         |
| TEZPUR                    | 19                | 23 50                      | 1                         | 3                                   | IV                         |         |
| GOALPARA                  | 19                | 00 00                      | 1                         | 10                                  | IV                         |         |
| HAPLONG                   | 19                | 23 51                      | 1                         | 5                                   | IV                         |         |
| NOWGONG                   | 20                | 00 51                      | 6                         | 33                                  | IV                         |         |
| MAZBAT                    | 20                | 00 49                      | -                         | 25                                  | III                        |         |
| GAUHATI                   | 20                | 20 54                      | 1                         | 3                                   | IV                         |         |

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GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

10-'56

SEISMOLOGICAL BULLETIN



Published under the direction of  
Shri S. Basu, B.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECONDS	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMEAY	Sprengnether	E	$T_0=T_g=7$ sec	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHATRA	Benioff	Z	$T_0=0.72$ $T_g=0.45$	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	F	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MADRAS	Sprengnether	E	$T_0=T_g=7.2$	-	-	30
NEW DELHI	Milne-Shaw	N	12	300	20:1	8
	Omori-Ewing	L	30	30	1	12
POONA	Sprengnether	Z	$T_0=T_g=1.6$	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	$T_g=0.18$ $T_0=1.0$	-	-	60
	Sprengnether	E	$T_0=T_g=7.8$	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
				h. m. s.	km						h. m. s.	km	
October 1956							October 1956						
01	SHILLONG	Z	eP	17 14 33		Slight	03	SHILLONG	Z	eP	03 42 58		Slight Compression
	CHATRA	Z	eP iS	17 14 55 16 03	650	Feeble	03	SHILLONG	Z	eP	06 16 13		Slight
01	SHILLONG	Z	eP	17 41 31			03	SHILLONG	Z	eP	07 23 53		Slight, near
02	DEHRA DUN	N, E	e i i	08 28 15 30 08 31 07		Feeble. Phases not clear	03	SHILLONG	Z	eP	08 05 43		Slight, near
	SHILLONG	Z E	iP eP e	08 31 04 34 59 38 01		Slight Rarefaction	03	Epc: 20°S, 69°W. Northern Chile. -h=150 KmCa.-H= 08h 18m 49s (U. S. C. G. S) Magnitude= 6½ Pasadena).					
	POONA	Z	i	08 34 20		Slight shock Phases not clear	POONA	Z	i	08 38 15 38 42			Phases not clear.
	MADRAS	E	e	08 36 22		Slight	DEHRA DUN	N, E	e e e	08 38 31 39 17 42 24			Phases not clear.
02	SHILLONG	Z	eP	09 50 29		Slight, distant Compression	SHILLONG	Z	e	08 38 38			
02	DEHRA DUN	N, E	e	12 57 16 58 53		Feeble. Phases not clear	03	CHATRA	Z Z, N, E	iP iS	14 35 10 35 30	160	Slight
02	Epc: 53°N, 159°E. Near Southeast Coast of Kamchatka. -h=60 KmCa. -H= 14h 56m 26s. Magnitude= 6½-6¾ (Pasadena), 6.3 (Uppsala).						SHILLONG	Z	eP PP Lq eS	14 36 06 36 12 36 55 37 09	580	Slight	
	SHILLONG	Z, E N N, E E	iP eP PcP PP PPP iS eS	15 06 05 07 11 08 07 09 27 13 49	6160	Initial ground movement towards 'South and West' Compression.	DEHRA DUN	N, E	e	14 37 52			Tremor
	CHATRA	Z	i	15 06 19			03	SHILLONG	Z	eP Pg eSg	20 45 37 45 38 45 52	120	Slight
	DEHRA DUN	N, E	eP eS e e	15 06 35 14 45 15 22 19 33	6630	Phases not clear	03	SHILLONG	Z	e	20 59 59		Feeble
	POONA	Z	i	15 07 50			03	SHILLONG	Z	ePg iSg	22 00 27 00 30	20	Slight
	BOMBAY	N E N, E	eP eS e M	15 07 53 17 14 18 21 42 --	8000		03	SHILLONG	Z	iP	23 46 22		Slight Rarefaction
02	SHILLONG	Z	eP	15 43 08		Slight Compression	04	SHILLONG	Z	eP	02 35 24		Slight
02	SHILLONG	Z	ePg eSg	16 56 33 56 43	80	Slight	04	SHILLONG	Z	eP P* Pg Lq eS Sg	04 45 29 45 38 45 47 46 10 46 19 46 42	460	Slight Compression
02	DEHRA DUN	N, E	e	18 39 00		Tremor	04	SHILLONG	Z	iP	07 14 21		Slight Compression
	SHILLONG	Z	eP	18 40 25		Slight Rarefaction	04	SHILLONG	Z	iPg	08 08 40		Slight, local
02	SHILLONG	Z	eP i Z, E N	19 30 39 30 42 31 19		Slight, near Rarefaction	04	DEHRA DUN	N, E	e	19 02 10		Tremor
	CHATRA	Z Z, N, E	iP iS	19 31 02 32 07	620	Feeble	04	SHILLONG	Z	iP	19 36 36		Slight Compression
02	SHILLONG	Z	e	20 15 53		Feeble	04	SHILLONG	Z	eP	19 37 59		Slight Rarefaction
02	SHILLONG	Z	eP Pg eSg eSg	21 24 15 24 16 24 33	140	Slight	04	SHILLONG	Z	iP	20 08 23		Slight Compression
	CHATRA	Z	iP iS	21 24 46 25 31	410	Feeble	04	SHILLONG	Z	e	20 43 14		Feeble
02	SHILLONG	Z	e	21 50 45		Feeble	04	DEHRA DUN	N, E	e	22 03 39		Tremor
03	NEW DELHI	N	iP iS	00 24 29 24 33	30	Slight	04	SHILLONG	Z	e	23 19 23		Feeble
03	SHILLONG	Z	eP	03 37 44		Slight Compression	04	SHILLONG	Z	eP	23 39 01		Slight, near Compression.
							04	SHILLONG	Z	eP	23 54 35		Slight
							04	SHILLONG	Z	ePg	23 58 08		Slight, local
							05	SHILLONG	Z	eP	00 27 47		Slight, distant
							05	SHILLONG	Z	eP	04 13 46		Slight
							05	DEHRA DUN	N, E	e i	06 01 05 01 30		Feeble. Phases not clear
							05	SHILLONG	Z	eP	12 49 37		Slight

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
				h. m. s.	km						h. m. s.	km	
October 1956							October 1956						
05	SHILLONG	Z	ePg	13 00 45		Slight, local	08	SHILLONG	Z	eP	17 27 55		Slight
05	NEW DELHI	N, E	iP	16 00 34	20	Slight, shock	08	DEHKA DUN	N, E	e	21 50 04		Feeble, Phases not clear
		E	iS	00 36		Felt locally. Initial ground movement towards 'West'			e	50 35			
05	SHILLONG	Z	e	18 59 18		Feeble	08	SHILLONG	Z	eP	21 51 23		Slight
05	SHILLONG	Z	iP	21 55 36		Slight Compression	09	SHILLONG	Z	eP	00 35 08		Feeble
06	SHILLONG	Z	eP	00 55 29		Slight Compression	09	SHILLONG	Z	iP	17 00 16		Slight
06	SHILLONG	Z	iP	05 16 49		Slight, near Compression		CHATRA	Z	i	17 00 48		Feeble, Near
06	SHILLONG	Z	iP	06 23 43		Slight Rarefaction	09	SHILLONG	Z	iP	17 23 59		Slight
06	SHILLONG	Z	eP	06 29 36		Slight		CHATRA	Z	i	17 24 30		Tremor
06	CHATRA	Z	eP	15 30 45	200	Feeble	09	SHILLONG	Z	eP	17 45 23		Slight
	SHILLONG	Z	eP	15 41 50		Slight, near.	10	Epc: 28.4°N, 78.5°E. Northern India H: 15h 31m 40s (Shillong) 28°N, 78°E. H: 15h 31m 34s (U.S.C.G.S) Magnitude: 6.4 (Shillong), 6.4 (Uppsala, Kiruna). Felt at Roorkee, Jaipur, Gwalior, Lakhimpur, Hissar, Nazibabad, Sheopurkalan, Delhi. Twentythree killed in Bulund Shahar district and one slightly injured at Delhi (Press).					
	DEHRA DUN	N, E	e	15 41 53		Tremor		NEW DELHI	N, E	iP	15 31 50	90	Felt locally. Direction of motion 'North and East'
06	SHILLONG	Z	eP	15 55 55		Slight, near			E	iSg	31 57		first
06	SHILLONG	Z	iP	17 33 48		Slight, near Compression		DEHRA DUN	N, E	eP	15 32 17	240	
	CHATRA	Z	eP	17 34 32	430	Feeble			N	P*	32 21		
			iS	35 19						Pg	32 24		
06	SHILLONG	Z	e	18 21 38		Feeble				PP	32 26		
06	DEHRA DUN	N, E	e	22 14 06		Feeble, Phases not clear.				PPP	32 32		
			i	14 32						iS	32 45		
07	SHILLONG	Z	eP	01 41 46		Slight		CHATRA	Z	iP	15 33 36	960	
07	SHILLONG	Z	eP	01 43 37		Slight			N, E	iS	35 15		
07	SHILLONG	Z	eP	03 22 52		Slight, near.		BOKARO	N, E	iP	15 33 44	880	Initial ground movement towards 'South and West'
07	SHILLONG	Z	eP	04 23 16		Slight Rarefaction				PPP	33 54		Rarefaction
07	SHILLONG	Z	ePg	07 01 47		Slight, local				Lq	35 03		Per: 7.5 secs
07	SHILLONG	Z	ePg	13 56 07	100	Slight				iS	35 15		$\mu = 238$
			eSg	56 18						M	36 01		
07	SHILLONG	Z	eP	16 02 02		Slight, near		POONA	Z	eP	15 34 08	1150	
07	SHILLONG	Z	e	20 11 07		Slight			N	Lq	35 57		
07	SHILLONG	Z	iP	21 40 08		Slight Compression				eS	36 06		
07	BOMBAY	E	e	21 51 47		Slight		BOMBAY	N, E	eP	15 34 09	1200	
			e	51 53						eS	36 12		
			e	52 38									
		N, E	e	52 42				SHILLONG	Z, N, E	iP	15 34 39	1370	Initial ground movement towards 'East' Compression.
08	SHILLONG	Z	e	00 44 38		Slight			N, E	PP	34 51		
08	SHILLONG	Z	eP	00 48 18	140	Slight				PPP	34 56		
			Pg	48 19						Lq	36 52		
			eSg	48 37						iS	36 58		
08	SHILLONG	Z	eP	02 54 12	310	Slight				e	37 18		
			P*	54 16						SSS	37 28		
			Lq	54 35						M	38 24		Per: 11.3 secs Amp: 2 mm
			eSg	54 58									
08	SHILLONG	Z	eP	04 37 59		Slight Compression		MADRAS	E	eP	15 35 13	1610	
08	Epc: 20°S, 174°W. Tonga Islands. H: 14h 55m 49s (U.S.C.G.S) Magnitude: 5.5 (Moskva).												
	SHILLONG	Z, N, E	e	15 13 56						PP	35 25		
		N, E	e	20 26						PPP	35 33		
08	SHILLONG	Z	eP	17 11 15		Slight				Lq	37 52		
										eS	37 56		
										e	38 07		
										M	39 53		
										PeP	40 28		
										PeS	43 32		
										e	44 37		
										i	46 03		
										SeS	47 03		
								HYDERABAD	E	iS	15 36 09		Per: 6 secs $\mu = 31$
										M	37 28		
								KODAIKANAL	E	S	15 39 01		
										M	41 10		

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	
				h. m. s.	km						h. m. s.	km		
October 1956							October 1956							
10	COLOMBO	E	e	15 40 26			11	BOMBAY	N,E	iP	02 35 27	7410		
Contd.			e	43 04			Contd.			PeP	35 51			
			e	45 19						PP	37 46			
			e	46 24					E	PeS	40 00			
10	CHATRA	Z	eP	23 36 21	360	Feeble			N,E	iS	44 18			
			iS	37 01						PS	44 35			
										PPS	44 55			
11	Epc: 46°N, 150°E. Kurile Islands. -h=100 Km Ca. - H = 02h 24m 33s (U.S.C.G.S) Magnitude: 7½(Moskva), 7.4(Praha), 7¼-7½(Pasadena), 7.3(Roma), 7¼(De Bilt).													
	SHILLONG	Z,N,E	iP	02 33 27	5420	Initial ground movement towards 'South and West' Compression			E	SKS1	45 06			
		N,E	pP	33 50					N	SKS1	45 19			
			SP	34 00					E	i	46 03			
			PP	35 24					N,E	SS	48 54			
			PPP	36 22					N	SSS	51 40			
			iS	40 30					N,E	Lq	52 08			
			sS	41 10					N	M	03 00 52		Per.: 27 secs	
			SS	43 56									$\mu$ = 96	
			SSS	45 30					E	M	03 54		Per.: 11 secs	
			M	51 08		Per.: 18.7 secs Amp.: 4 mm							$\mu$ = 14	
	CHATRA	Z	i	02 33 42		Distant		KODAIKANAL	E	iP	02 35 49	7630		
		E	e							PPP	40 04			
										S	44 52			
										PPS	45 40			
										SS	49 28			
										Lq	54 13			
										Lr	57 34			
										M	03 03 34			
								COLOMBO	E	P	02 35 52			
										e	44 55			
										e	57 29			
										e	03 03 01			
								11	Epc: 40°N, 126°W. Off Cape Mendocino, California. - H = 16h 48m 46s (U.S.C.G.S). Magnitude = 6¼-7(De Bilt), 6¼(Lwiro), 6(Pasadena, Berkeley, Uppsala).					
								DEHRA DUN	N,E	ePKP	17 07 26			
										i	17 48			
										e	19 21			
										e	23 13			
										e	42 08			
								BOMBAY	E	ePKP	17 07 32	12980		
									N	e	08 50			
									E	e	17 16			
									N	e	18 48			
									E	e	19 01			
										e	24 34			
									N,E	eS	24 45			
									E	M	48 39		Per.: 30 secs	
													$\mu$ = 5	
									N	M	54 29		Per.: 26 secs	
													$\mu$ = 7	
								NEW DELHI	N	ePKP	17 07 37			
										e	12 05			
										e	17 04			
										e	22 61			
								MADRAS	E	e	17 09 25			
								COLOMBO	E	e	17 10 00?			
										e	49 20			
										e	58 35			
								SHILLONG	Z	i	17 25 26		Slight	
								HYDERABAD	E	M	17 48 11		Per.: 26 secs	
													$\mu$ = 17	
								12	Epc: 15°S, 74°W. Near Coast of Central Peru. -h=60 Km Ca. - H = 02h 37m 45s (U.S.C.G.S) Magnitude = 6¼ (Pasadena).					
								COLOMBO	E	e	02 57 04			
										e	04 00 49			
										e	09 29			
								BOMBAY	N,E	PKP1	02 57 30	16670		
									E	PP	03 01 06			
									N,E	PP	01 16			
									E	PPP	04 24			
									N	SS	20 29			
									N,E	e	54 39			
									E	e	56 00			
									N	e	56 14			
									N	M	04 06 24			
									E	M	06 22			





DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	$\Delta$ km	REMARKS	
October 1956							October 1956							
16	DEHRA DUN		N, E	e 21 18 37		Tremor	19	SHILLONG	Z	e	12 13 45			
16	DEHRA DUN		N, E	e 22 45 02		Tremor	19	SHILLONG	Z	e	12 30 44		Slight	
17	MADRAS		E	e 01 03 44		Slight	19	Epe: 56°S, 122°W. South Pacific Ocean. H = 14h 05m 34s (U.S.C.G.S) Magnitude = 6 (Pasadena).						
17	POONA		Z	i 01 05 15		Slight. Phases not clear.	SHILLONG	Z	ePKP	14 25 15				
17	Epe: 36°N, 70°E. Azores Islands. - h = 200 Km Ca. H = 01h 14m 51s (B.C.I.S)						DEHRA DUN	N, E	e	14 25 25			Feeble	
	MADRAS		E	E 01 15 40		Slight	BOMBAY	N, E	e	14 28 52				
	DEHRA DUN		N, E	eP 01 17 01		Feeble. Phases not clear			eSS	46 30				
	POONA		Z	iP 01 18 53		Slight. Phases not clear			e	49 38			Per = 17 secs	
17	SHILLONG		Z	eP 16 36 50	240	Slight, local			M	15 24 31			$\mu$ = 1	
				iS 37 18					E	M	24 39		Per = 17 secs	
				iSg 37 23									$\mu$ = 1	
17	DEHRA DUN		N, E	e 20 01 26		Feeble. Phases not clear	POONA		N	e	14 29 03		Slight	
				i 03 06			COLOMBO		E	e	14 30 54			
	SHILLONG		Z	eP 20 03 06		Slight				e	15 05 49			
				M 09 14						M	13 39		Amp. = 0.2 mm	
	BOMBAY		E	e 20 09 43		Slight	19	SHILLONG	Z	iPg	15 02 45		Slight, local	
17	SHILLONG		Z	eP 20 38 18		Slight	19	HYDERABAD		E	e	15 22 27		
18	Epe: 10°N, 126°E. Near North Coast of Mindanao, Philippine Islands. - h = 03h 27m 18s (U.S.C.G.S) 0°, 126°E. - H = 03h 27m 25s (B.C.I.S)						19	SHILLONG	Z	iPg	16 13 15		Slight, local	
	SHILLONG		Z	eP 03 34 30		Slight	19	SHILLONG	Z	iP	18 40 54	130	Slight	
	POONA		Z	iP 03 36 36		Tremor				Pg	40 56		Rarefaction	
18	SHILLONG		Z	iP 09 09 54		Slight. Probably local.				eSg	41 12			
	CHATRA		Z	eP 09 10 20	470	Feeble	19	SHILLONG	Z	ePg	19 35 08	30	Slight	
				iS 11 11						iSg	35 11			
18	SHILLONG		Z	eP 10 01 23		Slight	19	SHILLONG	Z	e	20 45 08		Feeble	
	DEHRA DUN		N, E	e 10 29 22		Feeble. Phases not clear	19	Epe: 52°N, 177°E. Rat Islands. Aleutian Island H = 20h 47m 33s (U.S.C.G.S) 52°N, 177°E. - H = 20h 47m 32s (B.C.I.S). Magnitude = 6 (Pasadena, Berkeley), 6.6 (Uppsala, Kiruna), 6 (Moskva, Roma).						
	SHILLONG		Z	eP 10 30 07		Slight	SHILLONG	Z, N, E	eP	20 58 27	7390		Moderate	
18	DEHRA DUN		N, E	e 14 06 13		Feeble. Phases not clear			N, E	PP	21 01 04			
	CHATRA		Z	i 14 06 41		Feeble, near.				PPP	02 42			
	SHILLONG		Z	eP 14 07 26		Slight			N	eSq	07 17			
18	SHILLONG		Z	iP 18 37 38		Slight			E	iSq	07 36			
18	DEHRA DUN		N, E	e 19 27 02		Tremor			N, E	PS	11 34			
	SHILLONG		Z	iP 19 37 53		Slight				SS	15 04			
19	Epe: 46°N, 152°E. Kurile Islands. - h = 150 Km Ca. H = 03h 20m 46s (B.C.I.S)									Lq	18 34			
	SHILLONG		Z	iP 03 29 37		Slight Rarefaction				M	22 34		Amp. = 37.5 mm	
19	SHILLONG		Z	e 08 29 28		Slight	CHATRA		Z	iP	20 58 41			
19	CHATRA		Z	iPg 09 14 14	130	Feeble				i	21 07 56			
				iSg 14 30			DEHRA DUN		N, E	eP	20 58 58	7930		
19	Epe: 5°S, 154°E. Solomon Islands. - h = 150 Km Ca. H = 10h 50m 42s (U.S.C.G.S)									N	iS	21 08 16		
	SHILLONG		Z	iP 11 01 32		Slight Compression				e	12 34			
19	SHILLONG		Z	eP 11 39 25		Slight, near.				i	15 11			
19	Epe: 21°S, 179°W. Fiji Islands. - h = 650 Km Ca. H = 12h 00m 38s (U.S.C.G.S) Magnitude = 6 (Pasadena)									M	25 54			
							BOKARO		N, E	eP	20 59 01	8070	Other phases not clear	
										iS	21 08 26		Per = 30 secs	
										M	26 29		$\mu$ = 37	
										E	M	26 37	Per = 28 secs	
													$\mu$ = 23	
							NEW DELHI			N	eP	20 59 07	8050	
											eS	21 08 31		
											PS	09 09		
											PPS	09 27		
											SS	13 23		
											e	16 51		
											M	27 24		
							HYDERABAD			E	eP	20 59 57	8920	
											PPP	21 04 51		
											iS	10 03		
											PS	10 45		
											e	11 16		
											e	15 20		
											e	21 48		
											M	30 49	Per = 14 secs	
													$\mu$ = 13	

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	
				h. m. s.	km						h. m. s.	km		
October 1956							October 1956							
19	POONA	Z,N,E	iP	21 00 02	9220		22	Ept: 9 $^{\circ}$ S, 150 $^{\circ}$ E. Near Coast of Papua, New Guinea.						
	Centd.	E	PPP	05 18				H: 12h 35m 10s (U.S.C.G.S).						
			eS	10 21			SHILLONG	Z,N,E	eP	12 46 03	7290		Moderate.	
			PPS	11 52				N	PP	48 25			Compression	
			SSS	18 56				N,E	eS	54 48				
			Lq	21 57					PPS	55 25				
			Lr	25 34				N	SS	58 49				
			M	32 31				N,E	Lr	13 04 41				
	BOMBAY	N,E	eP	21 00 05	9220	Moderate	COLOMBO	E	P	12 46 39				
			eS	10 24					S	55 54				
			e	11 06					L	13 13 59				
		N	PPS	11 39					M	19 09			Amp: 0.6 mm	
		E	e	12 11			MADRAS	E	eP	12 46 48			Slight	
		N,E	e	12 17			KODAIKANAL	E	e	12 46 57			Slight	
		N	e	16 24			HYDERABAD	E	iP	12 47 03	8300		Moderate. Initial	
			e	19 43					iS	56 40			ground movement	
			M	34 52		Per: 19 secs			PS	57 03			towards 'West'	
						$\mu = 26$			PPS	57 34				
						Per: 20 secs			SS	13 01 29				
						$\mu = 9$			Lq	06 48				
		E	M	38 26					Lr	10 12				
									M	17 33			Per: 15 secs	
	COLOMBO	E	e	21 01 24									$\mu = 4$	
			e	11 21			DEHRA DUN	N,E	eP	12 47 35	8590		Slight	
			e	27 59				N	iS	57 25				
			e	34 29					SS	13 02 10				
	MADRAS	E	i	21 10 28		Slight			e	18 39				
	KODAIKANAL	E	e	21 11 09		Slight. Phases not clear	BOMBAY	N,E	eP	12 47 38	8890		Slight	
	SHILLONG	Z	e	21 26 44		Slight			eS	57 42				
19	Epc: 52 $^{\circ}$ N, 177 $^{\circ}$ E. Rat Islands aftershock							E	M	13 31 --				
	H: 21h 27m 47s (U.S.C.G.S)							N	M	43 24			Per: 15 secs	
													$\mu = 1$	
	SHILLONG	Z	eP	21 38 47		Slight	22	SHILLONG	Z	eP	12 52 06		Slight	
19	Epc: 52 $^{\circ}$ N, 177 $^{\circ}$ E. Rat Islands aftershock												Compression	
	H: 21h 37m 45s (U.S.C.G.S)													
	SHILLONG	Z	eP	21 48 43		Slight, distant	POONA	Z,N	i	12 58 32			Slight. Phases not clear.	
19	SHILLONG	Z	iP	23 30 10		Slight Rarefaction	22	Epc: New Guinea foreshock. H: 12h 51m 08s (BCIS).						
19	CHATRA	Z	iP	00 23 43	140	Feeble	SHILLONG	Z	e	13 02 35			Slight	
		N,E	iS	24 01									Compression	
	SHILLONG	Z	iP	00 24 19	310	Slight	22	SHILLONG	Z	e	13 14 35			Feeble
			P*	24 20		Compression	22	SHILLONG	Z	e	15 08 03			Feeble
			Pg	24 25			22	Epc: 9 $^{\circ}$ S, 150 $^{\circ}$ E. Near South East Coast of New Guinea. H: 100 Km Ca. H: 15h 18m 13s (U.S.C.G.S).						
			eSg	25 01			SHILLONG	Z	eP	15 28 57			Slight	
20	Epc: 51 $^{\circ}$ N, 170 $^{\circ}$ W. Fox Islands, Aleutian Island.												Compression	
	H: 03h 31m 24s (U.S.C.G.S)						22	Epc: New Guinea aftershock H: 15h 27m 00s (B.C.I.S).						
	SHILLONG	Z	eP	03 43 05		Slight, distant Rarefaction	SHILLONG	Z	eP	15 38 05			Slight	
20	SHILLONG	Z	eP/P*	23 34 25	160	Slight							Compression	
			Pg	34 26			22	SHILLONG	Z	eP	16 07 38			Slight
			eSg	34 45			22	SHILLONG	Z	iPg	19 19 49	50		Slight
21	SHILLONG	Z	iP	07 01 23	380	Slight				eSg	19 55			
			P*	01 30		Rarefaction	22	DEHRA DUN	N,E	e	23 57 41			Tremor
			Pg	01 36			SHILLONG	Z	eP	23 58 53			Slight	
			eS	02 04			23	SHILLONG	Z	eP	04 05 11			Slight, near.
			eSg	02 25			23	Epc: Off Coast of E.L. Salvador H: 04h 24m 52s (U.S.C.G.S).						
21	SHILLONG	Z	iP	12 15 40		Slight	DEHRADUN	N,E	e	04 35 10			Feeble. Phases not clear	
						Compression	SHILLONG	N,E	e	04 40 37			Slight	
21	SHILLONG	Z	iPg/P*	16 29 14	110	Slight	MADRAS	E	e	04 42 43			Slight	
			eSg	29 26		Rarefaction	HYDERABAD	E	M	04 43 51			Per: 9 secs	
22	SHILLONG	Z	ePg	01 52 44		Slight, local							$\mu = 2$	
22	SHILLONG	Z	eP	03 18 04		Slight, near	23	SHILLONG	Z	e	04 44 36			Feeble.
22	SHILLONG	Z	ePg	06 00 01	40	Slight								
			eSg	00 06										
22	CHATRA	Z	iP	07 25 10	190	Feeble								
			iS	25 32										
22	Epc: 52 $^{\circ}$ N, 177 $^{\circ}$ E. Rat Islands, Aleutian Islands													
	H: 07h 26m 15s (U.S.C.G.S)													
	H: 07h 26m 18s (B.C.I.S).													
	SHILLONG	Z	eP	07 37 16		Slight, distant								

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS
				h. m. s.	km						h. m. s.	km	
October 1956							October 1956						
23	CHATRA	Z	ePg iSg	05 33 09 33 22	100	Feeble	23	POONA Contd.	Z N,E N	iP iS PPS SS Lq	08 49 31 56 09 56 32 59 24 59 56	4960	Initial ground movement towards 'South and West.' Compression
23	MADRAS	E	e	06 47 22		Slight			E N	SSS Lr	09 00 32 02 02		
23	Epc: 3°N, 95°W. North West of Galapagos Islands - H = 08h 07m 35s (U.S.C.G.S) 3°N, 95°W. - H = 08h 07m 32s (B.C.I.S) Magnitude = 5.4 (Pasadena), 5.4 (Takubaya)							BOMBAY	N,E	eP e PP N,E N N,E E	08 49 43 50 02 51 37 56 26 56 46 59 58 09 00 20	5020	
	SHILLONG	Z	ePKP	08 27 23		Slight, distant	23	Epc: 23°N, 121°E. - H = 10h 32m 10s (B.C.I.S) Off south East Coast of Formosa. - H = 10h 32m 03s (U.S.C.G.S)					
23	Epc: 13°N, 120°E. Mindoro Islands, Philippine Islands. - h = 100 Km Ca. - H = 08h 41m 22s (U.S.C.G.S) 14°N, 121.3°E. - H = 08h 41m 20s (Shillong) 13°N, 120°E. - h = 100 Km Ca - H = 08h 41m 21s (B.C.I.S) Magnitude = 6.4 (Uppsala, Kiruna), 5.4 (Moskva).							SHILLONG	Z	eP	10 37 54		Slight, distant Compression.
	SHILLONG	Z,E N E N,E	iP eP pP PP iS sS	08 47 23 47 42 48 27 48 44 52 03 52 42	3200	Initial ground movement towards 'West' Compression	23	BHILLONG	Z	eP	14 32 34		Slight
	CHATRA	Z E	eP iS	08 47 59 53 13	3700		23	SHILLONG	Z	iP	14 36 25		Slight, local
	BOKARO	N,E	iP pP PP PPP iS SS Lr	08 48 07 48 37 49 14 49 43 53 31 54 27 57 41	3760	Initial ground movement towards 'South & West' Compression	23	SHILLONG	Z	iP	18 09 33		Slight Compression
	MADRAS	E	iP i i PP PPP i iS i SS SSS Lq M	08 48 48 49 03 49 29 50 27 50 37 51 35 54 47 55 54 57 36 58 10 09 00 17 01 46	4270		23	SHILLONG	Z	eP	19 03 29		Slight, local
	HYDERABAD	E	iP PP PcP PPP PcS iS PPS Lq SSS Lr M	08 48 57 50 39 51 01 51 21 54 45 55 04 55 21 58 09 58 27 09 00 15 04 26	4390	Initial ground movement towards 'West'	23	SHILLONG	Z	eP	19 16 52		Slight, near
	COLOMBO	E	P S L M	08 48 59 55 01 09 01 24 03 29		Amp = 0.5 mm	23	CHATRA	Z	iPg iSg	20 13 13 13 23	80	Feeble
	KODAIKANAL	E	iP PP S e M	08 49 09 50 51 55 27 55 48 09 04 35	4610	Initial ground movement towards 'West'	23	SHILLONG	Z	e	20 14 14		Feeble
	NEW DELHI	N	eP PPP i iS SSS	08 49 13 51 21 52 03 55 33 59 09	4660		23	Epc: 1.20°S, 22.10°E. - H = 21h 21m 03s (Johannesburg)					
	DEHRA DUN	N,E N	eP PPP iS e Lq SSS Lr M	08 49 14 51 40 55 27 55 59 58 44 59 10 09 00 33 03 41	4610		23	SHILLONG	Z	iP	22 35 47		Slight, near Rarefaction
						Per. = 18 secs $\mu = 5$	24	SHILLONG	Z	iP* eSg	04 59 33 59 49	130	Slight Compression
							24	CHATRA	Z	iPg iSg	06 43 14 43 25	80	Feeble
							24	Epc: 12°N, 87°W. Near Coast of Nicaragua. Minor damage at Managua. Felt Southern E L Salvador. - H = 14h 42m 10s (U.S.C.G.S) 11°N, 86°W. - H = 14h 42m 09s (B.C.I.S) Magnitude = 7.4 (Pasadena), 7 (Berkeley, Uppsala).					
								SHILLONG	Z,N,E	ePKP PP i i PPS SS SSS Lq Lr M	15 01 41 04 43 07 44 15 03 17 14 23 27 28 48 43 22 50 58 16 01 59	15780	Amp = 50 mm
								DEHRA DUN	N,E N	e i i i i i	15 01 42 05 09 16 24 17 47 28 35 37 30		Phases not clear
								BOMBAY	N,E N N,E E N	ePKP PKS e e e M	15 01 45 05 30 23 12 23 47 30 13 16 14 13 15 20	16000	Per. = 18 secs $\mu = 9$ Per. = 22 secs $\mu = 20$

