

JAN, 1954 - DEC, 1955



1954
complete

GOVERNMENT OF INDIA

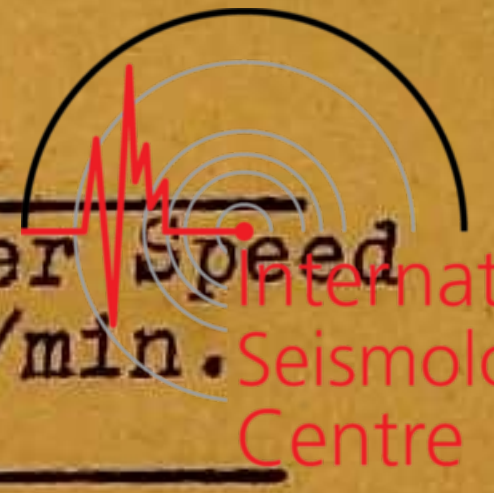
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

January, 1954.


*
*
* * * * *
*
*

Published under the direction of
Dr. S.C. Roy, D.Sc.(Lond.), F.N.I.,
Director General of Observatories.

INSTRUMENTS AND THEIR CONSTANTS.

Station	Instruments	Compt.	Period in secs	Static Magnifi- cation	Damping ratio	Paper Speed mm/min.
Bombay	Milne-Shaw	N	12	350	16:1	16
	Milne-Shaw	E	12	350	11:1	8
	Sprengnether	E	To = Tg = 7.2			30
Calcutta	Milne-Shaw	E	10	150	20:1	8.0
	Wood-Anderson	N	2	870	Critical	30.0
	Omori-Ewing	N	18	32	-	25.4
	Omori-Ewing	E	19	30	-	25.4
Chatra	Milne-Shaw	N	10.0	150	20:1	16
	Milne-Shaw	E	12.0	250	20:1	16
	Wood-Anderson	N	1.0	1000	30:1	60
	Wood-Anderson	E	1.0	1000	30:1	60
	Benioff Verti- cal	Z	To=0.72 Tg=0.45	-	Es=2.3:1 Eg=Critical	60
Colombo	Milne-Shaw	E	12	250	20:1	31.5
Dehra Dun	Wood-Anderson	N	1	1000	30:1	60
	Wood-Anderson	E	1	1000	30:1	60
	Milne-Shaw	N	12	250	20:1	16
Hyderabad	Milne-Shaw	E	12	253	20:1	8
	Milne-Shaw	N	12	251	20:1	8
Kodaikanal	Milne-Shaw	E	10.0	250	20:1	8
Madras	Sprengnether micro-seismo- graph	E	To=Tg=7.4		-	30
New Delhi	Milne-Shaw	N	12	288	20:1	8
	Wood-Anderson	N	4.0	1070	20:1	16
	Wood-Anderson	E	2.0	1841	30:1	60
	Omori-Ewing	E	28	30	1	12
Poona	Sprengnether	Z	To=Tg=1.5		-	30
	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
Shillong	Milne-Shaw	N	12.0	250	20:1	8.0
	Wood-Anderson	N	4	1000	20:1	60.0
	Wood-Anderson	E	1.0	1000	30:1	30.0
	Wood-Anderson	N	1.0	1000	30:1	30.0
	Benioff	Z	To = 1.0 Tg = 0.18	-	-	60.0


SEISMOLOGICAL BULLETIN

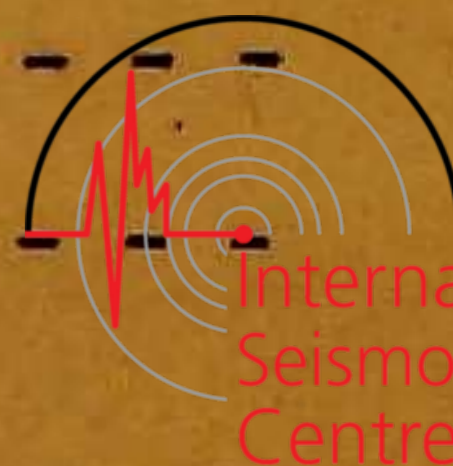
DATE STATION COMPT. PHASE G. M. T.  REMARKS

h. m. s. km.

Jan.
1954

01 Shillong Z eP 01 22 59

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Jan. 1954						
01	Epc: $8\frac{1}{2}^{\circ}$ S., 124° E. Flores Sea, h = 100 km ca ; $0 = 13h\ 04m\ 17s$ (U.S.C.G.S.) 9° S., $123\frac{1}{2}^{\circ}$ E., h = 100 km ca; $0 = 13h\ 04m\ 19s$ (B.C.I.S.) 8.0° S., 122.0° E., $0 = 13h\ 04m\ 26s$ (Shillong). Magnitude - $6\frac{1}{2}$ (Pasadena).					
	Colombo	E	P	13 12 32		
			S	19 16		
			L	25 30		
			M	28 03		Amp = 0.1 mm.
	Shillong	Z	iP	13 12 39	5090	Moderate.
		N	i	12 53		
			PP	14 30		
			PPP	15 04		
			S	19 13		
			PS	19 23		
			PPS	19 35		
			i	20 12		
			LQ	23 04		
			SSS	23 31		
			LR	25 27		
			M	28 38		
	Calcutta	E	eP	13 12 46	5000	Slight.
		N	iP	12 47		
		E	?	15 35		
			iS	19 25		
		N	iS	19 29		
		E	SS	22 35		
	Madras	E	iP	13 12 57	5160	Moderate.
			PcP	14 18		
			PP	14 46		
			PPP	15 35		
			ScP	18 08		
			iS	19 45		
			ScS	22 27		
			SS	23 03		
			LQ	24 16		
			e	41 35		
	Chatra	NEZ	eP	13 13 10	5460	Slight.
		NE	PcP	14 37		
			PP	15 10		
			PPP	16 04		
			PcS	18 30		
		E	iS	20 15		
			PS	20 23		
			PPS	20 29		
			ScS	22 52		
			SS	23 48		
			LQ	24 33		
			LR	27 30		
			M	31 30		



DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
an. 954							
1	Hyderabad	E	eP	13	13	19	5550
contd.			iS		20	30	
			SS		23	01	
		N	SS		23	08	
			L		30	08	
			M		35	48	
	Poona	Z	iP	13	13	55	6078 Moderate.
		E	PcP		14	48	
			PP		16	00	
			PPP		17	12	
			PcS		18	40	
			eS		21	34	
			ScS		23	19	
			SS		25	11	
			LQ		27	29	
			M		35	04	
	Bombay	E	eP	13	13	57	6455 Slight.
			i		14	20	
			e		14	28	
			PP		16	13	
			PPP		17	38	
			iS		21	46	
		N	i		21	52	
		E	iY		22	22	
		N	eY				
			i		23	30	
			SS		25	34	
	Dehra Dun	NE	eP	13	14	04	6240 Moderate.
			i		14	32	
			PP		16	12	
			PcS		18	45	
			iS		21	54	
			PS		22	07	
			PPS		22	15	
			ScS		23	36	
			M		35	30	
	New Delhi	NE	eP	13	14	08	6220 Moderate.
		N	i		14	29	
			eS		21	56	
		NE	PS		22	04	
			PPS		22	12	
		N	i		23	50	
			ScS		24	18	
001	Dehra Dun	NE	e	22	20	38	Slight.
			i		21	33	
002	Shillong	Z	iP	05	37	44	Tremor.
002	Shillong	Z	iP	07	09	35	Tremor.
002	Shillong	Z	eP	09	57	44	Tremor.
002	Shillong	Z	iP	11	29	26	Tremor.
002	Shillong	Z	eP	13	17	50	Tremor.



DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
Jan. 1954							
02	Shillong	Z	iP	20	29	12	
03	Shillong	Z	iP	00	43	02	Tremor.
03	Shillong	Z	i	07	05	50	Tremor.
03	Shillong	N	e(Pg)	14	33	53	Slight, local.
			i		33	55	
			i(Sg)		34	09	
			i		34	26	
04	Bombay	E	e	12	22	10	Long distance.
		N	e		22	21	
		E	e		24	42	
		N	e		28	17	
		E	e		33	42	
			e		34	11	
	Shillong	N	e	12	37	43	Slight.
			M	13	02	-	
04	Shillong	Z	i	17	16	03	Slight.
04	Shillong	Z	i	23	59	13	Slight.
05	Dehra Dun	NE	eP	08	51	41	330 Slight.
			PP		51	49	
			Pg		51	51	
			PPP		51	55	
			LQ		52	12	
			iS		52	15	
			SS		52	25	
			SSS		52	35	
	New Delhi	E	eP	08	51	54	350 Slight.
			P*		51	59	
		NE	PP		52	01	
			LQ		52	23	
			eS		52	33	
			S*		52	41	
		E	SS		52	43	
		NE	Sg		52	47	
		N	SSS		52	53	
05	New Delhi	NE	e	10	42	36	Slight.
			i		44	05	
			i		44	20	
			i		44	36	
		E	e		45	00	
			e		45	36	
		NE	i		45	44	
05	Epc: 18° N., 81° 3 E. East Godavari, Andhra; 0 = 11h 39m 53s (Shillong)						
	Felt - Kothagudium (Deccan).						
	Hyderabad	E	iP	11	40	32	240
		N	iS		41	00	
		E	iS		41	02	



DATE	STATION	COMPT.	PHASE	G. M. T.		△ km.	REMARKS
				h.	m. s.		
Jan. 1954	Poona	Z	iP	11	41 26	700	Slight.
Contd.		E	eS		42 39		
			M		43 18		
	Bombay	E	eP	11	41 45	890	Feeble, local tremor.
			e		43 01		
			iS		43 16		
		N	e		43 19		
		NE	i		43 46		
	Calcutta	N	eP?	11	42 21	1055	Slight.
			iS		44 49		
	Chatra	E	eP	11	42 25		Slight, near.
			e(S)		44 32		
	Shillong	Z	eP	11	42 49	1350	Slight.
			eS		45 06		
006	Dehra Dun	N	e	08	47 33		Slight, phases not clear.
006	Shillong	Z	i	11	00 37	20	Slight, local. Felt at Shillong.
		N	i(Pg)		00 38		
			i(Sg)		40		
006	Epc: 7° 6' N., 7° E. SW of Spit-zbergen ; 0 = 15h 53m 59s (U.S.C.G.S.Y)						
	Chatra	Z	iP	16	04 20		Slight, distant.
	Shillong	Z	iP	16	04 20		Slight, distant.
		N	eP		04 36		
			eS		13 12		
			e(M)		35 00		
	Bombay	N	iPχ	16	04 50	7370	Slight.
		E	ePχ				
			i		13 08		
			eS		13 39		
	Poona	Z	iP	16	04 53		Tremor.
007	Shillong	Z	i	00	34 31		Slight, local.
			i		34 40		
007	Shillong	Z	iP	19	30 45		Slight, near.
			i		31 28		
		N	e		31 33		
			e		31 39		
			i		32 27		
007	Shillong	N	e	19	47 25		Slight, near.
			i		48 16		
008	Shillong	Z	e	00	26 13		Slight.
008	Dehra Dun	N	e	02	29 01		Slight, phases not clear.
			i		29 59		
			i		30 10		

DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
11 Jan. 1954 08	Dehra Dun	NE	eP PP PPP iS SS and LR SSS S*	03	36	06	820	Slight.
	New Delhi	E NE	eP PPP eS LR	03	36	22	870	Slight.
	Shillong	Z	i	03	38	41		Slight.
08	Dehra Dun	NE	e e	18	14	10 45		Feeble.
09	Shillong	Z	e	00	54	02		Tremor.
09	Shillong	Z	i	01	48	08		Tremor.
09	Shillong	Z	i	05	03	01		Slight.
09	Chatra	Z E	e e	08	15	04 37 --		Slight, distant. Surface waves.
09	Shillong	Z NE N NE N	iP eP PP i iS iSg SS SSS	18 08	08 31	31 08 38 08 50 08 56 09 02 09 07 09 18	220	Slight, felt.
	Chatra	Z	i i	18	09	30 51		Slight, near.
10	Shillong	Z	iPg Sg	07	39	02 15		Tremor.
10	Dehra Dun	NE	eP PPP eS SS LR SSS S* Sg/M	13	41	09 41 23 42 57 43 11 43 21 43 23 43 37 44 06	1060	Slight.
	New Delhi	N E NE E NE	eP P* eS SS SSS S*	13	41	30 41 58 43 34 43 46 43 56 44 18	1210	Slight.
	Chatra	Z	e	13	42	33		Slight, distant.





DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Jan. 1954 Contd.	Shillong	Z	e	13	43	21		Slight.
	Poona	Z	eP e?	13	43	34 48 00		Slight, phases not clear.
	Bombay	N E N E	e iY eY i	13	49	12 49 27 50 06		Movements continue upto 1400 hrs.
10	Shillong	Z	iPg	16	28	45 28 57		Slight, tremor.
10	Shillong	Z	eP Sg	17	51	51 52 01		Tremor.
10	Dehra Dun	NE	iP P* PP PPP iS SSS	18	52	47 52 49 52 55 53 01 53 07 53 29	220	Slight, near.
	New Delhi	NE E NE E NE	eP PP LQ eS S* SS Sg	18	53	01 53 09 53 31 53 41 53 48 53 52 53 57	360	Slight.
10	Shillong	Z	eP Sg	20	02	52 03 25		Tremor.
10	Shillong	Z	iPg Sg	21	38	17 38 29		Feeble.
10	Shillong	Z	iPg Sg	21	52	02 52 14		Feeble.
11	Shillong	Z	Pg Sg	01	23	47 23 58	90	Slight, felt locally.
	Dehra Dun	N	e i	01	28	42 28 48		Feeble.
11	Poona	Z N	eP e? e?	16	15	49 24 51 28 48		Slight, phases doubtful.
11	Epc: 23° N., 126° E., Riu Kiu Island; 0 = 17h 09m 02s (USCGS) 22°3 N., 125½°E., 0 = 17h 09m 02s (B.C.I.S.). Mag. 6 (Kiruna, Praha).							
	Shillong	Z N	iP PPP PcP eS LQ SSS LR M	17	15	24 16 47 18 05 20 23 22 28 22 56 24 09 26 39	3357	Slight.



DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Jan. 1954						
11	Chatra	Z	iP	17 16 00	3900	Slight, distant.
Contd.		NE	eS	21 33		
			e	30 --		
	Calcutta	E	e	17 16 01		Slight.
			e	21 20		
	Dehra Dun	NE	eP	17 17 08		Feeble.
	New Delhi	E	eP	17 17 11	4810	Slight.
		N	eS	23 39		
	Hyderabad	E	iP	17 17 20	4960	
		NE	iS	23 57		
		E	SS	27 13		
		N	L	30 59		
			M	34 57		Per. = 18 secs μ = 5.
		E	M	35 50		Per. = 15 secs μ = 4.
	Bombay	NE	eP	17 17 54	5500	Feeble.
		N	PP	19 50		
		E	i	20 07		
			i	21 14		
		NE	eS	25 01		
		E	PS	25 12		
		NE	PPS	25 17		
		E	ScS	27 14		
		N	ScS	27 34		
			SS	28 31		
		E	SS	28 36		
11	Epc: $13\frac{3}{4}^{\circ}$ N., $51\frac{1}{4}^{\circ}$ E. Gulf of Aden; O = 22h 45m 06s (B.C.I.S.)					
	Bombay	E	iP	22 49 49	3450	Feeble.
			iX	50 00		
		N	eX			
		NE	PP	50 16		
		E	PPP	50 27		
		NE	iS	54 54		
			LQ	55 13		
		E	SS	55 29		
			SSS	55 39		
			LR	56 15		
	Poona	Z	eP	22 50 02	2600	Slight.
		E	PP	51 03		
			eS	54 12		
			PS	54 16		
			SS	56 07		
			M	23 01 22		
	Hyderabad	E	eP	22 51 03	2650	
			S	55 17		
			L	57 56		
			M	59 21		Per. = 12 secs μ = 2.
	Kodaikanal	E	e	22 55 13		Tremor, phases not clear.