DATE	STATION	COMPT	PHASE	G. M. T.	△	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	△	REMARKS	
				h. m. s.	km						h. m. s.	km		
October 1956							October 1956							
24	POONA	Z	PKP	15 01 48	16110		26	CHATRA	Z	eP	23 03 11		Slight, distant	
Contd.		N	PKP1	02 07			Contd.							
			PKP2	05 23				BOKARO	N, E	eP	23 03 16	9690	Long distant	
			SKS2	08 41						iS	13 55		Other phases	
			SSP	24 48						PS	14 18		not clear	
			e	30 29				COLOMBO	E	e	23 03 22			
			Lq	45 41						e	13 48			
			Lr	53 07						e	34 50			
	BOKARO	N, E	PKP	15 01 49		Very distant shock. Phases not clear.				e	42 05			
			e	05 27				MADRAS	E	iP	23 03 28			
										e	13 56			
	HYDERABAD	E	iPKP	15 01 57	16670			HYDERABAD	E	eP	23 03 37			
			SS	09 29						PP	07 08			
			Lq	19 42						i	14 05			
			Lr	25 17						e	14 59			
			M	34 37		Per. = 19 secs Δ = 26				e	15 59			
										e	19 38			
	MADRAS	E	ePKP	15 02 23						e	27 02			
			i	16 08 40						e	31 29			
										M	38 41		Per. = 25 secs Δ = 11	
	KODAIKANAL	E	e	15 03 13				KODAIKANAL	E	iP	23 03 41	10440	Initial ground movement towards 'East'	
										PP	07 29			
	NEW DELHI	N	e	15 02 02						S	14 50			
			PKS	05 27						M	43 23			
			PPP	07 27										
			SKS	09 00										
			PS	15 00										
			PPS	16 37										
			SS	22 35										
			SSP	23 06										
			SSS	27 46										
24	Epc: 6½°S, 156½°E. - H = 17h 22m 49s (B.C.I.S)													
	SHILLONG	Z	eP	17 34 03		Slight Compression		DEHRA DUN	N, E	eP	23 03 59		Phases not clear.	
										e	13 48			
24	SHILLONG	Z	e	18 04 04		Feeble		BOMBAY	N, E	eP	23 04 06	10890		
24	SHILLONG	Z	e	21 22 09		Feeble				e	07 11			
24	Epc: 1.20°S, 22.10°E. - H = 21h 21m 03s (Johansburg)									PPP	10 15			
	SHILLONG	Z	eP	21 37 07		Slight				SKS1	14 38			
25	MADRAS	E	e	06 51 10		Slight			N, E	eS	15 30			
									E	PS	17 19		Per. = 21 secs Δ = 3	
	HYDERABAD	E	e	06 51 47					N	M	58 23			
25	SHILLONG	Z	eP	07 17 46		Slight		27	Epc: 39½°N, 99°E. Kansa Province, China - H = 00h 45m 21s (U.S.C.G.S)					
25	SHILLONG	Z	e	10 18 40		Slight		SHILLONG	Z	eP	00 49 00		Slight	
			e	22 42						PP	49 07			
26	POONA	Z	e	08 04 32		Slight shock Phases not clear		27	CHATRA	Z	iP	05 25 21	800	Feeble
26	Epc: 6½°S, 130°E. Banda Sea. - h about 200 Km - H = 08h 54m 46s (U.S.C.G.S).									iS	26 44			
	SHILLONG	Z	iP	09 03 19	5130	Slight		27	SHILLONG	Z	iP	12 25 44		Slight
			iS	10 07										
	CHATRA	Z	iP	09 03 51		Slight, distant		27	Epc: New Hebrides. - H = 13h 29m 30s (B.C.I.S)					
	MADRAS	E	iP	09 03 52		Slight		SHILLONG	Z	iP	13 42 01		Slight	
			PS	11 09										
	BOMBAY	N, E	eP	09 04 52		Slight		27	Epc: Mariannes Islands Region. - H = 17h 18m 36s (BCIS)					
		E	e	05 44				SHILLONG	Z	e	17 27 38		Slight	
			PP	07 12										
		N, E	PS	13 00				27	SHILLONG	Z	iP	21 34 40	170	Slight
	DEHRA DUN	N, E	eP	09 04 54		Tremor				Pg	34 45			
										iSg	35 04			
	SHILLONG	Z	iP	11 07 39	180	Slight		27	SHILLONG	Z	e	22 45 00		Slight
			Pg	07 42										
			iSg	08 03				28	Epc: 32°S, 179°W. Kermadec Islands - H = 03h 28m 41s (U.S.C.G.S) 33½°S, 178½°W. - H = 03h 28m 37s (B.C.I.S) Magnitude: 6½ (Pasadena), 6 (Berkeley) 6.8 (Uppsala, Kiruna).					
26	Epc: Region: New Britain. - H = 21h 40m 05s (B.C.I.S)													
	SHILLONG	Z	e	21 51 15		Slight		SHILLONG	Z	eP	03 42 40			
26	Epc: 14°S, 167°E. New Hebrides Islands - H = 22h 50m 24s (U.S.C.G.S) Magnitude: 6½ (Pasadena) (Berkeley) 6 (Moskva).													
	SHILLONG	Z	iP	23 02 50	9220	Compression		COLOMBO	E	e	03 46 51			
			iS	13 09						e	56 07			
										e	04 18 19			
										e	23 29			
								BOMBAY	E	PKP1	03 47 08	12810		
										PP	48 25			
									N, E	SKS1	54 09			

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km						h. m. s.	km	
October 1956							October 1956						
28	BOMBAY Contd. Contd.	E	SKKS1 PPS e e e M	03 55 19 58 12 59 15 04 01 18 04 07 30 27		Per.: 23. secs Δ = 3 Per.: 23. secs Δ = 4	28	COLOMBO Contd.	E	PP e e M	10 54 51 11 01 29 10 39 13 19		Amp.: 0.9 mm Per.: 18. secs Δ = 6
		N	M	32 28			28	HYDERABAD	E	M	11 11 53		
	HYDERABAD	E	e e e e e e e e	03 47 43 49 47 53 59 57 14 58 38 04 01 50 03 05 19 38 29 25			28	Epc: Off East Coast of New Britain - H: 18h 18m 50s (U.S.C.G.S).					
								SHILLONG	Z	iP	18 29 31		Slight
	NEW DELHI	N	e e e e	03 54 04 55 17 58 08 59 17			29	DEHRA DUN	N,E	e	05 55 42		Tremor
								CHATRA	Z	iP iS	05 56 22 58 02		Feeble
28	MADRAS	E	e	04 25 01		Feeble	29	Epc: 8°S, 77°W. Central Peru. - h: 60 Km Ca - H: 15h 42m 08s (U.S.C.G.S).					
	POONA	Z	i	04 47 20		Slight shock		DEHRA DUN	N,E	e	16 01 52		Feeble; Phases not clear.
28	Epc: 14°N, 123°E. Luzon, Philippine Islands. - H: 10h 45m 06s (U.S.C.G.S) 14°N, 123°E. - H: 10h 45m 06s (B.C.I.S) Magnitude: 6.6(Uppsala, Kiruna), 5.8(Moskva).							POONA	Z	i	16 01 52		Tremor
								SHILLONG	Z	i	16 02 03		Slight
	SHILLONG	Z	iP iS	10 51 29 56 38	3520	Slight	29	Epc: Near South East Coast of Hokkaido, Japan. - H: 23h 29m 30s (B.C.I.S).					
	CHATRA	Z	i	10 52 10		Slight; distant		SHILLONG	Z	iP	23 36 11		Slight Compression
	BOKARO	N,E	eP PP iS Lq Lr	10 52 15 53 47 57 57 11 00 26 01 13	4050		30	Epc: 12°N, 123°E. Off North Coast of Panay, Philippines. - H: 00h 41m 47s (B.C.I.S).					
								SHILLONG	Z	iP	00 48 18		Slight Rarefaction
	NEW DELHI	N	eP PP PPP/PcP PcS eS i i SS SSS	10 53 04 54 42 55 04 58 48 59 04 59 19 59 51 11 01 49 02 34	4330		30	CHATRA	Z	iP iSg	10 51 26 51 35		70. Feeble
								SHILLONG	Z	iP	14 32 30		Slight; near Other phases not clear.
	DEHRA DUN	N,E	eP iS e SS e Lr M	10 53 26 59 52 11 00 30 03 16 04 25 05 27 08 43	4780		31	Epc: 26°N, 54°E. Southern Iran. - H: 14h 03m 38s (U.S.C.G.S) Many killed and extensive property damage at Laristan. 27°N, 54°E. - H: 14h 03m 44s (B.C.I.S) 26°N, 55°E. - H: 14h 03m 50s (Moskva). Magnitude: 6.8(Uppsala, Kiruna), 6.8(Pasadena).					
								BOMBAY	N,E	iP PP PPP iS N N,E SSS N E	14 08 06 08 17 08 28 11 34 11 43 11 57 12 27 12 46 19 15 21 41	2100	Per.: 14. secs, Δ = 29 Per.: 12. secs, Δ = 35.
	KODAIKANAL	E	e	10 53 29		Tremor							
	POONA	Z	iP PcP PP PPP PcS iS SS SSS Lq Lr M	10 53 45 55 00 55 33 56 24 58 49 11 00 36 03 59 05 02 05 18 07 06 11 00	5290			POONA	Z	iP i iS i i Lr M	14 08 19 09 46 12 05 13 13 13 44 14 15 16 03	2280	Initial ground movement towards 'South and East.' Compression
	BOMBAY	E	eP PP PcS eS PPS e M	10 53 55 55 40 58 54 11 00 53 01 24 01 38 15 40	5330	Slight		NEW DELHI	N	iP PPP iS Lq SS Lr M PcS	14 08 22 08 51 11 58 12 05 12 32 13 09 14 51 16 21	2180	
		N,E	eS	11 00 53									
		E	PPS	01 24				DEHRA DUN	N,E	eP PP iS Lq SS SSS Lr M	14 08 31 09 13 12 20 12 41 12 56 13 20 13 46 15 13	2320	
		N	M	20 32		Per.: 15. secs Δ = 2 Per.: 14. secs Δ = 2							

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	
				h. m. s.	km						h. m. s.	km		
October 1956							October 1956							
31	HYDERABAD	E	iP	14 09 03	2810	Initial ground movement towards 'East' Per. = 15 secs Δ = 46	31	SHILLONG	Z	iP	17 35 16		Slight Compression.	
Contd.			PP	09 48						Z	e	17 35 53		Tremor
			iS	13 27						Z	i	19 35 24		Tremor
			Lr	16 03										
			M	17 30										
	MADRAS	E	iP	14 09 36	3150	Initial ground movement towards 'East'	31	SHILLONG	Z	i(Pg)	21 15 02		Slight	
			PP	10 26						Z	iSg	15 03		
			S	14 23						Z	eP	21 54 30		Slight
			SS	15 47						E	e	21 58 51		
			SSS/ScP	16 10						E	e	22 02 06		
			Lr	17 00										
	KODAIKANAL	E	iP	14 09 39	3120	Initial ground movement towards 'East'	31	COLOMBO	E	P	22 18 26			
			PPP	10 51						E	S	23 06		
			S	14 24							L	26 56		
			Lq	15 45							M	29 11		
			Lr	17 12										
			M	19 33		Per. = 10 secs Δ = 8.3	31	Epc: 5°N, 94°E. Off North Coast of Sumatra. H = 22h 19m 28s (Shillong).						
	BOKARO	N, E	eP	14 09 42	3370	Moderate		MADRAS	E	eP	22 23 13		Slight	
			eS	14 42						e	27 02			
	CHATRA	Z	iP	14 09 47		Slight		SHILLONG	Z	iP	22 23 55	2120	Slight. Other phases not clear	
	COLOMBO	E	P	14 10 06	3650	Amplitude 4.2 mm			E	iS	27 25			
			S	15 21					BOMBAY	N, E	eP	22 24 59	2700	Slight
			L	22 03						E	PP	25 26		
			M	24 16							PPP	25 50		
	SHILLONG	Z, N, E	iP	14 10 24	3780	Initial ground movement towards 'South and East', Compression			N, E	eS	29 16			
		E	PP	11 25							Lq	29 58		
			PPP	11 46						N	e	30 10		
			iS	15 49						E	SSS	30 34		
			Lq	17 19						N	M	35 07		Per. = 15 secs Δ = 2
			SS	17 34						E	M	34 34		Per. = 19 secs Δ = 3
			i	17 49										
			Lr	18 21			Per. = 15 secs Δ = 130		DEHRA DUN	N, E	eP	22 25 38		Feeble. Phases not clear
			M	21 21						e	30 39			
31	Epc: 27°N, 54½°E. Southern Iran. Aftershock. H = 14h 22m 19s (U.S.C.G.S).													
	POONA	Z	eP	14 26 58		Slight. Phases not clear.								
31	SHILLONG	Z	iP	17 06 08		Slight Compression.								

*Earthquake reports  
(Non Instrumental reports)*

Following is the list of Earthquakes that were reported by Voluntary Observers from different stations during the month of October 1956.

PLACE AT WHICH FELT	DATE IN G.M.T	TIME IN G.M.T h. m.	NO. OF SHOCKS	DURATION OF SHOCKS IN SECS.	INTENSITY IN R.F. SCALE.	REMARKS
Upper SHILLONG	04	08 10	1	3	III	
HISSAR & HANSI	10	16 35	1	4	IV	
NIJIBABAD	10	15 25	2	15	IV	
GVALIOR	10	16 35	2	12	IV	
LAKHIMPUR	10	15 25	3	2	III	
ROORKEE	10	16 33	2	3	III	
JAIPUR	10	16 35	1	8	III	
SHEOPURKALAN	10	18 05	2	2	II	



GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN



Published under the direction of  
Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECOND	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMBAY	Sprengnether	E	To=Tg=7 secs	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHATRA	Benioff	Z	To=0.72 Tg=0.45	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMEO	Milne-Shaw	E	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MAERAS	Sprengnether	E	To=Tg=7.2	-	-	30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Omori-Ewing	E	30	30	1	12
POONA	Sprengnether	Z	To=Tg=1.6	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	Tg=0.18 To=1.0	-	-	60
	Sprengnether	E	To=Tg=7.8	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30







DATE	STATION	COMPT	PHASE	Q	M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	Q	M. T.	Δ	REMARKS	
					h:m.s.	km							h:m.s.	km		
November 1956								November 1956								
04	MADRAS	E	e		07:30 44		Slight	07	CHATRA	Z	IP		16:34 29	1430	Feeble	
Contd.	HYDERABAD	E	e		07:30 53			Contd.	DEHRADUN	N,E	e		16:36 13		Feeble, Phases not clear.	
					M 08:16 32		Periodic noise						16:39 56			
	KODAIKANAL	E	e		07:31 00		Tremor	07	CHATRA	Z	IP		16:22 23 08	120	Feeble	
					08:27 54								16:23 22			
04	Epc: 35°S, 67°W. Mendoza Province, Argentina. Htz 08h 35m 12s (U.S.C.G.S)								SHILLONG	Z	eP			07:03 11		Slight
	POONA	Z	i		08:55 17		Tremor	08	Epc: 9°N, 126°E. Mindanao, Philippine Islands. Htz 15h 44m 50s (U.S.C.G.S)							
04	SHILLONG	Z	e		12:54 53		Slight, over	SHILLONG	Z	IP			15:51 54		Slight	
	CHATRA	Z	eP		12:55 15	490	Feeble	CHATRA	Z	e			15:52 33		Slight, distant.	
					IS 156 07			POONA	Z	e			15:54 17		Tremor	
04	SHILLONG	Z	IP		15:27 48		Slight, other phases not clear.	DEHRADUN	N,E	e			16:00 44		Feeble, Phases not clear.	
					PPP 28 02			BOMBAY	E	e			15:01 17		Slight	
					IS 28 33								15:01 30			
	CHATRA	Z	eP		15:28 40	960	Slight	08	CHATRA	Z	IP		00:21 39	140	Feeble	
					IS 30 09								00:31 53			
04	SHILLONG	Z	IP		21:40 11	350	Slight	09	SHILLONG	Z	IP		02:48 55		Slight	
					Pg 49 24		Refraction	09	SHILLONG	Z	eP		02:10 46		Slight	
					IS 40 52			09	SHILLONG	Z	IP		02:52 58		Slight	
					S° 40 58			09	SHILLONG	Z	eP		12:02 44		Slight	
					Sg 41 05			09	SHILLONG	Z	eP		12:02 44		Slight	
	CHATRA	Z	eP		21:41 01	1090	Slight	09	Epc: 17°N, 94°W. Northern Mexico. Slight distance in Oaxaca Province. Htz about 450 Km. Htz 13h 06m 10s (U.S.C.G.S) Magnitudes: 6 (Bartoloy), 6M-6N (Tosdona) 6s (Uppsala, Kitano)							
					IS 42 52			CHATRA	Z	e			13:25 17		Distant	
04	SHILLONG	Z	IP		22:41 40	330	Slight	BOMBAY	N,E	e			13:25 25		Distant	
					i 41 43								13:28 58			
					P° 41 45								13:30 00			
					Pg 41 50								13:35 15			
					S 42 17			POONA	Z	e			13:25 20		Distant	
					S° 42 22								13:25 45			
					Sg 42 31			DEHRADUN	N,E	eP			13:25 22	1450		
05	SHILLONG	Z	IP		03:59 08		Slight, near.						13:27 23			
05	SHILLONG	Z	eP		06:35 31		Slight						13:27 40			
05	SHILLONG	Z	IP		08:42 46		Slight, Compression						13:28 22			
					i 42 49		Other phases not clear						13:30 22			
					i 42 54								13:32 18			
					i 43 17								13:34 15			
	CHATRA	Z	IP		08:43 42	820	Feeble						13:35 18			
					IS 45 07								13:37 33			
05	CHATRA	Z	i		16:52 34		Tremor						13:39 00			
05	SHILLONG	Z	i		21:25 42		Slight, near						13:44 44			
					i 15 45		Phases not clear.						13:45 19			
					i 15 55								13:47 20			
05	CHATRA	Z	IP		03:26 30	140	Feeble						13:47 20			
					IS 26 50								13:47 20			
06	Epc: Tonga Islands. Htz 03h 03m 15s (U.S.C.G.S)								MADRAS	E	e					
	SHILLONG	Z	e		00:21 08		Tremor						14:25 34			
													14:27 15			
06	Epc: 54°S, 134°E. Amari Islands, Benda Sea. Htz 12h 12m 35s (U.S.C.G.S) 54°S, 134°E. Htz 12h 12m 37s (U.S.C.G.S)								COLOMBO	E	e					
	SHILLONG	Z	IP		14:21 41		Slight						14:25 36			
													14:33 53			
06	CHATRA	Z	eP		14:22 14		Feeble						14:41 01			
	MADRAS	E	IP		14:22 20		Slight						14:46 01			
					e 30 13											
	POONA	Z,Z	IP		14:24 14		Slight, phases not clear.	07	SHILLONG	Z	e					Slight
	DEHRADUN	N,E	eP		14:25 17		Tremor	07	POONA	Z	i					Tremor
	BOMBAY	N,E	OP		14:25 21	710	Slight	07	CHATRA	Z	eP		14:39 42	560	Feeble	
					e 26 00								14:40 41			
					N,E 26 38			07	SHILLONG	Z	eP		14:40 16		Slight	
07	SHILLONG	Z	e		11:35 11		Slight	07	SHILLONG	Z	eP		14:56 29		Slight	
					i 30 37			07	SHILLONG	Z	e		14:53 57		Slight	
07	SHILLONG	Z	eP		16:23 02		Slight	07	SHILLONG	Z	eP		14:53 57		Slight	
								07	SHILLONG	Z	e		14:53 57		Slight	

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km						h. m. s.	km	
November 1956							November 1956						
10	SHILLONG	Z	iP Pg eSg	08 33 27 33 39 34 21	360	Slight	12	Epc: 1°N, 120°E. Molucca Passage - H = 08h 33m 20s (U.S.C.G.S.)					
10	SHILLONG	Z	e	10 07 34		Slight		SHILLONG	Z	eP	08 41 08		Slight
10	Epc: 16°N, 121°E. Luzon Island, Philippine Islands. Felt: Manila. - H = 14h 39m 56s (U.S.C.G.S.) 15°N, 120°E. - H = 14h 39m 56s (B.C.I.S.) Magnitude: 6 (Uppsala, Kiruna).						12	SHILLONG	Z	iP	12 04 35		Slight
	SHILLONG	Z	iP eS	14 45 51 50 37	3130		13	Epc: Cap Anjoi Java. - H = 03h 19m (B.C.I.S.)					
	CHATRA	Z	iP i	14 46 32 47 01				SHILLONG	Z	eP	03 26 45		Slight
	DEHRA DUN	N, E	eP iS i	14 47 46 53 55 57 46	4500	Feeble, Phases not clear.		CHATRA	Z	e	03 26 58		Feeble
	COLOMBO	E	P e e	14 47 59 53 51 15 02 59 04 54				BOMBAY	N, E	e e e	03 27 33 33 42 35 27		Slight
	POONA	Z, E	iP eS	14 48 11 54 37	4780			POONA	Z	iP e	03 28 23 34 44		Feeble
	BOMBAY	N, E	eP eS	14 48 18 55 00	5050		13	Epc: 48°S, 124°E. Indian Ocean, about 1000 miles South of Australia. - H = 09h 55m 30s (U.S.C.G.S.)					
10	Epc: 25°N, 94°E. Indo-Burma Frontier. - h = 150 Km Ca. - H = 15h 41m 02s (U.S.C.G.S.) Felt at Lakhimpur.							SHILLONG	Z	eP	10 07 30		Slight, distant.
	SHILLONG	Z	iP Lq iS	15 41 45 42 08 42 18	300			POONA	Z	iP eS	10 07 43 17 52	9000	Slight, distant.
	CHATRA	Z	iP iS	15 42 45 44 06	780	Slight		BOMBAY	N, E	eP e e	10 07 48 20 10 23 33		Slight
	DEHRA DUN	N, E	eP eS	15 44 41 47 26	1720	Feeble, Phases not clear.			N	M	40 42		Per. 17 sec U = 3
	POONA	Z	iP	15 45 31		Feeble, Phases not clear.		DEHRA DUN	N, E	eP iS i	10 08 25 18 52 20 15	9400	Feeble, Phases not clear.
	BOMBAY	E N, E E	e e e	15 45 41 49 31 51 25		Slight		COLOMBO	E	e e e	10 15 22 23 50 27 05		
	POONA	Z	iP	15 49 10		Feeble, Phases not clear.	13	Epc: 15°N, 123°E. Near East Coast of Luzon, Philippines. - H = 14h 38m 05s (U.S.C.G.S.)					
10	DEHRA DUN	N, E	e	18 02 45		Tremor		SHILLONG	Z	iP	14 45 11		Slight Compression
10	DEHRA DUN	N, E	e	18 23 31		Tremor		CHATRA	Z		14 45 49		Feeble, near.
10	SHILLONG	Z	iP	23 40 16		Slight		POONA	Z	iP	14 47 27		Mild, Phases not clear.
11	Epc: 39°N, 71°E. Pamir. - H = 12h 56m 36s. Magnitude: 4 (Moskva)							COLOMBO	E	e e	15 03 55 05 25		
	DEHRA DUN	N, E	eP iS i i	12 59 06 13 00 59 02 00 07 43 08 23	1110	Phases not clear.	14	Epc: 36°N, 71°E. Hindukush. - h = about 200 km. - H = 06h 51m 36s (U.S.C.G.S.) Felt at Sriragar.					
	POONA	Z	eP	13 01 18		Slight		DEHRA DUN	N, E	eP PP PP Lq iS SS Lr SSS Sg/M	00 53 33 53 39 53 46 54 55 55 05 55 19 55 21 55 29 55 59	900	Moderate
	SHILLONG	Z	iP	13 01 25		Slight			N	iP P* iS Sg	00 53 43 54 02 55 27 56 27	1010	Slight, Initial ground movement towards the east
	BOMBAY	E N, E	e e	13 07 41 12 48		Slight		CHATRA	Z	iP iS	00 55 12 58 10	1120	Slight
11	Epc: 44°N, 149°E. Kurile Islands - H = 19h 15m 20s (U.S.C.G.S.) 43.7°N, 148.5°E. - h = 60 Km Ca. - H = 19h 15m 32s J.N. (Japan).							BOMBAY	N, E E N, E E N N, E	eP PP PP eS e SS SSS	00 55 34 55 53 56 02 58 42 58 58 59 14 59 30	1880	Slight
	SHILLONG	Z	iP	19 24 13		Slight		BOKARO	N, E	iP PP PP i i iS SS SS Lr	00 55 35 55 46 55 55 56 05 56 35 58 42 58 58 59 14 59 29	1920	Slight
	DEHRA DUN	N, E	eP	19 25 04		Tremor					01 00 49		Per. 10.8 sec U = 10
	POONA	Z	iP	19 26 15		Feeble, Distant. Phases not clear.							
	BOMBAY	E	e	19 35 05		Slight							
	SHILLONG	Z	eP	19 36 32		Slight							



DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS
				h. m. s. km						h. m. s. km	
November 1956						November 1956					
16	Epc: 14°N, 123°E. Southern Luzon, Felt: Dact.					17	POONA	Z	e	20 45 33	Feeble, distant Phases not clear
	H: 11h 48m 35s (U.S.C.G.S.)						Contd.				
	SHILLONG	Z	eP	11 49 59	Slight Compression	17	SHILLONG	Z	iP	21 17 29	Slight Rarefaction
	BOMBAY	N,E	eP	11 52 22	5400 Slight		HYDERABAD	E	e	21 23 38	
		N,E	eS	59 24			COLOMBO	E	e	21 23 50	
			e	12 00 19					e	30 00	
	POONA	Z	eP	11 52 23	Feeble, distant Phases not clear	17	SHILLONG	Z	iP	23 01 27	Slight Rarefaction
	COLOMBO	E	eP	11 52 35		18	COLOMBO	E	e	04 39 35	
			e	58 30					e	42 35	
			e	12 08 50							
			e	12 00							
	DEHRA DUN	N,E	e	11 58 47	Feeble, Phases not clear	18	Epc: 40°N, 76°E. Western Sinkiang Province, China.				
			i	12 02 36			H: 05h 19m 26s (U.S.C.G.S.)				
16	SHILLONG	Z	e	12 13 24	Tremor		DEHRA DUN	N,E	eP	05 21 49	1850 Slight
16	SHILLONG	Z	e	12 29 58	Tremor			N	iS	23 37	
16	Epc: 27°N, 54°E. Iran.								SS	23 50	
	H: 14h 04m 06s (B.C.I.S.)								Lr	23 56	
	H: 14h 04m 08s (Moskva).								SSS	24 00	
	DEHRA DUN	N,E	e	14 07 58	Feeble, Phases not clear				Sg/M	24 41	
			i	12 43			NEW DELHI	N	eP	05 22 13	1190 Slight
	BOMBAY	N,E	eP	14 08 35	2110 Slight				iS	24 15	
		E	e	09 05					M	25 24	
		N,E	eS	12 04			CHATRA	Z	eP	05 22 58	1860 Slight
	POONA	Z	iP	14 08 44	2280 Slight			E	iS	26 04	
		N	eS	12 28			SHILLONG	Z	eP	05 23 51	2150 Slight
16	SHILLONG	Z	iP	15 55 48	Feeble Compression.			E	PPP	24 16	
16	Epc: 20°S, 170°E. New Hebrides Islands Region.								i	24 25	
	H: 16h 16m 19s (U.S.C.G.S.)								iS	27 24	
	SHILLONG	Z	iP	16 29 20	Slight Compression				Lq	27 30	
16	SHILLONG	Z	eP	20 18 54	Slight Compression				SS	27 48	
16	SHILLONG	Z	e	23 38 18	Near, Feeble				Lr	28 01	
17	SHILLONG	Z	i	00 00 03	Slight, near.				M	28 23	
17	SHILLONG	Z	i	01 45 24	Slight, local				M	30 02	Per: 14, secs P: 17
17	SHILLONG	Z	Pg	04 32 42	80 Slight		POONA	Z	eP	05 24 19	Slight
			iP	32 43				N	e	28 21	
			Sg/S*	32 49			BOMBAY	N,E	eP	05 24 20	2450 Slight
			S	32 52				E	e	28 10	
17	SHILLONG	Z	iP	04 38 06	260 Slight			N,E	eS	28 20	
			Pg	38 14					e	29 00	
			S	38 35				N,E	e	29 15	
			Sg	38 43					e	30 40	
17	SHILLONG	Z	i	05 15 19	Slight				i	30 53	
17	SHILLONG	Z	i	10 31 51	Slight, near. Phases not clear				M	33 37	Per: 7, secs P: 1
17	SHILLONG	Z	iP	16 16 43	Slight Rarefaction			E	M	34 50	Per: 7, secs P: 1
17	Epc: 27°N, 125°E. Ryukyu Islands Region.						HYDERABAD	E	e	05 25 47	
	H: 150 Km. H: 19h 15m 06s (U.S.C.G.S.)								e	28 32	
	SHILLONG	Z	iP	19 21 14	Slight Compression				e	34 35	
17	Epc: 54°E, 134°N. Queen Charlotte Islands Region.					18	CHATRA	Z	iP	05 40 15	430 Feeble
	H: 20h 27m 15s (U.S.C.G.S.). Felt: Ketchikan, Alaska. Magnitudes 5.6-6.4 (Berkeley).								iS	41 02	
	SHILLONG	Z	eP	20 59 59	Slight Rarefaction	18	Epc: Androssov Islands. H: 100 Km. H: 09h 17m 48s				
	DEHRA DUN	N,E	e	20 40 27	Slight, Phases not clear.		SHILLONG	Z	eP	09 30 16	Slight
			e	51 08		18	Epc: 27°S, 176°W. Kermadec Islands Region.				
							H: 18h 16m 25s (U.S.C.G.S.)				
							COLOMBO	E	e	18 30 25	
									e	41 25	
									e	19 12 00	
									e	17 02	
							BOMBAY	N,E	e	18 42 09	Feeble
									e	43 22	
							18	Epc: 28°N, 129°E. Kuriles Islands			
								H: 21h 22m 38s (U.S.C.G.S.)			
	SHILLONG	Z	iP	21 29 25	Slight Rarefaction		SHILLONG	Z	iP	21 29 25	Slight Rarefaction
	POONA	Z	i	21 31 51	Feeble, Phases not clear.		POONA	Z	i	21 31 51	Feeble, Phases not clear.

DATE	STATION	COMP	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMP	PHASE	G. M. T.	Δ	REMARKS	
				h. m. s.	km						h. m. s.	km		
November 1956							November 1956							
19	SHILLONG	Z	iP Pg S Sg	09 08 38 08 41 09 01 09 02	180	Slight Rarefaction	21	DEHRA DUN	N, E	eP IS PPS SS M	07 42 32 50 10 50 28 53 26 08 02 13	6080	Slight	
19	Epic: 3°S, 139¼°E. New Guinea H: 02h 50m 31s (U.S.C.G.S.)							HYDERABAD	E	eP iP Fes IS SeS SS Lr M	07 43 24 45 39 45 27 51 20 53 30 55 24 59 51 08 05 39	6950	Moderate	
	SHILLONG	Z	iP	02 59 57		Slight								
	POONA	Z	e	03 01 32		Tremor								
19	Epic: Dasso California. H: 07h 24m 00s (R.C.I.S.)													
	SHILLONG	Z	iP	07 37 22		Slight								
19	SHILLONG	Z	iP	09 36 21		Slight								
19	Epic: 12°N, 148°E. Marianas Islands. H: 12h 02m 06s (U.S.C.G.S.)							POONA	Z E	eP eS	07 43 47 52 05	6790	Slight distant	
	SHILLONG	Z	iP	12 11 15		Slight		BOMBAY	N, E E	eP eS M	07 43 51 52 16 08 13 13	6920	Slight  Fees 13 sec H: 2	
	CHATRA	Z	iP	12 11 34 12 08		Feeble								
	DEHRA DUN	N, E	e	12 12 30 21 15		Feeble. Phases not clear.		21	Epic: 5°S, 152½°E. Solomon Islands. H: About 100 Km. H: 07h 49m 47s (U.S.C.G.S.)					
	POONA	Z	eP	12 13 10		Feeble. Phases not clear.		SHILLONG	Z	iP	08 00 26		Slight Compression	
	BOMBAY	N, E E N, E E	eP e eS e	12 13 17 16 42 22 21 23 14	2640		21	SHILLONG	Z	iP ISg	10 56 24 58 39	180	Slight	
19	DEHRA DUN	N, E	e	21 08 51		Tremor	21	SHILLONG	Z	Pg	13 42 08		Felt locally (Very slight)	
	CHATRA	Z	iP ISg	21 23 55 24 05	80	Feeble	21	SHILLONG	Z	eP	20 12 34		Slight	
20	Epic: 7°S, 129°E. Banda Sea. H: 11h 03m 30s (U.S.C.G.S.)							21	SHILLONG	Z	eP	21 33 41		Slight
	SHILLONG	Z	iP	11 12 14		Slight	21	SHILLONG	Z	eP ISg	21 41 02 41 36	340	Slight	
20	Epic: 10°, 123¼°E. Near-East Coast of Cuba. H: 11h 58m 37s (U.S.C.G.S.)							22	SHILLONG	Z	iP	21 23 33		Slight
	SHILLONG	Z	iP	12 06 17		Slight	22	Epic: 3°S, 149°E. Banda Sea. H: 23h 07m 07s (U.S.C.G.S.)						
	POONA	Z	e	12 07 54		Very mild Phases not clear		SHILLONG	Z	iP	23 37 53		Slight	
	DEHRA DUN	N, E	e	12 08 03		Tremor		COLOMBO	E	P S L M	23 38 32 46 05 00 02 35 05 30		Ampl. 0.5 sec	
20	SHILLONG	Z	eP Sg	14 39 55 40 33	270	Slight		POONA	Z	e	23 39 24		Tremor	
	CHATRA	Z	eP	14 40 33	230	Slight		BOMBAY	E N, E	eP eS	23 39 31 41 19 48 06	7180	Feeble	
	DEHRA DUN	N, E	e	14 48 55		Tremor	23	SHILLONG	Z	eP	15 49 34		Slight	
20	SHILLONG	Z	eP	15 07 51		Slight	23	SHILLONG	Z	eP ISg	15 56 50 50 50	340	Slight	
20	SHILLONG	Z	iP	22 45 14		Slight	24	SHILLONG	Z	eP	16 29 40		Slight	
	CHATRA	Z	iP	22 45 22		Feeble, near.	24	SHILLONG	Z	iP	05 15 54		Slight	
	COLOMBO	E	e	23 53 50 56 35			24	SHILLONG	Z	iP ISg	09 40 02 40 06	30	Slight	
21	SHILLONG	Z	eP ISg	02 49 21 49 55	240	Slight	24	SHILLONG	Z	eP eS	14 28 21 28 35	120	Slight	
21	Epic: 49°N, 14¼°E. Off West Coast of Sakhalin. H: 05h 22m 10s (U.S.C.G.S.)							24	SHILLONG	Z	eP	15 02 27		Slight
	SHILLONG	Z	iP	06 30 23		Slight Rarefaction		MADRAS	E	e	16 02 51 08 00		Slight	
21	Epic: 38°N, 142°E. Near Coast of Northern Honshu (Japan). H: About 60 Km. H: 07h 33m 28s (U.S.C.G.S.). Magitude: 6 (Nakaya).							POONA	Z N	eP eS	16 04 13 08 13	2450	Slight	
	SHILLONG	Z	iP	07 41 34	5800	Slight		BOMBAY	N, E E	e	16 04 30 08 35		Slight	
	CHATRA	Z	e	07 41 47		Slight, distant.		DEHRA DUN	N, E	e	15 04 38		Tremor	
							24	SHILLONG	Z	iP	20 39 42		Slight	

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	
				h m. s.	km						h m. s.	km		
November 1956							November 1956							
24	COLOMBO	E	e	21 06 58			26	CHATRA	Z	eP	07 28 55	180	Feeble	
			e	16 05						iS	29 17			
			e	35 50			26	MADRAS	E	e	08 49 55		Feeble	
			e	38 25										
25	COLOMBO	E	P	01 51 31			26	CHATRA	Z	iP	15 33 09	630	Feeble	
			S	02 01 53						iS	34 16			
			L	16 26										
			M	18 56		Amplitude 0.4 mm		DEHRA DUN	N,E	e	15 33 20		Tremor	
25	Epc: 34°S, 70°E, Indian Ocean. H=01h 50m 00s (B.C.I.S)							26	Epc: 26°S, 70°W, Northern Chile. H=about 100 Km					
	POONA	Z	e	02 07 39		Feeble, Phases not clear								
	BOMBAY	N,E	e	02 15 36		Slight		BOMBAY	N,E	e	19 09 24		Slight	
	KODAIKANAL	E	e	02 18 27					E	e	09 42			
										e	12 41			
25	CHATRA	Z	eP	03 30 58	150	Feeble		POONA	Z	i	19 09 29		Slight, Phases not clear	
			iS	31 17										
25	SHILLONG	Z	eP	09 41 51	180	Slight		DEHRA DUN	N,E	e	19 09 43		Tremor	
			g	41 55										
			eSg	42 16			26	Epc: 22°S, 169°E, Loyalty Islands. H=23h 29m 41s (U.S.C.G.S) Magnitudes: 6½ (Pasadena), 6½ (Berkeley).						
25	SHILLONG	Z	eP	12 14 02		Slight		COLOMBO	E	P	23 41 00			
										e	53 27			
25	Epc: 17°S, 72°W, Near Coast of Southern Peru. H=100 Km Ca. H=14h 15m 05s (USCGS).										e	00 12 57		
	POONA	Z	i	14 34 46		Tremor				e	18 37			
	SHILLONG	Z	eP	14 35 03		Slight		POONA	Z	e	23 43 37		Slight, distant Phases not clear	
25	CHATRA	Z	iP	15 15 07	180	Feeble								
			iS	15 28				BOMBAY	N,E	e	23 48 00		Slight	
									E	e	50 00			
										e	54 31			
25	Epc: 15°S, 168°E, New Hebrides Islands. H=18h 07m 34s (U.S.C.G.S).										e	57 12		
	SHILLONG	Z	iP	18 20 07	9270	Slight, distant				M	00 40 42		Per: 13 secs	
		E	eS	30 29		Compression							Per: 17 secs	
	POONA	Z	e	18 21 16		Feeble, distant Phases not clear							Per: 2	
25	COLOMBO	E	P	18 21 26				KODAIKANAL	E	e	23 53 46		Tremor	
			e	31 06										
			e	57 31				MADRAS	E	e	23 53 55		Slight	
			e	19 01 06						e	00 30 35			
	BOMBAY	E	e	18 24 49		Slight		27	Epc: 5°S, 154°E, Solomon Islands. H=06h 59m 34s (U.S.C.G.S)					
			e	32 00				SHILLONG	Z	iP	07 10 31		Slight	
			e	32 11									Compression	
			e	33 05				POONA	Z	eP	07 11 58		Tremor	
25	SHILLONG	Z	eP	20 09 23		Slight		27	SHILLONG	Z	e	07 19 08		Feeble
25	SHILLONG	Z	eP	23 35 14	160	Slight		27	Epc: Off North Coast of Hokkaido, Japan. H=08h 00m 00s (U.S.C.G.S).					
			eSg	35 36				SHILLONG	Z	iP	08 08 32		Slight	
25	SHILLONG	Z	ePg	23 02 39	90	Slight							Waveform	
			iSg	44 30				27	CHATRA	Z	iP	11 58 57	70	Feeble
26	SHILLONG	Z	eP	00 39 01	200	Slight				iS	56 07			
			Pg	39 06				27	Epc: 21°S, 169°E, Loyalty Islands. Afternoon. H=13h 19m 00s (U.S.C.G.S)					
			iSg	39 32				SHILLONG	Z	iP	13 37 01		Slight	
	CHATRA	Z	iP	00 39 29	700	Slight							Comp. trace	
			iS	40 49				27	DEHRA DUN	N,E	e	13 58 10		Tremor
26	POONA	Z	i	03 18 03		Tremor		27	SHILLONG	Z	iP	15 31 21		Slight
26	Epc: 8½°N, 122½°E, Celebes. H=05h 07m 55s (USCGS).												Compression	
	CHANGA	Z	i	03 17 54		Slight, distant		27	SHILLONG	Z	e	21 38 28		Slight, comp.
	MADRAS	E	e	03 18 03		Feeble		28	SHILLONG	Z	iP	17 35 47	260	Slight, Phases not clear
	POONA	Z	i	03 18 59		Probably two slight shocks Phases not clear				iP	35 59			
		Z,E	i	23 05						g	35 55			
	BOMBAY	E	e	03 17 06		Slight				S	36 17			
		N,E	e	24 10						Sg	36 22			
		N	e	25 00										
	MADRAS	E	e	03 17 53		Feeble								

DATE STATION COMPT PHASE G.M.T. REMARKS

November 1956

28 Epc: 49°N, 155°E. Northern Kurile Islands  
 H<sub>0</sub> 19h 27m 15s (V.S.C.C.S.)  
 49°N, 155°E. H<sub>0</sub> 60 Km  
 49°N, 157°E. H<sub>0</sub> 60 Km  
 49°N, 155°E. H<sub>0</sub> 19h 27m 01s (J.M.A. Japan)  
 H<sub>0</sub> 60 Km C<sub>0</sub>  
 H<sub>0</sub> 19h 27m 15s (B.C.I.S.)  
 Magnitudes 6½-7 (Pasadena, Kiruna).