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Jan. 1954								
12	Dehra Dun	NE	eP PPP iS SS SSS	07	50	11	170	Feeble, near.
12	Epc: 49° S., 165° E. Off Coast of South Island, New Zealand; 0 = 14h 16m 22s (U.S.C.G.S.) Magnitude - 6 $\frac{3}{4}$ - 7 (Pasadena), 6 $\frac{3}{4}$ (Kiruna), 6 $\frac{1}{2}$ - 6 $\frac{3}{4}$ (Praha).							
	Chatra	Z NE	eP χ eP χ e	14	30	22		Slight, distant Surface waves.
12	Shillong	Z N	eP S	14	34	07	10665	Slight, phase doubtful.
	Colombo	E	P SKS L M	14	33	43		Phases doubtful due to superposition due to the earlier shock. Amp = 1.0 mm.
	Madras	E	iP PP PPP SKS SKKS SKKKS iS PPS SS e	14	34	00	10500	Moderate, phases doubt- ful due to superposi- tion of phases due to the earlier shock.
	Calcutta	E	eP SKS ₁ S? PS ? SSS SKKS ₂ ? SKKKS	14	34	07	10920	Moderate.
	Hyderabad	E N E NE N	eP PP SKS iS PS SSP L M M	14	34	23	11080	
								Per. = 18 secs μ = 23. Per. = 18 secs μ = 13.
	Bombay	E N E	iPKP ₁ χ ePKP ₁ χ PP i PPP PKS ₁ SKS	14	34	29		Moderate, phases mixed up with that of the succeeding shock.



No.	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS	
				h.	m.	s.			
54 Contd.	Bombay	N	PS	14	44	11			
		E	PS		44	24			
		N	e		45	13			
		E	PPS		45	24			
		N	SS		49	43			
		E	i		50	29			
		NE	SSS		54	08			
		N	LQ		15	00	51		
		Poona	Z	eP		34	46		Moderate.
			E	FP		38	18		
	SKS			45	19				
	PS			48	17				
	e			51	21				
	M			15	11	22			
Kodaikanal	E	PP?	14	33	26	10520	Moderate.		
		S		45	37				
		PPS		47	37				
		LQ	15	00	37				
		LR		01	58				
		M		15	52				
12	Bombay	E	iPKP ₁	14	35	27	Moderate, phases mixed with that of preceding shock.		
		NE	PP		35	51			
			PPP		41	03			
		E	FMS ₁		41	42			
		N	SLS ₁		44	49			
			e		48	06			
		NE	PPS		49	03			
			SS		53	06			
		N	SSS		57	49			
			M	15	27	13		Per. = 16 secs μ = 14.	
		New Delhi	N	ePP	14	39		28	12200
PPP				41	47				
SKS				45	35				
SKKS				46	27				
ES				48	50				
PPS				48	57				
S				54	59				
M	15			20	52				
13	Epc: 49°S., 165° E. Off the South Coast of Sud Island, New Zealand;								
	0 = 00h 13m 06s (U.S.C.G.S.)								
	49.5° S., 166.0° E. 0 = 00h 13m 06s G.M.T. (B.C.I.S.)								
	Mag. - 7½ (Wellington), 7¼ (Pasadena), 7 (Praha), 6¾ - 7 (Hurbanovo, Strasbourg), 6¾ (Kiruna, Uppsala).								
Colombo	E	eP	00	25	01		L and M lost while changing the chart.		
		S		36	51				
Madras	E	eP	00	25	47	10860	Moderate.		
		FP		30	48				
		SKS		37	21				
		SKKS		37	46				
		IS (Sec)		38	10				
		PS		39	48				
		PPS		40	33				
	SS		44	52					

No.	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
54	Calcutta	E	e(P)	00	27	07		
			e		37	34		
			e		40	00		
			M	01	07	58		
	Chatra	NEZ NE	eP	00	27	08	11090	Slight.
			PP		31	21		
			SKS ₁		37	49		
			SKKS ₁		38	13		
			eS		38	39		Phases doubtful.
			SKS ₂		38	56		
			PS		40	32		
			PPS		41	05		
			SS		45	28		
			SSP		45	47		
			PKKS ₁		46	50		
			SSS		49	50		
			SKKKS		54	20		
			LQ		55	24		
			LR	01	00	09		
			M		09	--		
	Hyderabad	E EN E N EN N E N	eP	00	27	19	10900	Slight.
			PP		31	21		
			SKS		37	42		
			iS		38	34		
			S		38	44		
			PS		40	07		
			SS		45	29		
			L	01	00	03		
			L		00	20		
			M		02	18		Per. = 18 secs μ = 9.
			M		02	20		Per. = 18 secs μ = 19.
	Poona	Z E	eP	00	27	25		Moderate.
			e		30	54		
			e		37	58		
			S		39	17		
			PS		39	47		
			e		44	02		
			LQ		52	09		
			M	01	04	03		
	Kodaikanal	E	PP?	00	30	01	10520	Moderate.
			S		37	13		
			PPS		39	16		
			LQ		52	25		
			LR		56	46		
			M	01	04	31		Per. = 15 secs μ = 10.
	Bombay	NE E N E NE E N NE	ePKP ₁	00	30	53		Moderate and distant.
			PP		32	00		
			e		32	10		
			PPP		34	05		
			PKS		34	21		
			SKS		37	30		
			SKS ₁		37	57		
			SKKS ₁		38	14		
			eS		39	14		
			PS		41	00		





No.	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
54	Bombay	N	PPS	00	41	50		
Contd.	Contd.	E	PPS		41	53		
		NE	SSP		46	44		
			SSS		49	53		
	New Delhi	N	e	00	30	59		Moderate.
			e		38	07		
			e		40	57		
			i		42	04		
			i		43	04		
			i		47	32		
	Dehra Dun	NE	eP	13	11	38	260	Slight.
			PPP		11	51		
			iS		12	07		
			S*		12	11		
			Sg		12	15		
			SS		12	19		
			SSS		12	28		
3	Shillong	Z	eP	16	23	01		Tremor.
3	Dehra Dun	NE	eP	20	35	35	660	Slight.
			PP		35	42		
			P*		35	48		
			LQ		36	30		
			iS		36	41		
			SS		36	50		
			S*		36	58		
			SSS		37	02		
	New Delhi	NE E	eP	20	35	56	770	Slight.
			PP		36	03		
			PPP		36	10		
			P*		36	13		
			Pg		36	30		
			eS		37	16		
			SS		37	26		
			SSS		37	36		
	Shillong	Z	iP	20	37	52		Tremor.
	Poona	Z	e(P)	20	41	21		Tremor.
13	Shillong	Z	eP	22	52	01		Tremor.
14	Shillong	Z	iP	02	18	58		Tremor.
	Poona	Z	eP?	02	20	50		Tremor.
	Bombay	E	i	02	21	05		
			i		21	32		
			e		23	18		
			i		28	44		
			i		29	02		
14	Shillong	Z	iPg	06	46	06		Feeble.
			Sg		46	14		
14	Shillong	Z	iP	10	48	09		Tremor.


DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
an. 1954								
4	Shillong	Z	iP	22	47	31		Slight.
5	Bombay	E	e e	23	46	35 47 27		
7	Poona	Z	eP?	03	14	14		Tremor.
7	Dehra Dun	NE	iP PP PPP and P* Pg LQ iS LR SS S* SSS Sg	08	47	41 47 48 47 56 48 10 48 40 48 52 48 58 49 03 49 12 49 14 49 30	670	Moderate.
	New Delhi	NE E NE E NE N E	eP PP PPP P* LQ iS SS SSS S* Sg	08	48	00 48 08 48 15 48 19 49 14 49 25 49 36 49 46 49 50 50 12	820	Slight.
	Poona	Z	eP	08	50	01		Slight, phases not clear.
	Bombay	NE E NE	e e e i e i i	08	50	03 50 08 53 02 53 44 54 15 54 50 56 01		
	Hyderabad	E	e i	08	54	40 55 47		
17	Poona	Z	eP	11	54	50		Tremor.
	Bombay	E	e	11	56	18		Tremor.
17	Dehra Dun	N	e	17	15	24		Feeble.
	Bombay	NE E NE	i e e	17	48	38 50 25 56 00		Probably deep.
	Poona	Z	eP	17	48	41		Slight, phases not clear.
	Kodaikanal	E	e?	17	58	58		Tremor.
	Hyderabad	E	M	18	07	16		Per. = 15 secs $\mu = 3.$





DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Jan. 1954								
20	Kodaikanal	E	e?	16	12	37		Tremor.
	Poona	Z E	eP i?	16	16	13 23 07		Slight, phases not clear.
	New Delhi	NE E NE	e e e e	16	24	10 17 51 11		Slight, phases not clear.
21	Dehra Dun	NE	e i(S)?	23	07	40 59		Feeble.
22	Hyderabad	E	e	10	41	30		
22	Bombay	E NE E N	e e i i i	11	34	25 05 19 43 30 00		Feebly recorded.
	Shillong	Z N	eP eS	11	35	40 53		Slight.
	Dehra Dun	NE	eP PP PPP Pg iS SS S* SSS Sg	11	36	11 18 25 43 30 32 51 53 07	770	Moderate.
	New Delhi	NE N NE	eP PPP S Sg	11	36	17 52 46 38 38	820	Slight.
	Poona	Z E	e e M	11	37	52 30 13		Slight.
22	Bombay	E NE E N N	eP SKS eS PS PPS e e SS	11 12	51 01	32 34 41 39 02 57 47 32	9000	
22	Epc: 20° S., 169° E. Loyalty Island; h = 100km ca; O = 21h 23m 04s (U.S.C.G.S.) Magnitude - 6½ ca (Wellington).							
	Poona	Z	eP	21	36	48		Distant, phases not clear.



DATE STATION COMPT. PHASE G. M. T.  REMARKS

h. m. s. km.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS
				h. m. s.	km.
Jan. 1954					
22	Bombay	E	eP	21 37 05	10855 Distant.
Contd.			e	40 55	
			PP	41 37	
		N	e	43 15	
		E	PPP	43 37	
		NE	SKS	47 25	
			SKKS	48 07	
			eS	48 28	
		E	PS	50 03	
			PPS	50 51	
			SS	55 30	
		N	e	55 35	
23	Dehra Dun	N	e	12 13 14	Tremor.
23	Dehra Dun	N	e	12 40 57	Slight.
			i	41 14	
23	Epc: $37\frac{1}{2}^{\circ}$ N., $72\frac{1}{2}^{\circ}$ E. Tadjik USSR; 0 = 16h 06m 30s G.M.T. (USCGS)				
	37° N., 74° E. 0 = 16h 06m 37s G.M.T. (Shillong)				
	Magnitude - $6\frac{1}{2}$ (Uppsala, Kiruna).				
	Dehra Dun	NE	eP	16 08 36	920 Moderate.
			PP	08 44	
			PPP	08 51	
			P*	08 57	
			Pg	09 15	
			LQ	10 00	
			iS	10 11	
			SS	10 22	
			LR	10 26	
			SSS	10 33	
			S*	10 40	
			Sg/M	11 03	
	New Delhi	NE	eP	16 08 51	990 Slight.
		E	PP	08 57	
		NE	PPP	09 04	
			iS	10 33	
			SS	10 45	
			LR	10 49	
		E	SSS	10 56	
			S*	11 06	
		NE	Sg	11 35	
	Chatra	Z	iP	16 10 15	Slight, other phases
			iS	13 17	obscure.
	Bombay	N	iP χ	16 10 54	2100 Feeble.
		E	eP χ		
		NE	PP	11 07	
			PPP	11 16	
		E	iS	14 19	
		NE	iS	14 22	
		N	i	14 36	
		E	SS	14 39	
		NE	SSS	14 54	
			LR	15 14	



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Jan. 1954	Poona	Z	eP	16	10	55	2170	Moderate.
3		E	PP		11	12		
contd.			PPP		11	23		
			eS		14	29		
			LQ		14	33		
			SS		14	45		
			LR		15	20		
			M		16	53		
	Shillong	Z	eP	16	11	09	2170	Slight.
		N	S		14	45		
			LQ		14	59		
			SSS		15	14		
			LR		16	06		
			M		16	33		
	Calcutta	E	iP	16	11	12	2170	Moderate, first move- ment East.
		N	eP		11	14		
		E	PPP		11	42		
			S		14	47		
		N	S		14	48		
		E	?		14	56		
			LR		15	49		
			M		17	24		
	Hyderabad	N	iP	16	11	12	2300	Moderate.
		NE	iS		14	59		
		E	SS		15	40		
			L		17	03		
			M		17	47		
		N	M		18	02		
	Madras	E	eP	16	12	06	2120	Moderate.
			PP		12	25		
			PPP		13	41		
			PcP		14	32		
			iS		16	24		
			ScP		17	53		
			LQ		18	03		
			SS		18	12		
			SSS		18	28		
*** /			ScP		21	38		
***			M		21	52		
	Kodaikanal	E	LR		19	26		Amp = 42 mm.
			e	16	16	10		
23	Epc: $37\frac{1}{2}^{\circ}$ N., $72\frac{1}{2}^{\circ}$ E. Tadjik USSR; 0 = 17h 11m 54s (U.S.C.G.S.) 37° N., 73° E., 0 = 17h 12m 00s G.M.T. (Shillong).							
	Dehra Dun	NE	eP	17	14	02	1000	Moderate.
			PP		14	09		
			PPP		14	17		
			P*		14	23		
			Pg		14	46		
			LQ		15	32		
			iS		15	43		
			SS		15	52		
			LR		15	57		
			SSS		16	40		



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Jan. 1954	New Delhi	N	eP	17	14	18	1000	Slight.
3			PPP		14	33		
ontd.		E	P*		14	37		
		N	Pg		14	58		
		NE	LQ		15	49		
			eS		16	01		
			SS		16	13		
		N	LR		16	18		
		NE	SSS		16	24		
			S*		16	35		
			Sg		17	04		
	Bombay	E	eP	17	16	20	2075	Very feeble.
		N	iPY		16	16		
		E	ePY					
		NE	PP		16	36		
			PPP		16	42		
		E	eS		19	46		
		NE	iS		19	49		
			SS		20	05		
	E	SSS		20	19			
	Chatra	Z	iP	17	15	40		Slight.
			iS		18	38		
	Poona	Z	eP	17	16	21	2180	Moderate.
		E	PP		16	38		
			eS		19	57		
			SS		20	23		
			SSS		20	35		
			LR		20	59		
			M		22	37		
	Shillong	Z	eP	17	16	34	2220	Slight.
		N	S		20	13		
			LQ		20	25		
			SSS		21	03		
			LR		21	18		
			M		22	56		
	Hyderabad	N	iP	17	16	42	2290	Slight.
		NE	iS		20	28		
		N	L		22	39		
		E	M		23	26		
		N	M		23	29		
	Calcutta	E	i	17	20	23		Slight, near.
			i		23	12		
	Kodaikanal	E	e	17	22	05		Tremor.
23	Dehra Dun	N	e(P)	22	05	40		Slight.
24	Dehra Dun	NE	e(P)	21	01	26	920	Slight.
			iS		03	01		
	Poona	ZE	i?	21	09	06		Feeble.
25	Poona	Z	i?	02	38	11		Tremor.

Per. = 12secs μ = 8.
Per. = 12 secs μ = 9.



No.	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
54	Hyderabad	N	M	03	57	07		Per. = 15 secs $\mu = 4.$
	Dehra Dun	NE	e i	17	11	27 13 08		Slight, phases not identifiable.
	Poona	Z	eP	23	41	07		Tremor.
	Bombay	E	e e e e e e	18	42	02 42 10 52 08 52 50 53 04 53 44		Slight.
	Poona	Z	i?	21	01	03		Tremor.
	Bombay	E	e e e e e e	21	48	06 49 25 51 51 52 10 52 23 22 01 13 04 51		Slight.
	Poona	Z	i?	22	04	37		Tremor.
	Bombay	N	e e	11	54	11 54 35		Slight.
	Hyderabad	E NE E	eP S L	11	54	49 12 04 14 19 00	8070	Slight.
		N	M	24	55			Per. = 14 secs $\mu = 5.$ Per. = 13 secs $\mu = 4.$
	Bombay	E	eP e PP eS ScS PPS SSS M	11	54	57 55 11 57 31 12 04 19 04 45 05 17 09 19 34 42	8020	Slight. Per. = 12 secs $\mu = 5.$

Earthquake Reports
Non-Instrumental Reports

The following table contains a list of earthquakes that were recorded by Voluntary Observers from various station.

Place at which felt	Date	G.M.T. of earthquake h. m. s.	Duration in secs	Intensity R.F.scale	No. of shock	Remarks
thagudium (eccan)	5-1-54	23-45-00	10	V	5	Sounds like blasting in the underground heard.
illong	6-1-54	11-00-00	8	-	1	
uhati	11-1-54	01-23-00	15	V	1	
inagar	17-1-54	08-49-00	12	IV	3	



GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

February, 1954.

*
*
* * * * *
*
*

Published under the direction of
Dr. S.C. Roy, D.Sc.(Lond.), F.N.I.,
Director General of Observatories.

INSTRUMENTS AND THEIR CONSTANTS

Station	Instrument	Compt.	Period in secs	Static Magni- fication	Damping ratio	Paper speed mm/minute
Dibrugarh	Milne-Shaw	N-S	12	350	20:1	16
	Milne-Shaw	E-W	12	350	12:1	8
	Sprengnether	E-W	To = Tg = 7			30
Dumraon	Milne-Shaw	E-W	12.0	250	20:1	16
	Wood-Anderson	N-S	1.0	1000	30:1	60
	Wood-Anderson	E-W	1.0	1000	30:1	60
	Benioff short period	Z	To = 0.72 Tg = 0.45	-	Es = 2.3:1 Eg = Critical	60
Lucknow	Milne-Shaw	E-W	10	150	20:1	8
	Wood-Anderson	N-S	2	870	Critical	30
	Omori-Ewing	N-S	18	32	-	25.4
	Omori-Ewing	E-W	19	30	-	25.4
Ambo	Milne-Shaw	E-W	11.8 secs from 1.2. 54 to 15.2.54 12.0 secs from 15.2.54 to 28.2.54	250	17:1 from 1.2.54 to 15.2.54 20:1 from 15.2.54 to 28.2.54	8
Dungra	Wood-Anderson	N-S	1	1000	30:1	60
	Wood-Anderson	E-W	1	1000	30:1	60
	Milne-Shaw	N-S	12	250	20:1	16
Deerabad	Milne-Shaw	E-W	12	253	20:1	8
	Milne-Shaw	N-S	12	251	20:1	8
Daikanal	Milne-Shaw	E-W	10.0	250	20:1	8
Madras	Sprengnether Microseismo- graph	E-W	To = Tg = 7.4 secs			30
New Delhi	Milne-Shaw	N-S	12	288	20:1	8
	Wood-Anderson	N-S	4	1070	20:1	16
	Wood-Anderson	E-W	2	1841	30:1	60
	Omori-Ewing	E-W	28	30	1	12
Bonga	Sprengnether Microseismo- graph	Z	To = 1.5 Tg = 1.5			30
	Milne-Shaw	N-S	12	250	20:1	8
	Wood-Anderson	E-W	4	1100	20:1	16
Shillong	Milne-Shaw	N-S	12	250	20:1	8
	Wood-Anderson	N-S	4.0	1000	20:1	30
	Wood-Anderson	E-W	0.8	1000	h = 0.8	30
	Wood-Anderson	N-S	0.8	1000	h = 0.8	30
	Benioff seis- mograph	Z	To = 1.0 Tg = 0.18	1000	h = 0.8	60



DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS
				h. m. s.	km.	
Feb. 1954						
01	Dehra Dun	NE	e	00 38 17		Feeble.
			i	38 35		
01	Epc:					24° N., 143° E.; 0 = 01h 06m 48s (U.S.C.G.S.) 24½° N., 143½° E.; 0 = 01h 06m 53s (B.C.I.S.) 25° N., 144° E.; 0 = 01h 06m 58s (CMO, Japan) 22° N., 142.5° E. 0 = 01h 06m 56s (Shillong). Mag. - 7½ (Wellington), 7¼ (Pasadena), 7 (Uppsala, Kiruna, Praha, Hurbanovo), 6¾ (Strasbourg).
	Shillong	Z	eP	01 15 20	5260	Moderate.
		N	e	21 57		
			eS	22 15		
			PPS	22 27		
			SS	25 12		
			LQ	25 46		
			SSS	26 09		
			LR	27 50		
			M	31 20		
	Chatra	Z	iPX	01 15 51	5520	Slight.
		E	ePX			
			PcP	17 27		
			PP	17 50		
			?	18 15		
			PPP	18 45		
			PcS	21 11		
			iS	23 00		
			PS	23 11		
			PPS	23 23		
			ScS	25 45		
			SS	26 42		
			LQ	27 45		
			LR	30 19		
			M	34 38		Per. = 20 secs μ = 6.5.
	Calcutta	E	iP	01 15 56	5450	Moderate. First movement West.
			PcS	21 14		
			iS	23 01		
			ScS /	25 48		
			LR	29 58		
			M	34 01		
			Mn ₁	37 36		Per. = 20 secs μ = 105.
			Mn ₂	45 17		Per. = 15 secs μ = 67.
	Dehra Dun	NE	eP	01 16 44	6490	Moderate.
			PcP	17 25		
			PP	18 49		
			PPP	20 25		
			PcS	21 27		
			iS	24 46		
			PS	24 56		
			PPS	25 30		
			ScS	26 20		
			SS	28 51		
			SSS	31 07		
			LQ	31 32		
			LR	34 17		
			M	39 15		
			e	16 48		
			i	17 22		
			i	17 59		

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Feb. 1954 01 Contd.	New Delhi	NE E N NE N	eP PcP PP PPP iS ScS SS M	01 16 50 17 57 18 58 20 13 24 50 26 36 28 49 38 19	6450	Moderate.
	Madras	EW	iP PcP PP PPP PcP iS PS PPS ScS SS SSS LQ LR	01 17 05 17 43 19 22 20 49 21 40 25 15 25 36 25 46 26 42 29 09 31 45 32 18 35 09	6830	Moderate.
	Hyderabad	EN E EN N E N	iP PcP iS PS SS L M M	01 17 05 17 51 25 17 25 32 29 20 35 51 41 06 41 27	6660	Per. = 21 secs μ = 30. Per. = 21 secs μ = 20.
	Colombo	E	P	01 17 20		
	Kodaikanal	EW	iP PP PPP iS SS LQ LR M	01 17 28 19 46 21 25 25 58 30 13 33 43 36 43 42 04	7000	Slight. Per. = 21 secs μ = 29.
	Poona	ZE E	iP PcP PP e e S SS e M	01 17 30 17 59 19 43 21 07 25 27 26 07 30 01 32 49 42 01	7000	Moderate.
	Bombay	NE E N NE	iP PcP PcP i i PP PPP	01 17 35 18 05 18 13 18 29 19 05 20 05 21 38	7240	Great.



DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
							△ km.
Feb. 1954							
01	Bombay	N	PcS	01	22	13	
Contd.	Contd.	NE	iS		26	18	
		E	i		26	24	
		N	i		26	31	
		NE	PS		26	41	
		N	PPS		26	47	
			ScS		27	28	
			SS		30	19	
		E	SS		30	24	
		N	SSS		33	23	
02	Epc: 80° N., 7° E. Off North East Coast of Greenland; 0 = 17h 45m 45s G.M.T. (U.S.C.G.S.) 83½° N., 3° W. 0 = 17h 45m 44s (B.C.I.S.) Mag. - 6 (Uppsala), 5¾ - 6 (Kiruna).						
	Poona	E	eP(?)	17	56	29	
			e		58	49	
			e	18	00	32	
			i		06	26	
			i		09	27	
02	Hyderabad	E	M	18	28	27	Per. = 15 secs $\mu = 3$
03	Epc: 36½° N., 70° E. Hindukush; 0 = 15h 56m 51s (U.S.C.G.S.).						
	Dehra Dun	NE	eP	15	59	04	900 Moderate.
			PP		59	12	
			PPP		59	17	
			P*		59	22	
			Pg		59	45	
			LQ	16	00	26	
			iS		00	37	
			SS		00	49	
			LR		00	50	
			SSS		01	01	
			S*		01	07	
			Sg,M		01	32	
	New Delhi	NE	iP	15	59	16	950 Slight.
			PP		59	24	
			PPP		59	31	
			iS	16	00	54	
			SS		01	05	
		N	SSS		01	16	
			i		01	35	
	Chatra	Z	eP	16	00	54	Slight, near.
			i		03	55	
	Bombay	E	eP	16	00	56	Slight.
			PP		01	11	
			PPP		01	16	
			i		01	44	
			i		02	04	
		**	e(S)		04	07	
			e		04	44	
			LR		04	52	
		**	SS		04	24	





DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
				6			
				△			
				km.			
Feb. 1954							
03	Shillong	Z	eP	16	01	43	2270 Slight.
Contd.		N	e		05	28	
	Poona	E	i	16	01	57	
			i		02	55	
			i		06	47	
	Madras	E	e	16	02	02	Slight.
			e		06	41	
03	Epc: 45½° N., 148½° E. Kurile Island; h = 100 km ca; 0 = 18h 23m 53s (U.S.C.G.S. and B.C.I.S.) 44½° N., 149° E. h = 100 - 200 km; 0 = 18h 23m 58s (CMO, Japan).						
	Chatra	Z	iP	18	32	54	Slight, distant.
	Bombay	E	eP	18	34	43	7280 Slight.
			PcP		35	12	
			PP		37	10	
			PPP		38	46	
			PcS		39	08	
			eS		43	28	
			PS		43	48	
			PPS		44	02	
			ScS		44	18	
			i		47	08	
			SS		47	18	
			i		50	08	
			SSS		50	43	
04	Bombay	E	e	03	53	31	
			e		55	46	
			e	04	00	32	
			e		02	25	
04	Dehra Dun	NE	eP	19	06	55	300 Slight.
			P*		06	58	
			PP		07	02	
			Pg		07	03	
			LQ		07	18	
			LR		07	25	
			iS		07	29	
			S*		07	33	
			SS, Sg, M		07	39	
			SSS		07	50	
05	Epc: 4½° S., 153° E. Off the Coast of New Britain; 0 = 09h 19m 42s (U.S.C.G.S.) 5° S., 153° E. 0 = 09h 19m 46s (B.C.I.S.) Mag. - 7.1 (Christchurch), 6¾ - 7 (Pasadena), 6¾ (Skalnate Pleso), 6.7 (Wellington), 6½ - 6¾ (Kiruna), 6½ (Praha, Berkeley).						
	Shillong	Z	iP	09	30	23	7330 Moderate.
		N	S		39	10	



 DATE STATION COMPT. PHASE G. M. T. Δ REMARKS

 h. m. s. km.

Feb.
 1954
 05
 Contd.

Chatra Z iPY 09 31 05 7870 Slight.
 NE ePY
 E PcP 31 28
 PP 33 28
 PPP 35 24
 iS 40 20
 PS 40 47
 PPS 40 59
 SS 44 48
 SSS 47 22
 LQ 49 18
 LR 52 28
 M 58 36

Colombo E (P) 09 31 23
 (S) 40 52
 L 55 09
 M 59 37

Madras E iP 09 31 29 8200 Moderate.
 PcP 31 40
 PP 34 19
 PPP 36 08
 iS 41 00
 SKS 41 22
 ScS 41 31
 PS 41 49
 PPS 42 06

Hyderabad E iP 09 31 44 8440
 PP 34 53
 EN iS 41 27
 E PS 41 57
 SS 46 24
 L 56 41
 M 10 01 23
 N M 02 03

Per. = 23 secs μ = 19.
 Per. = 22 secs μ = 22.

Kodaikanal EW iP 09 31 45 8445 Slight.
 PP 34 45
 PPP 36 36
 iS 41 28
 SS 46 28
 LQ 52 22
 LR 56 04
 M? 10 02 34

Per. = 27 secs μ = 48

Dehra Dun NE eP 09 32 00 8690 Moderate.
 PcP 32 04
 PP 35 02
 PPP 36 54
 eS and
 SKS 41 55
 ScS 42 10
 PS 42 44
 PPS 42 58
 SS 47 10



							8			
DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS				
							h. m. s.	km.		
Feb. 1954										
05	Dehra Dun	NE	SSS	09 50 33						
Contd.	Contd.		LQ	53 35						
			LR	57 22						
			M	10 03 54						
	New Delhi	NE	eP	09 32 01	8690	Moderate.				
		N	eS	41 56						
			SKS	42 14						
			PS	42 41						
			PPS	43 01						
			SS	47 07						
	Poona	EWZ	iP	09 32 08	8930	Moderate.				
		EW	PP	35 21						
			PPP	37 06						
			eS	42 14						
			ScS	42 18						
			PS	43 03						
			SS	47 37						
			SSS	51 09						
		NS	LQ	54 13						
			LR	57 59						
			M	10 05 12						
	Bombay	N	ePY	09 32 14	9330	Great.				
		E	iPY							
		NE	i	32 31						
			PP	35 26						
			PPP	37 30						
			SKS	42 23						
		N	SKS ₁	42 31						
		NE	iS	42 38						
		N	ScS	42 54						
		E	i	43 08						
		NE	PS	43 36						
			PPS	43 55						
		E	SS	48 14						
		N	SS	48 18						
			SSS	51 38						
		E	SSS	51 44						
		NE	LQ	55 --						
05	Bombay	E	i	15 31 38		Distant.				
			i	37 28						
			e	40 30						
			i	56 37						
			i	16 00 32						
05	Dehra Dun	N	e	17 03 40		Feeble.				
			i	03 55						
06	Bombay	E	e	04 58 09		Very feeble.				
			i	58 30						
			i	05 00 10						
			e	03 50						
06	Colombo	S	M	05 03 59						



DATE STATION COMPT. PHASE G. M. T. Δ REMARKS

 h. m. s. km.