SHILLONG Z E IP 19:36:38 5890 Initial ground  
 i 37 05 movement  
 PeP 37 39 towards 'South  
 PP 38 38 and West'  
 IS 44 07 Compression.  
 PS 44 14  
 PPS 44 28  
 SS 47 41  
 SSS 49 41  
 M 56 50 (Perd 15 secs  
 @ 125)

28 DEHRA-DUN N E IP 19:37:15 6540  
 PP 39 12  
 PS 45 34  
 SS 48 52  
 Lr 54 34  
 M 59 27

BOKARO N E IP 19:37:18 6470 Other phases  
 eS 45 19 not clear

NEW-DELHI N IP 19:37:28 6630  
 PeP 38 14  
 eS 45 39  
 PS 45 55  
 ScS 47 14  
 Si 47 37  
 SSS 52 11  
 M 20 00 53

HYDERABAD E IP 19:38:17 7530 Initial ground  
 PeP 38 42 movement  
 PP 41 00 towards 'West'  
 PeS 42 47  
 IS 47 15  
 PS 47 32  
 SSSI 48 32  
 SSS 51 27  
 Lr 58 57  
 M 20 04 54 (Perd 19 secs  
 @ 125)

MADRAS E IP 19:38:29 7860 Initial ground  
 PeP 38 54 movement  
 e 39 54 towards 'West'  
 PP 41 11  
 PPP 42 54  
 IS 47 40  
 SS 51 47  
 e 55 00  
 M 20 11 00

POONA Z N E IP 19:38:31 7810 Initial ground  
 PeP 38 44 movement  
 PP 41 15 towards 'South  
 eS 47 42 and West'  
 PS 48 10 Compression.  
 PPS 48 29  
 SS 52 18  
 SSS 55 30  
 Lq 58 12  
 M 20 09 00  
 M 15 00 (Perd 10.5 secs  
 @ 125)

BOMBAY N E IP 19:38:33 7800 Madrasite  
 PeS 39 09  
 eS 47 44  
 PS 48 08  
 PPS 48 35  
 ScS 48 51  
 M 20 07 35 (Perd 10 secs  
 @ 125)  
 M 15 00 (Perd 21 secs  
 @ 125)

COLOMBO E IP 19:38:41  
 S 48 31  
 L 20 09 21  
 M 16 26 (Perd 10.5 secs  
 @ 125)

DATE STATION COMPT PHASE G.M.T. REMARKS

November 1956

28 KODAIKANAL E IP 19:38:36 4890  
 Contd. (S<sub>0</sub>) 27 50  
 (S<sub>1</sub>) 28 01

28 SHILLONG Z IP 19:38:25 4890  
 (S<sub>0</sub>) 27 50  
 (S<sub>1</sub>) 28 01

29 SHILLONG Z IP 19:38:25 4890  
 (S<sub>0</sub>) 27 50  
 (S<sub>1</sub>) 28 01

29 Epc: 27°N, 141°E. Bonin Islands Jerniseck  
 H<sub>0</sub> 07h 16m 07s (V.S.C.C.S.)  
 SHILLONG Z IP 19:38:25 4890  
 (S<sub>0</sub>) 27 50  
 (S<sub>1</sub>) 28 01  
 27°N, 142°E. H<sub>0</sub> 60-80 Km  
 H<sub>0</sub> 09h 15m 22s (J.M.A. Japan)  
 27°N, 141°E. H<sub>0</sub> 09h 15m 20s (B.C.I.S.)  
 Magnitudes 7 (Pasadena)

SHILLONG Z IP 19:38:25 4890  
 (S<sub>0</sub>) 27 50  
 (S<sub>1</sub>) 28 01  
 (S<sub>2</sub>) 28 12  
 (S<sub>3</sub>) 28 23  
 (S<sub>4</sub>) 28 34  
 (S<sub>5</sub>) 28 45  
 (S<sub>6</sub>) 28 56  
 (S<sub>7</sub>) 29 07  
 (S<sub>8</sub>) 29 18  
 (S<sub>9</sub>) 29 29  
 (S<sub>10</sub>) 29 40  
 (S<sub>11</sub>) 29 51  
 (S<sub>12</sub>) 30 02  
 (S<sub>13</sub>) 30 13  
 (S<sub>14</sub>) 30 24  
 (S<sub>15</sub>) 30 35  
 (S<sub>16</sub>) 30 46  
 (S<sub>17</sub>) 30 57  
 (S<sub>18</sub>) 31 08  
 (S<sub>19</sub>) 31 19  
 (S<sub>20</sub>) 31 30  
 (S<sub>21</sub>) 31 41  
 (S<sub>22</sub>) 31 52  
 (S<sub>23</sub>) 32 03  
 (S<sub>24</sub>) 32 14  
 (S<sub>25</sub>) 32 25  
 (S<sub>26</sub>) 32 36  
 (S<sub>27</sub>) 32 47  
 (S<sub>28</sub>) 32 58  
 (S<sub>29</sub>) 33 09  
 (S<sub>30</sub>) 33 20  
 (S<sub>31</sub>) 33 31  
 (S<sub>32</sub>) 33 42  
 (S<sub>33</sub>) 33 53  
 (S<sub>34</sub>) 34 04  
 (S<sub>35</sub>) 34 15  
 (S<sub>36</sub>) 34 26  
 (S<sub>37</sub>) 34 37  
 (S<sub>38</sub>) 34 48  
 (S<sub>39</sub>) 34 59  
 (S<sub>40</sub>) 35 10  
 (S<sub>41</sub>) 35 21  
 (S<sub>42</sub>) 35 32  
 (S<sub>43</sub>) 35 43  
 (S<sub>44</sub>) 35 54  
 (S<sub>45</sub>) 36 05  
 (S<sub>46</sub>) 36 16  
 (S<sub>47</sub>) 36 27  
 (S<sub>48</sub>) 36 38  
 (S<sub>49</sub>) 36 49  
 (S<sub>50</sub>) 37 00  
 (S<sub>51</sub>) 37 11  
 (S<sub>52</sub>) 37 22  
 (S<sub>53</sub>) 37 33  
 (S<sub>54</sub>) 37 44  
 (S<sub>55</sub>) 37 55  
 (S<sub>56</sub>) 38 06  
 (S<sub>57</sub>) 38 17  
 (S<sub>58</sub>) 38 28  
 (S<sub>59</sub>) 38 39  
 (S<sub>60</sub>) 38 50  
 (S<sub>61</sub>) 39 01  
 (S<sub>62</sub>) 39 12  
 (S<sub>63</sub>) 39 23  
 (S<sub>64</sub>) 39 34  
 (S<sub>65</sub>) 39 45  
 (S<sub>66</sub>) 39 56  
 (S<sub>67</sub>) 40 07  
 (S<sub>68</sub>) 40 18  
 (S<sub>69</sub>) 40 29  
 (S<sub>70</sub>) 40 40  
 (S<sub>71</sub>) 40 51  
 (S<sub>72</sub>) 41 02  
 (S<sub>73</sub>) 41 13  
 (S<sub>74</sub>) 41 24  
 (S<sub>75</sub>) 41 35  
 (S<sub>76</sub>) 41 46  
 (S<sub>77</sub>) 41 57  
 (S<sub>78</sub>) 42 08  
 (S<sub>79</sub>) 42 19  
 (S<sub>80</sub>) 42 30  
 (S<sub>81</sub>) 42 41  
 (S<sub>82</sub>) 42 52  
 (S<sub>83</sub>) 43 03  
 (S<sub>84</sub>) 43 14  
 (S<sub>85</sub>) 43 25  
 (S<sub>86</sub>) 43 36  
 (S<sub>87</sub>) 43 47  
 (S<sub>88</sub>) 43 58  
 (S<sub>89</sub>) 44 09  
 (S<sub>90</sub>) 44 20  
 (S<sub>91</sub>) 44 31  
 (S<sub>92</sub>) 44 42  
 (S<sub>93</sub>) 44 53  
 (S<sub>94</sub>) 45 04  
 (S<sub>95</sub>) 45 15  
 (S<sub>96</sub>) 45 26  
 (S<sub>97</sub>) 45 37  
 (S<sub>98</sub>) 45 48  
 (S<sub>99</sub>) 45 59  
 (S<sub>100</sub>) 46 10

CHATRA Z IP 19:38:25 4890  
 (S<sub>0</sub>) 27 50  
 (S<sub>1</sub>) 28 01

BOKARO N E IP 19:38:25 4890  
 IS 31 31  
 SS 35 02  
 Lq 36 34  
 M 43 31

DEHRA-DUN N E IP 19:38:25 4890  
 PP 24 32  
 e 17 29  
 IS 32 26  
 PS 32 39  
 PPS 32 55  
 SS 34 06  
 SSS 35 18  
 Lr 41 20  
 M 45 05

NEW-DELHI N IP 19:38:25 4890  
 PPP 28 24 ground  
 PPS 28 33 movement  
 eS 32 49 towards 'West'  
 SS 35 18  
 Lr 38 30  
 M 46 05

HYDERABAD E IP 19:38:25 4890  
 PP 27 38 ground  
 PPP 27 45 movement  
 PeS 30 18 towards  
 IS 33 22 'West'  
 PS 33 52  
 PPS 34 02  
 SS 35 15  
 Lr 38 30  
 M 47 05

MADRAS E IP 19:38:25 4890  
 PeP 27 56 ground  
 PP 28 07 movement  
 e 27 13 towards  
 PeP 29 04 'West'  
 IS 30 40  
 PS 31 11  
 PPS 31 22  
 SS 32 36  
 Lr 34 20  
 M 45 05

COLOMBO Z IP 19:38:25 4890  
 S 33 56  
 L 45 23  
 M 50 30  
 M 55 30 (Perd 10.5 secs  
 @ 125)



DATE	STATION	COMP	PHASE	G.M.T. h. m. s.	Δ km	REMARKS	DATE	STATION	COMP	PHASE	G.M.T. h. m. s.	Δ km	REMARKS		
November 1956							November 1956								
29 POONA Contd.	Z	iP		09 25 44	6890	Initial ground movement towards 'North-East' Rarefaction	29 SHILLONG	Z	iP	09 51 01			Slight Rarefaction		
	E	PeP		26 10			29 SHILLONG	Z	e	12 31 25				Slight Rarefaction	
		PP		28 03											
		PPP		29 33											
	N, E	eS		34 08											
	N, E	PS		34 26											
	N, E	PPS		34 47											
	E	ScS		35 04											
		SS		38 17											
	N	SSS		41 07											
E	Lq		42 04												
N	Lr		44 58												
N, E	M		50 27												
KODAIKANAL	E	iP		09 25 48	7000	Initial ground movement towards 'East' Perv: 15 sec Δ = 9.6	29 SHILLONG	Z	iP	14 48 29				Slight Compression	
		PeP		26 18			29 SHILLONG	Z	e	17 27 20				Slight Rarefaction	
		e		26 42											
		PP		28 39											
		PeS		30 18											
		S		34 18											
		PPS		34 51											
		SS		38 42											
		SSS		41 30											
		Lq		42 21											
	Lr		45 21												
	M		50 51												
BOMEAY	E	iP		09 25 49	7035	Perv: 11 sec Δ = 3	30 SHILLONG	Z	iP	15 54 28				Slight Rarefaction	
	N, E	eP					30 SHILLONG	Z	e	17 55 50				Tremor	
	N, E	PeP		26 15			30 SHILLONG	Z	e	18 10 30				Tremor	
	N, E	PP		28 15			30 SHILLONG	Z	e	21 11 30				Slight Compression	
	N	eS		34 21			30 SHILLONG	Z	e	21 59 08				Slight Rarefaction	
	E	iS													
	N	PS		34 34											
		e		35 03											
		M		57 08											

*Earthquake Reports  
(Non-Instrumental Reports)*

Following is the list of earthquakes that were reported by Voluntary Observers from different stations during the month of November 1956

PLACE AT WHICH FELT	DATE IN G.M.T.	TIME IN G.M.T. when	NO. OF SHOCKS	DURATION OF SHOCKS IN SECS.	INTENSITY IN R.F. SCALE	REMARKS
MOHNBARI	10	00 40	1	few secs	III	
LAKRIMPUR	10	15 40	1	3	IV	
SRINAGAR	14	00 55	3	30	II	



Dups

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

Dec. 1956



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Shri S. Basu, M.Sc., F.N.I.,  
Director General of Observatories

Instruments and their constants

STATION	INSTRUMENTS	COMPONENT	PERIOD IN SECOND	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED IN mm/min
BOKARO	Wood-Anderson	E	0.8	960	0.8	60.0
	Wood-Anderson	N	0.8	1000	0.8	60.0
	Milne-Shaw	N	12.0	250	20:1	16.0
	Milne-Shaw	E	12.0	250	20:1	16.0
BOMBAY	Sprengnether	E	$T_0=T_g=7$ secs	-	-	30
	Milne-Shaw	N	12	350	20:1	16
	Milne-Shaw	E	12	350	15:1	8
CHATRA	Benioff	Z	$T_0=0.75$ $T_g=0.45$	Critical	-	60
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	E	1.0	1000	30:1	60
COLOMBO	Milne-Shaw	E	12.1	250	19:1	8
DEHRA DUN	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	0.8	800	60:1	60
	Wood-Anderson	E	0.8	950	60:1	60
HYDERABAD	Milne-Shaw	N	12	254	20:1	8
	Milne-Shaw	E	12	254	20:1	8
KODAIKANAL	Milne-Shaw	E	10.0	250	20:1	8
MADRAS	Sprengnether	E	$T_0-T_g=7.2$	-	-	30
NEW DELHI	Milne-Shaw	N	12	320	20:1	8
	Omori-Ewing	E	30	30	1	12
POONA	Sprengnether	Z	$T_0=T_g=1.6$	-	2.1:1	30
	Milne-Shaw	N	12	300	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
SHILLONG	Benioff	Z	$T_g=0.16$ $T_0=1.0$	-	-	60
	Sprengnether	E	$T_0=T_g=7.8$	Critical	-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	N	4	1000	Critical	30
	Wood-Anderson	E	0.8	1000	Critical	30
	Wood-Anderson	N	0.8	1000	Critical	30

DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	$\Delta$	REMARKS	
				(h. m. s.)	km						(h. m. s.)	km		
December 1955							December 1955							
01	SHILLONG	Z	iP	18 31 01		Slight Compression	03	SHILLONG	Z	iP	17 06 42		Slight Compression	
01	Epc: 17°S, 72°W. Off Coast of Southern Peru. - H <sub>0</sub> 21h 24m 54s (U.S.C.G.S).							03	SHILLONG	Z	iP	17 54 09		Slight Compression
	SHILLONG	Z	e	21 44 17		Slight	03	MADRAS	E	e	19 21 13		feeble	
	POONA	Z	i	21 44 57		Tremor	02	Epc: Fox Islands aftershock. - H <sub>0</sub> 20h 56m 40s (U.S.C.G.S).						
01	SHILLONG	Z	eP	22 50 04		Probably near	SHILLONG	Z	iP	21 05 25			Slight Rarefaction	
02	Epc: 52°N, 169°W. Fox Islands foreshock. - H <sub>0</sub> 02h 59m 56s (U.S.C.G.S).							03	SHILLONG	Z	iP	22 18 52		Slight Compression
	SHILLONG	Z	eP	03 11 41		Slight	04	SHILLONG	Z	eP	03 21 23		Slight	
	POONA	Z	i	03 13 03		Tremor	04	Epc: 50°N, 155°E. Kurile Islands. - H <sub>0</sub> 08h 44m 28s						
02	Epc: 27°N, 137°E. Bonin Islands Region. - H <sub>0</sub> about 300 Km. - H <sub>0</sub> 05h 53m 45s (U.S.C.G.S)							SHILLONG	Z	iP	08 53 59		Slight	
	SHILLONG	Z	eP	06 01 32		Slight	04	Epc: Kurile Islands aftershock. - H <sub>0</sub> 08h 50m 25s (U.S.C.G.S)						
02	SHILLONG	Z	iP	07 42 20		Slight, local.	SHILLONG	Z	eP	08 59 57		Slight		
02	SHILLONG	Z	iP	21 25 52		Slight Compression	04	Epc: 45°S, 100°W. South Pacific Ocean. - H <sub>0</sub> 10h 07m 54s (U.S.C.G.S)						
	CHATRA	Z	iP	21 26 08	390	Feeble	POONA	Z	i	10 27 47			Feeble shock Phases not clear	
			iS	26 51						i	27 53			
										i	28 17			
03	SHILLONG	Z	iP	03 01 08		Slight	SHILLONG	Z	e	10 27 49		Slight		
03	SHILLONG	Z	(eP)	03 11 39		Slight	BOMBAY	E	e	10 28 00		Feeble		
03	SHILLONG	Z	(eP)	05 01 32		Slight		N	e	28 06				
03	SHILLONG	Z	iP <sub>2</sub>	04 01 10	80	Slight, local	DEHRA DUN	N, E	e	10 28 13			Feeble. Phases not clear.	
			iS <sub>g</sub>	01 19					e	32 39				
03	DEHRA DUN	N, E	e	07 12 03		Tremor	04	Epc: 53°N, 169°W. Fox Islands aftershock. - H <sub>0</sub> 10h 52m 10s (U.S.C.G.S)						
03	Epc: 53°N, 169°W. Fox Islands foreshock. - H <sub>0</sub> 07h 12m 44s (U.S.C.G.S).							SHILLONG	Z	iP	10 53 55		Slight	
	SHILLONG	Z	eP	07 24 28		Slight	04	POONA	Z	iP	10 55 13		Tremor	
03	Epc: 53°N, 169°W. Fox Islands. Aleutian Islands. - H <sub>0</sub> 07h 20m 08s (U.S.C.G.S) Magnitudes 5.4-5.3 (Pasadena).							04	Epc: 26°N, 127°E. Ryukyu Islands. - H <sub>0</sub> 100 Km - H <sub>0</sub> 20h 59m 52s (U.S.C.G.S).					
	SHILLONG	Z	iP	07 31 52		Compression	SHILLONG	Z	eP	21 06 09		Slight		
	DEHRA DUN	N, E	e	07 32 16		Tremor	04	POONA	Z	iP	21 08 39		Tremor	
	POONA	Z	iP	07 33 14		Tremor				i	08 47			
							04	SHILLONG	Z	eP	22 19 25		Slight	
03	POONA	E	i	07 44 24		Feeble shock Phases not clear.	04	Epc: 15°N, 92°W. Guatemala. Felt: Western San Salvador. - H <sub>0</sub> 150 Km - H <sub>0</sub> 23h 01m 35s (U.S.C.G.S) 15°N, 92°W. - H <sub>0</sub> 100 Km Ca. - H <sub>0</sub> 23h 01m 32s (B.C.I.S.) Magnitudes 6 (Pasadena).						
03	Epc: 52°N, 169°W. Fox Islands aftershock. - H <sub>0</sub> 07h 44m 55s (U.S.C.G.S).							SHILLONG	Z	eP	23 20 41		Slight	
	SHILLONG	Z	iP	07 56 41		Slight Compression	POONA	Z	iP	23 20 57			A very feeble shock. Phases not clear.	
	CHATRA	Z	iP	07 56 53						i	21 38			
										e	24 31			
	POONA	Z	iP	07 58 03		Tremor	05	Shock felt at Lahore.						
							DEHRA DUN	N, E	e	04 25 09			Feeble. Phases not clear.	
										i	25 33			
03	SHILLONG	Z	iP	07 58 56		Slight Compression	05	Epc: 25°N, 90°E. South of Garo Hills. - H <sub>0</sub> 15h 05m 08s (Shillong). Felt at Dhubri, Goalpara.						
03	Epc: Aux Renards Islands aftershock. - H <sub>0</sub> 07h 52m 44s (B.C.I.S).							SHILLONG	Z	iP	15 05 32	140	Slight	
	SHILLONG	Z	i	08 01 28		Slight Compression			iS <sub>g</sub>	05 49				
	HYDERABAD	E	M	08 14 10		Per 14 secs H <sub>0</sub> 3	CHATRA	Z	iP	15 05 03	420	Slight		
								E	iS	06 48				
03	SHILLONG	Z	e	17 02 41		Tremor, near.								



DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km						h. m. s.	km	
December 1955							December 1956						
10	Epc: Argentina-Chile Border. 23°S, 67°W.			H <sub>2</sub> : 23h 15m 00s (USCGS). H <sub>1</sub> : 23h 15m 05s (BCIS).			11	SHILLONG	Z	iP/P* PL PP eSg	17 01 23 01 24 01 28 01 43	150	Slight Compression
	SHILLONG	Z	i	23 35 11		Slight		BOKARO	N, E	e e	17 03 56 12 00		
11	Epc: 50°N, 156°E. North Kurile Islands H <sub>2</sub> : 06h 30m 58s (U.S.C.G.S).						11	SHILLONG	Z	eP	17 12 25		Slight
	SHILLONG	Z	eP	06 40 27 42 02		Slight	11	POONA	Z	e	18 01 29		Tremor
	POONA	Z	iP	06 42 20 42 35		Tremor	11	SHILLONG	Z	iP	22 06 18		Slight Compression
11	SHILLONG	Z	eP	08 47 13		Slight Compression	11	Epc: 45°N, 7°E. H <sub>2</sub> : 22h 25m 06s (B.C.I.S).					
	POONA	Z	iP	08 49 26 49 37		Tremor		CHATRA	Z E	iP i	22 35 09 35 27		
11	SHILLONG	Z	iP	10 13 03		Slight Compression		SHILLONG	Z	eP	22 35 46		Slight
11	Epc: 54°N, 61°E. H <sub>2</sub> : 16h 53m 01s (B.C.I.S). 54°N, 61°E. H <sub>1</sub> : 16h 52m 59s (Shillong).						12	CHATRA	Z	iP iS	06 01 53 02 29	320	Feeble
	BOMBAY	N, E E	iP PPP eS Lr M	16 57 01 57 20 17 00 21 01 02 02 18	2010	Moderate Per=15 secs P=4 Per=15 secs P=2		SHILLONG	Z	eP	06 02 52		Slight
	POONA	Z, N, E E N E	iP PPP eS SS SSP PcP M	16 57 02 57 23 17 00 10 00 24 00 40 01 46 02 12	1880	Moderate Initial ground movement towards North and East. Compression	12	Epc: 14°N, 142°E. Marianas Islands H <sub>2</sub> : 10h 20m 00s (U.S.C.G.S).					
	COLOMBO	E	P S L M	16 57 11 59 41 17 01 56 03 21		Ampl=1.0 mm		SHILLONG	Z	iP	10 29 11		Slight Compression
	KODAIKANAL	E	iP e eS Lq SS M	16 57 24 57 48 17 01 17 01 39 02 00 04 42	2350	Moderate Initial ground movement towards West		CHATRA	Z	i	10 29 42		Feeble
	MADRAS	E	iP PP PPP iS SS Lr M	16 57 31 57 54 58 14 17 01 31 02 28 03 04 05 00	2360	Slight. Initial ground movement towards East Per=14 secs P=7	12	SHILLONG	Z	eP	10 32 17		Slight
	NEW DELHI	N	eP e e	16 58 45 17 03 44 06 49		Slight	12	CHATRA	Z	eP iS eSg	11 05 09 05 29	160	Feeble
	DEHRA DUN	N	eP PP PPP PcP eS Lq SS SSS	16 59 05 59 57 17 00 13 02 09 03 53 05 12 05 27 05 53	3160	Slight	12	SHILLONG	Z	iP	12 34 08		Slight Compression
	CHATRA	Z	i	16 59 29		Slight, distant	12	SHILLONG	Z	eP	16 36 00		Slight Compression
	SHILLONG	Z, N E N, E N N, E	eP iP PP iS eSg SS Lr M	16 59 53 17 01 13 05 31 07 50 09 57 11 51	3990		12	SHILLONG	Z, E	iP* eP* i iSg eSg e	20 37 29 37 36 37 46 37 59	140	Slight. Feil. Compression
								CHATRA	Z	iP i	20 38 30 40 22		Slight
								BOMBAY	E	e e	20 46 24 48 02		Slight
							12	Epc: Formosa. H <sub>2</sub> : 150 Km Ca. H <sub>1</sub> : 20h 53m 15s (U.S.C.G.S)					
								SHILLONG	Z, E	eP	20 58 49		Slight Compression
							12	SHILLONG	Z	eP P* Pg eS Sg	23 53 37 53 38 53 41 54 01 54 03	200	Slight
							13	SHILLONG	Z	eP	05 02 45		Slight
							13	SHILLONG	Z	iP	07 24 01		Slight, near Refraction
								CHATRA	Z	eP iS	07 25 01 26 21	750	Feeble
							13	SHILLONG	Z	iP	09 08 05		Slight Compression.

DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km						h. m. s.	km	
December 1956													
13	Epc: 2°N, 125°E. Molucca Passage - H: 14h 52m 02s (U.S.C.G.S).						15	SHILLONG	E	iPg iSg	10 11 59 12 13	120	Slight
	SHILLONG	Z, E E	eP eS	14 59 50 15 05 59	4500	Slight Rarefaction		CHATRA	Z E	iP iS	10 12 56 14 30	910	Slight
13	DEHRA DUN	N, E	e	15 01 45		Tremor	15	Epc: 25°N, 128°E. Helmhra. - h: about 150 Km - H: 13h 30m 56s (U.S.C.G.S).					
13	SHILLONG	Z	iP* eSg	19 42 01 42 19	140	Slight Rarefaction		CHATRA	Z	i	13 59 13		Feeble
13	Epc: 12°N, 143°E. Marianas-Islands - H: 19h 34m 24s (U.S.C.G.S).							DEHRA DUN	N, E	e	14 00 18		Tremor
	SHILLONG	Z	iP	19 43 27		Slight Rarefaction		POONA	Z	iP i	14 00 23 01 11		Feeble shock. Phases not clear
13	CHATRA	Z	iPg iSg	19 43 59 44 15	130	Feeble	15	Epc: 13°S, 167°E. New Hebrides-Islands. - h: about 150 Km. - H: 17h 24m 24s. - Magnitude: 6-5M (Pasadena).					
13	CHATRA	Z	iPg iSg	20 15 27 15 43	130	Feeble		POONA	Z	i	17 37 43 38 24		Tremor
13	SHILLONG	Z	e	23 57 51		Slight, near		COLOMBO	E	e	17 47 25		
14	DEHRA DUN	N, E	e	06 56 09		Tremor		BOMBAY	E	e	17 48 11		Feeble and distant. Surface waves.
	SHILLONG	Z	eP i	06 58 17 58 22		Slight	16	Epc: 6°N, 78°W. Near West Coast of Colombia. Felt: Balboa Heights. - H: 01h 41m 57s (USCGS) Magnitudes: 5M (Pasadena), 6M (Berkeley).					
14	POONA	Z	e i	07 02 56 03 45		Tremor		BOMBAY	E	e	02 04 55		Surface waves of a distant shock.
14	CHATRA	Z	iP iS	11 50 08 50 28	160	Feeble		COLOMBO	E	L M	02 16 54 20 49		Amp: 0.5 mm
14	SHILLONG	Z	eP	11 50 57		Slight, near	16	SHILLONG	Z	eP	03 01 35		Slight
14	CHATRA	Z	iP iS	11 58 01 58 35	310	Feeble	16	CHATRA	Z	iP iS	04 10 25 12 08	990	Slight
	SHILLONG	Z	e	11 58 12		Slight, near	16	SHILLONG	Z	iP	05 29 37 29 37		Slight
14	SHILLONG	Z	eP	13 46 25		Slight Rarefaction	16	SHILLONG	Z	eP	06 30 28		Slight
14	Epc: 900 Km off South Coast of Madagascar (B.C.I.S)						17	DEHRA DUN	N, E	e i i i	02 50 57 52 00 55 02 56 00		Feeble. Phases not clear.
	SHILLONG	Z	eP	15 16 24		Slight Compression	17	SHILLONG	Z	iP	03 41 29		Slight
14	SHILLONG	Z E	eP e	16 34 35 35 47		Slight Compression		CHATRA	Z	iP iS	03 48 36 49 08	200	Slight
14	SHILLONG	Z	eP	17 34 58		Slight Rarefaction.	16	CHATRA	Z	iPg iSg	01 23 54 24 05	80	Feeble
14	SHILLONG	Z	eP	18 17 48		Slight Rarefaction	18	Epc: 25°S, 68°W. Chile-Argentina border. Felt: Antofagasta and Copiapo. - H: 02h 31m 00s (U.S.C.G.S) - Magnitudes: 7-7M (Pasadena), 6M-7 (Berkeley).					
14	SHILLONG	Z	eP* ePg e eSg	18 40 48 40 49 40 55 41 05	140	Slight		BOMBAY	N, E E N, E E E	ePKP1 e e e e	02 50 44 51 19 51 48 57 39 03 01 12 07 11 51 46	15890	Per: 22 secs 11 cc 7 Per: 10 secs 11 cc 6
14	SHILLONG	Z	e	18 54 48		Feeble			N	M	54 38		
14	Epc: Solomon Islands Region. - h: 100 Km. Ca. - H: 19h 47m 42s (B.C.I.S).							COLOMBO	E	ePKP PS M	02 50 45 03 04 20 48 55	15940	Amp: 1.0 mm
	SHILLONG	Z	eP	19 58 54		Slight Compression		POONA	Z, E N, E E	PKP1 PKP1 PKS1	02 50 45 50 51 54 08	15890	
15	Felt at Shillong.									e e	54 25 57 42		
	SHILLONG	Z, E N N, E	ePg ePg iSg	05 40 13 40 17	40	Slight, Felt.							
15	SHILLONG	Z	eP	07 47 39		Slight, near							
15	CHATRA	Z E	eP iS	08 35 11 36 40	850	Slight							
15	CHATRA	Z	iP iS	09 46 12 46 35	200	Feeble							