Feb.
 1954
 07

Epc: 15° S., 167½° E. New Hebrides; h = 100 km ca
 O = 06h 15m 21s G.M.T. (U.S.C.G.S.)
 Magnitude - 6½ - 6¾ (Berkeley), 6 (Pasadena).

Chatra	Z	iP	06 28 10		Slight, distant.
	E	i	38 26		
Poona	ZE	eP	06 28 55	9360	Feeble.
	E	eS	39 20		
Bombay	E	eP	06 29 02	10700	Moderate.
		PP	33 02		
		i	33 29		
	N	e	34 14		
	E	PPP	35 09		
	NE	SKS	39 25		
	E	SKKS	39 51		
	N	i	40 17		
	E	iS	40 19		
	N	e	41 50		
	E	PS	41 55		
	N	eX	43 15		
	E	iX			
		SS	47 01		
		SSS	50 33		

Hyderabad	E	e	06 36 54		
		e	38 55		
	N	L	39 23		
	E	M	40 32		
	N	M	40 33		

Per. = 11 secs μ = 4.
 Per. = 10 secs μ = 2.

Colombo	S	S	06 38 36		
		M	45 01		

07	Dehra Dun	N	e	15 56 54		Tremor.
08	Poona	Z	eP	00 48 11		Tremor.
08	Shillong	Z	iP	05 46 01		Slight, near.
08	Shillong	Z	iP	08 42 03	160	Slight.
			PP	42 10		
			eSg	42 25		
08	Poona	Z	eP	13 01 05		Tremor.

08 Epc: 22½° S., 68° W., Chili-Bolivia Boarder; h = 150 km ca;
 O = 14h 19m 09s (U.S.C.G.S.)
 Damages at Calama, Chili.

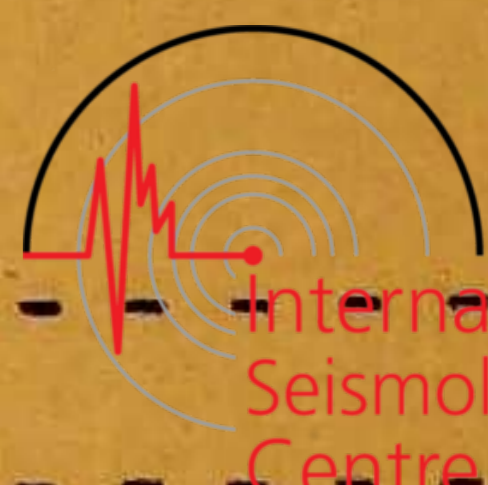
Bombay	NE	ePKP ₁	14 38 33	15890	Distant, moderate.
	E	i	39 05		
	N	e	41 14		
	E	PP	41 47		
		i	42 15		
	N	BPP	45 07		
	E	e	48 29		
	NE	PS	52 28		
	E	e	56 35		
	NE	eSS	15 00 24		



DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS
				h. m. s.	km.	
<u>Feb.</u>						
1954						
08	Poona	Z	ePKP	14 38 34		Feeble, phases not developed.
Contd.						
	Dehra Dun	N	ePKP i	14 38 44 39 21		Slight, phases not clear.
	Chatra	Z	ePKP	14 38 54		Slight, distant.
08	Bombay	E	e e e	18 54 28 19 03 55 11 30		
08	Shillong	N	e	19 07 05		Tremor.
09	Shillong	Z	eP P* Pg eSg	11 23 42 23 46 23 50 24 26	300	Slight.
09	Epc: 53° N., 166½° W. Aleutian; h = 100 km ca; O = 17h 39m 40s (U.S.C.G.S.).					
	Chatra	Z	i	17 51 30		Slight, distant.
	Bombay	N NE N E N E	i eP eX iX e SKKS	17 52 40 52 54 53 08 54 38 18 03 42	10245	Feeble.
			iS PS PPS	03 55 05 18 05 54		
09	Poona	Z	eP	17 53 41		Tremor.
09	Poona	Z	eP	18 12 15		Tremor.
09	Shillong	N	e M	18 19 25 25 40		Distant, slight.
09	Dehra Dun	N	e i i	19 30 58 32 27 33 37		Slight, phases not clear.
	Poona	Z	eP	19 38 08		Tremor.
09	Shillong	ZEN EN	iP iSg	23 53 41 53 49	65	Slight, felt.
10	New Delhi	NE	iP PP PPP i iS SS SSS LR M	00 35 15 35 44 35 57 36 09 39 20 40 02 40 17 41 00 42 39	2520	Moderate, direction of first motion North and East.




<u>11</u>						
DATE	STATION	COMPT.	PHASE	G. M. T.	\triangle	REMARKS
				h. m. s.	km.	
<u>Feb. 1954</u>						
10	Dehra Dun	NE	e i	05 26 51 28 09		Feeble, phases not clear.
	Poona	Z	e?	05 29 36		Tremor.
10	Shillong	Z	iP	17 21 23		Slight, near.
	Calcutta	N	eP LQ ? iS SS?	17 22 24 23 28 23 34 23 38 23 45	710	Slight.
	Poona	Z	eP	17 27 26		Tremor.
	Bombay	NE	e i	17 28 17 29 52		Very feeble.
11	Epc: $39\frac{1}{2}^{\circ}$ N., 101° E. 0 = 00h 30m 13 s. Felt over the district of Lanchow (U.S.C.G.S.) 39° N., $101\frac{1}{4}^{\circ}$ E. 0 = 00h 30m 13s (B.C.I.S.) 41° N., $100^{\circ}5$ E. 0 = 00h 30m 10s (Shillong). Mag. - $7\frac{3}{4}$ (Hurbanovo), $7\frac{1}{2}$ (Strasbourg), 7.4 - 7.5 (Shillong), 7.3 (Praha), $7\frac{1}{4}$ - $7\frac{1}{2}$ (Pasadena), $7\frac{1}{4}$ (Skalnate Pleso), 7 - $7\frac{1}{2}$ (Berkeley, Kiruna, Uppsala).					
	Shillong	ZEN NE	iP PP PPP LQ iS SS SSS M	00 33 52 34 05 34 14 36 48 37 01 37 31 37 47 38 32	1890	Moderate.
	Chatra	NEZ NE	eP PP PPP iS LQ SS SSS LR M\X M\X	00 34 10 34 26 34 34 37 30 37 33 37 52 38 06 38 22 39 44	2010	Great. Per. = 16 secs μ = 9
	Calcutta	E N E N E	iP eP PP iS iS LR	00 34 45 34 50 35 07 38 33 38 34 40 00	2310	Great, first movement West.
	Dehra Dun	NE	eP PP PPP PcP iS LQ SS SSS LR M	00 35 00 35 27 35 37 38 59 39 01 39 20 39 39 39 53 40 21 42 22	2490	Moderate.