DATE	STATION	COMPT PHASE	G. M. T.	$\Delta$	REMARKS	DATE	STATION	COMPT PHASE	G. M. T.	$\Delta$	REMARKS		
December 1956			h. m. s.	km		December 1956			h. m. s.	km			
18	POONA Contd. Contd.	N E	e SKKS1	02 59 34 03 00 55		18	SHILLONG Contd.	Z,E E	iP PeP	19 30 34 31 17	7200	Slight Rarefaction Initial ground movement towards West	
			e	01 38					PP	33 03			
		N	e	04 41					PPP	34 15			
			Mn	49 50	Per: 18.7 secs H: 6				iS	39 06			
	NEW DELHI	N	ePKP PP PPP SKKS	02 50 55 54 40 58 15 03 01 24	16560				Lq	45 15			
			e	14 45			NEW DELHI	N	eP PP PPP	19 30 45 33 09 34 43	7070		
	MADRAS	E	ePKP e e SKS	02 50 56 52 10 52 49 57 51	16690				eS SS SSS	30 19 43 40 46 34			
			e	03 02 17			CHATEA	E	e	19 30 48		Surface waves.	
			e	04 45			DEHRA DUN	N,E N	eP PP	19 30 49 33 15	7440		
	HYDERABAD	E	iPKP e PKS SKKS PS e e e M	02 50 59 51 56 54 27 03 01 38 05 12 15 03 24 39 33 35 48 09	16400	Per: 18 secs H: 9			eS PS SS e SSS	39 42 40 12 44 18 46 25 47 33			
							HYDERABAD	E	e	19 37 03 44 45			
	CHATEA	Z	i	02 51 05			18	Epc: 345°N, 139°E. Near South Coast of Honshu, Japan. - h: 100 Km. M: 21h 12m 49s (U.S.C.G.S) 35.8°N, 139.2°E. - h: 21h 12m 57s (JMA Japan). - h: 120 Km.					
	SHILLONG	E	PKP i	02 51 11 03 02 51		Distant shock	SHILLONG	Z	iP	21 19 35		Slight Rarefaction	
18	Epc: 30°N, 35°E. Israel-Jordan Border Region. Minor damage in Haifa. Felt in Ksara, Televiv and Jerusalem. - H: 17h 53m 00s (U.S.C.G.S). Magnitude: 5 (Moskva), 5k (Uppsala).						SHILLONG	Z	e	01 27 44		Slight, near tremor.	
	SHILLONG	Z	eP	18 01 55		Slight Rarefaction	POONA	Z	iP i	01 29 33 29 50		Tremor	
	BOMBAY	N,E	e	18 04 18		Feeble	19	Epc: 29°N, 139°E. Bonin Islands Region. - h: 450 Km. Ca. - H: 04h 36m 20s (U.S.C.G.S) 28.2°N, 140°E. - H: 04h 36m 13s (JMA Japan). - h: 450 Km. Ca.					
	COLOMBO	E	L M	18 20 33 24 08		Ampl: 0.2 mm	SHILLONG	Z	iP	04 43 33		Slight Rarefaction	
18	Epc: 36°S, 77°E. South Indian Ocean. - H: 19h 20m 06s (U.S.C.G.S).						POONA	Z	i	04 45 44		Tremor	
	COLOMBO	E	P S L M	19 28 13 34 33 40 58 43 03	4560	Ampl: 0.7 mm	19	SHILLONG	Z	iP	04 48 28		Slight Compression
	MADRAS	E	eP e e iS PPS SS Lr e	19 29 00 29 21 31 07 35 05 36 27 39 23 43 33 47 07	5460		19	SHILLONG	Z	iP	11 54 22		Slight Compression
	POONA	Z,N,E N	iP PP	19 29 35 31 35	6130		19	DEHRA DUN	N,E	e	21 03 43		Tremor
			FPP	32 57			20	SHILLONG	Z	i i	05 57 31 57 34		Slight, near
		N,E	eS	37 18			CHATEA	Z	iP iS	05 57 32 58 21	450	Feeble	
			PPS	37 31			20	Epc: 27°S, 175°W. Komodis Islands. - H: 19h 59m 56s (U.S.C.G.S) Magnitude: 6 1/2 (Pasadena).					
		E	SS	40 49			COLOMBO	E	e e e e	11 24 25 34 56 55 31 57 36			
	BOMBAY	N,E I N N,E N E N,E N	eP PPP PcS eS PS PPS SS M	19 29 43 33 05 34 44 37 25 37 37 37 53 41 04 48 59	6120	Per: 17 secs H: 4 Per: 15 secs H: 3	BOMBAY	E N,E	e e	11 25 48 27 01		Slight	
				51 00			20	POONA	Z,N	eP	19 28 14		Tremor
	DOKARO	N,E	i	19 30 17		Slight							



DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km						h. m. s.	km	
December 1956							December 1955						
22	CHATRA Contd.	Z	iP iS	04 49 32 51 14	990	Slight	23	BOMBAY Contd.	N,E	eP eS	06 12 41 16 05	2500	Slight
	POONA	Z	eP	04 52 43		Feeble shock Phases not clear	23	DEBRA DUN	N,E	e	06 30 19		Feeble
22	SHILLONG	Z	iP	10 02 48		Slight Satisfaction		SHILLONG	Z	iP	06 33 03		Slight Compression
22	SHILLONG	Z	iP	10 16 57		Slight Compression		POONA	Z	eP	06 35 47		Tremor
22	SHILLONG	Z	iP	11 31 20		Slight Satisfaction	23	SHILLONG	Z	iP	06 45 10		Slight Compression
22	SHILLONG	Z E	iP P <sub>g</sub> eS S* Sg	12 14 07 14 19 14 50 14 57 15 07	400	Slight Satisfaction		CHATRA	Z	eP iS	06 46 11 47 55	1010	Slight
	CHATRA	Z	eP iS	12 14 51 15 45	1110	Slight	23	Epc: 22°N, 144°E. Iajiana Islands-Region. H: 08h 37m 26s (U.S.C.G.S). h ± 100 Km. Magnitude: 5.9 (Pasadena).					
22	SHILLONG	Z	e	18 33 45		Slight, near		SHILLONG	Z	iP	08 45 00		Slight Compression
22	Epc: 33°N, 139°E. Honshu after shock. H: 23h 12m 35s (U.S.C.G.S). 33.7°N, 139.5°E. H: 23h 12m 36s (JMA Japan). Magnitude: 6.1 (Uppsala).							CHATRA	Z	iP i	08 46 32 47 43		Slight
	SHILLONG	Z F	eP i PP PFP eS e e Lq M	23 20 26 20 35 22 15 22 48 26 50 26 55 27 04 30 00 35 58	4730	Per: 17 secs M = 5.8		DEBRA DUN	N,E	eP iS	08 47 19 55 25	6550	Feeble Phases not clear
	CHATRA	E	e	23 21 07		Surface waves		POONA	Z	iP eS	08 48 07 56 42	7100	Slight
	UCKARO	N,E	eP eS SS	23 21 09 28 09 31 49	5350	Distant		BOMBAY	N,E	eP eS i	08 48 43 56 59 58 00	7500	Slight Somewhat deep
	DEBRA DUN	N,E N	eP iS PPS SS SSS Lr M	23 21 52 29 11 29 26 32 19 34 03 36 33 40 19	5700		23	SHILLONG	Z	eP	14 41 12		Slight, local
	MADRAS	E	eP eS	27 22 25 30 28	6310	Slight	23	Epc: 25°N, 141°E. Volcano Islands H: 17h 26m 52s (U.C.I.S).					
	POONA	Z N,E	eP M	24 22 38 43 38		Feeble shock Phases not clear		SHILLONG	Z	eP	17 35 10		Slight
	BOMBAY	N,E N	eP eS M	23 22 40 31 09 52 46	6810	Per: 13 secs M = 3	23	KODAIKANAL	E	e	23 23 02		Tremor
	HYDERABAD	E	e M	23 30 18 46 44		Slight Per: 15 secs M = 4	24	SHILLONG	Z	eP	17 18 12		Slight
22	SHILLONG	Z	e	23 38 28		Slight, near	24	Epc: 10°N, 127°E. Northern Mindanao, Philippine Islands. H: 18h 38m 53s (U.S.C.G.S). H: 18h 28m 38s (U.C.I.S).					
23	Epc: 24°N, 98°E. Burma-China Border. H: 06h 07m 30s (Shillong).							SHILLONG	Z	iP	18 45 43		Slight Compression
	SHILLONG	Z	iP	06 08 47		Slight Compression		CHATRA	Z	e	18 46 21		Feeble
	CHATRA	Z	eP iS	06 09 41 11 27	1030	Slight		DEBRA DUN	N,E	e	18 47 31		Tremor
	BOKARO	N,E	i i i	05 11 35 11 46 13 34 13 46		Slight Initial ground movement towards North and East		BOMBAY	E	eP PP e eS	18 47 52 49 50 50 03 55 17	5810	Feeble
	DEBRA DUN	N,E	eP	05 11 36	2140	Feeble Phases not clear		POONA	Z	iP	19 47 47		Feeble shock Phases not clear
	POONA	Z	iP	05 12 30		Tremor	25	CHATRA	E	e	03 46 07		
							25	CHATRA	Z	iP iS	06 23 40 24 15	310	Feeble
								SHILLONG	Z	iP	06 23 59		Slight
							25	Epc: 48°N, 28°W. North Atlantic Ocean H: 09h 33m 37s (U.S.C.G.S). 48°N, 27°W. H: 09h 33m 45s (B.C.I.S). Magnitude: 2.6 (Pasadena, Berkeley), 6.2 (Uppsala, Kiruna).					
								DEBRA DUN	N,E	eP iS	09 45 31 55 30	8690	Phases not clear
								NEW DELHI	N	eP PP PFP eS PS PSS SS	09 45 39 48 29 50 43 55 33 56 15 56 27 10 00 33	8670	



DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS	DATE	STATION	COMPT	PHASE	G. M. T.	REMARKS	
				h. m. s. km						h. m. s. km		
December 1956						December 1956						
29				Epc: 5 <sup>o</sup> S, 151 <sup>o</sup> E. New Britain H: 06h 51m 08s (U.S.C.G.S).		30				Epc: 24 <sup>o</sup> N, 94 <sup>o</sup> E. India - Burma Border. H: 21h 59m 06s (U.S.C.G.S). 23 <sup>o</sup> N, 94 <sup>o</sup> E. H: 21h 59m 13s. Magnitude: 5.2 (Shillong). Felt at Shillong and Dibrugarh.		
	SHILLONG	Z	eP	07 02 00	Slight		SHILLONG	Z	iP	21 59 59	310 Compression	
									P*	22 00 03		
									i	00 27		
									iS	00 34		
29				Epc: 51 <sup>o</sup> N, 158 <sup>o</sup> E. H: 09h 37m 14s (B.C.I.S). Near South Coast of Kamchatka. H: 09h 37m 47s (U.S.C.G.S).			SHILLONG	Z	eP	09 46 59	Slight	
	SHILLONG	Z	eP	09 46 59	Slight		COLOMBO	E	P	22 00 55		
									e	08 02		
									e	19 40		
29	SHILLONG	Z	ePg	12 01 04	140 Slight		CHATRA	Z	eP	22 00 56	810	
			eSg	01 21				E	iS	02 20		
29	SHILLONG	Z	eP	17 53 17	Slight		BOKARO	N, E	iP	22 01 03	820 Initial ground movement towards South and West	
29				Epc: 21 <sup>o</sup> S, 180 <sup>o</sup> Longitude. Fiji Islands. H: 600 Km Ca. H: 19h 27m 16s (U.S.C.G.S).					PP	01 07		
	SHILLONG	Z	eP	19 39 52	Slight				PPP	01 15		
									Lq	02 20		
29				Epc: Near South Coast of Java. H: about 150 Km. H: 19h 51m 49s (U.S.C.G.S).					iS	02 28		
	SHILLONG	Z	eP	19 59 11	Slight				SSS	02 51		
	POONA	Z	iP	20 00 05	Tremor				M	03 18	Persec 3 secs U = 10	
			i	00 14			NEW DELHI	N	eP	22 02 56	1590	
									iS	05 36		
29				Epc: 31 <sup>o</sup> S, 75 <sup>o</sup> W. Tonga Islands. H: 20h 22m 12s (U.S.C.G.S). Magnitude: 6 <sup>+</sup> -6 <sup>+</sup> (Pasadena).						SS	05 53	
	SHILLONG	Z	e	20 36 08	Slight				SSS	06 04		
									M	07 09		
	COLOMBO	E	e	20 47 26			DEHRA DUN	N, E	eP	22 02 56	1640	
			e	56 23				N	iS	05 42		
			e	21 21 26					SSS	06 11		
	BOMBAY	N, E	e	20 47 55	Slight				Lr	06 24		
									M	07 35		
29	CHATRA	Z	iP	21 30 37	Slight		MADRAS	E	eP	22 03 09	1860	
			i	30 55					PPP	03 21		
	SHILLONG	Z	eP	21 31 06	350 Slight				eS	06 11		
			Pg	31 18					SS	06 31		
			eS	31 45					e	09 34		
			e	31 56			POONA	Z	iP	22 03 40	2280	
	CHATRA	Z	iP	21 52 43	210 Feeble			E	PP	04 02		
			iS	53 08				N, E	PPP	04 12		
29	SHILLONG	Z	eP	21 53 12	350 Slight			E	eS	07 26		
			P*	53 18					SS	07 54		
			S*	53 58					Lr	08 23		
			Sg	54 07					M	10 12		
30	SHILLONG	Z	eP	00 45 05	Slight		HYDERABAD	E	e	22 03 46		
			P*	45 10					e	08 02		
									e	09 27		
30	SHILLONG	Z	iPg	07 42 44	130 Slight		BOMBAY	N, E	eP	22 03 50	2370	
			iSg	42 59				E	PP	04 22		
30	CHATRA	Z	iP	07 43 39	880 Feeble			N, E	PPP	04 37		
			iS	45 10					eS	07 43		
30	SHILLONG	Z	iP	08 15 23	290 Slight			E	Lq	08 01		
			Pg	15 33				N	SS	08 19		
			iSg	16 07					Lr	08 52		
	CHATRA	Z	eP	08 16 07	1130 Slight				e	09 56		
			iS	18 03					M	11 33	Persec 7 secs U = 4	
30	SHILLONG	Z	iP	11 52 12	360 Slight		30 SHILLONG	Z	iP	22 55 43	210 Slight	
			Pg	52 22					Pg	55 50		
			eS	52 51					S	56 07		
			Sg	53 15					Sg	56 17		
	CHATRA	Z	eP	11 53 03	1110 Slight		CHATRA	Z	iP	22 56 39	920 Slight	
			iS	54 57					iS	58 14		
31	SHILLONG	Z	eP	21 38 45	Slight		31 SHILLONG	Z	eP	22 08 32	Slight	

*Earthquake Reports  
(Non-Instrumental Reports)*

*Following is the list of earthquakes that were reported  
by voluntary Observers from different stations during the  
month of December 1956.*

PLACE AT WHICH FELT	DATE IN G.M.T.	TIME IN G.M.T. h. m.	NO. OF SHOCKS	DURATION OF SHOCKS IN secs.	INTENSITY IN R.F. SCALE	REMARKS
DHUBRI	105	15 13	1	10	IV	
GOAL PARA	105	15 19	-	7	IV	
UPPER SHILLONG	12	20 38	1	5	III	
SILCHAR	12	29 37	-	3	IV	
LUMDING	12	20 40	1	5-6	III	
UPPER SHILLONG	15	05 45	1	2-3	I	
SILCHAR	15	10 12	-	15	V	
UPPER SHILLONG	15	10 11	1	2	IV	
PASIGHAT	22	04 44	-	2-3	III	
CANGTOX	230	21 30	2	15	IV	
UPPER SHILLONG	30	22 00	1	14	VI	