International
Seismological
Centre

12

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Feb. 1954						
11	Hyderabad	EN	iP	00 36 19		
Contd.		N	PP	37 55		
		EN	iS	41 08		
		E	SS	42 57		
			L	45 26		
		N	M	47 24		Per. = 15 secs $\mu = 19$
		E	M	47 32		Per. = 15 secs $\mu = 28$
	Poona	Z	iP	00 36 39	3480	Moderate.
		EW	PP	37 38		
			PPP	37 56		
			PcP	39 25		
			eS	41 46		
			LQ	43 25		
			SSS	43 53		
			LR	44 44		
	Bombay	NE	iP	00 36 44	3550	Moderate.
		E	PP	37 44		
		N	PPP	38 09		
		E	PPP	38 12		
		NE	iS	41 55		
		N	LQ	43 38		
			SSS	44 11		
			LR	45 07		
			M	47 --		
	Madras	EW	iP	00 36 44	3480	Great.
			PP	37 50		
			PPP	38 07		
			iS	41 51		
	Kodaikanal	EW	iP	00 37 16	4100	Moderate.
			PP	38 46		
			iS	43 01		
			SS	45 34		
			LR	47 22		
			M	50 25		
	Colombo	S	P	00 37 30	4210	
			S	43 22		
			L	47 17		
			M	52 02		
11	Poona	EW	M	00 47 21		
11	Shillong	Z	e	03 01 53		Slight.
			i	02 02		
11	Shillong	Z	e	04 57 19		Slight.
			i	57 28		
11	Shillong	Z	iP	12 18 17		Slight.
11	Dehra Dun	NE	e	18 16 23		Slight, phases not
			i	17 49		identifiable.
11	Poona	Z	eP	21 15 37		Tremor.
11	Shillong	Z	e	23 40 24		Slight.
			i	40 33		



DATE	STATION	COMPT.	PHASE	G. M. T.			△	REMARKS
				h.	m.	s.	km.	
<u>Feb.</u> 1954								
12	Poona	Z	eP	01	54	00		Tremor.
	Bombay	E	eP	01	54	11	3490	Slight.
			e		54	57		
			e _z		56	14		
			e _z		59	05		
			eS		59	19		
			i	02	01	05		
			e		04	31		
12	Epc: Off the Coast of Java; O = 21h 22m 30s (U.S.C.G.S.) 6° S., 110½° E. O = 21h 22m 31s (B.C.I.S.)							
	Chatra	Z	i	21	30	14		Slight, distant.
	New Delhi	NE	eP	21	31	10	4520	Slight.
			PP		32	48		
		N	iS		37	21		
			PPS		37	38		
			SS		40	03		
	Bombay	E	i	21	32	31		Slight.
			i		33	26		
			i(S)		36	53		
			i		39	16		
			i		39	50		
	Dehra Dun	NE	e	21	37	31		Tremor.
12	Poona	ZE	eP	22	30	43		Slight, phases not clear.
14	Bombay	E	e	04	50	03		Movement continues for some times.
			e		54	02		
			i		54	12		
	Poona	Z	i	04	50	14		Tremor.
14	Shillong	Z	Pg	06	56	00	100	Slight.
			Sg		56	12		
14	Poona	Z	i	07	01	37		Tremor.
	Bombay	E	i	07	01	55		
			e		05	16		
			i		05	25		
14	Shillong	Z	e	09	58	19		Slight, near.
			i		59	13		
14	Shillong	Z	e	13	54	06		Slight, near.
			e		55	15		
			i		55	39		
14	Shillong	Z	e	15	40	03		Slight, near.
			e		40	56		
14	Shillong	Z	e	16	10	03		Slight, near.
			e		10	29		



DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Feb. 1954						
14	Shillong	Z	e	22 44 38		Slight, near.
			e	44 49		
15	Poona	Z	e	02 42 27		Tremor.
15	Bombay	E	e(P)	03 42 30		Distant shock, feebly recorded.
			e(PP)	45 32		
			e	04 01 18		
15	Poona	Z	e	16 00 35		Tremor.
15	Dehra Dun	NE	e	19 08 27		Feeble.
			e	09 32		
15	New Delhi	NE	iPg	19 23 40	44	Slight, direction of first movement East.
			iSg	23 45		
	Dehra Dun	NE	eP	19 24 05	190	Slight, near.
			P*	24 06		
			PP	24 12		
			iS	24 28		
			LR	24 29		
			S*	24 32		
			SS	24 37		
			SSS	24 49		
	Shillong	Z	e	19 29 09		
15	Bombay	E	e	20 10 46		Possibly distant shock of slight intensity.
			e	11 12		
			e	14 10		
			e	26 40		
	Poona	Z	e	20 10 50		Tremor.
16	Epc:	34° N., 74 $\frac{3}{4}$ ° E.;		0 = 02h 23m 32s (B.C.I.S.)		
		34° N., 74° E.;		0 = 02h 23m 41s (Shillong).		
	Dehra Dun	NE	eP	02 24 56	550	Moderate.
			PP	25 04		
			PPP	25 11		
			Pg	25 17		
			LQ	25 40		
			iS	25 54		
			LR	25 55		
			SS	26 03		
			S*	26 06		
			SSS	26 14		
			Sg	26 17		
	New Delhi	NE	eP	02 25 12	640	Slight.
		E	PP	25 20		
		NE	PPP	25 27		
		E	i	25 30		
		NE	Pg	25 37		
			LQ	26 07		
			iS	26 20		
		E	LR	26 27		
		NE	SS	26 31		
			i	26 46		
			Sg	26 55		

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Feb. 1954						
16	Poona	Z	eP	02 27 19		Slight.
Contd.		E	PP	27 27		
			e(S)	30 00		
			M	31 47		
	Shillong	Z	eP	02 27 40		Slight.
			eS	30 46		
	Bombay	NE	e	02 29 05		Feeble.
		E	i	30 31		
		N	e	31 28		
			i	31 37		
	Hyderabad	E	i	02 32 38		
		N	M	34 06		Per. = 9 secs μ = 2.
17	Epc: $51\frac{1}{2}^{\circ}$ N., 160° E. Off the South East Coast of Kamchatka; O = 01h 38m 50s (U.S.C.G.S.) $52\frac{1}{2}^{\circ}$ N., 160° E. O = 01h 38m 52s (B.C.I.S.) Magnitude - $6\frac{1}{4}$ (Kiruna, Uppsala), 6 (Roma).					
	Shillong	Z	e	01 48 42		Slight.
		N	e	56 41		
	Chatra	Z	iP	01 48 56		Slight.
		E	e	02 12 --		
	Hyderabad	E	i	01 50 13		
			i	59 31		
			e	59 45		
		N	M	02 19 15		
		E	M	19 20		
	Poona	ZE	e	01 50 27		Slight.
		E	e	59 51		
			M	02 20 54		
	Bombay	NE	i	01 50 30		Slight.
			e	50 42		
		E	e	53 23		
		NE	e	55 03		
		N	i	02 00 00		
			e	00 37		
		E	e	00 50		
		N		00 53		
			M	26 12		Per. = 15 secs μ = 3
		E	M	26 45		Per. = 15 secs μ = 3
17	Shillong	N.	1	08 58 14		Tremor.
17	Epc: $51\frac{1}{2}^{\circ}$ N., 160° E., Off the South East Coast of Kamchatka; O = 08h 57m 54s (U.S.C.G.S.).					
	Shillong	N	eP	09 07 48		Tremor.
	Bombay	E	e(P)	09 09 39		Feeble.
			e(S)	19 09		
			PPS	20 04		
			e	23 13		
	Poona	Z	eP	09 09 35		Tremor.

DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954								
17	Shillong	N	i	09	30	21		Tremor.
17	Poona	Z	eP	10	37	13		Tremor.
17	Dehra Dun	N	e	11	45	07		Tremor.
	Shillong	Z	i	11	45	15		Tremor.
	Chatra	Z	i	11	45	36		Slight, distant.
	Bombay	E	iP PcP eS PS PPS LQ	11 47 47 56 56 56 12	19 43 17 39 53 39		7510	Feeble.
17	Poona	Z	eP	12	03	35		Tremor.
17	Dehra Dun	NE	e i	15 22	22 57	45		Feeble.
17	Shillong	Z	e	19	36	36		Tremor.
	Dehra Dun	N	e	19	38	29		Tremor.
18	Hyderabad	E EN E N	eP eS M M	00 42 54 54	35 43 19 34	31	5570	Per. = 10 secs $\mu = 2$. Per. = 12 secs $\mu = 2$.
	Shillong	Z	eP	00	36	37		Feeble.
	Poona	Z	eP	00	38	52		Tremor.
	Bombay	NE E NE E	eP PPP S/LQ SS SSS	00 43 46 46 47	16 38 31 58 09		1960	Very feeble.
	Chatra	Z	e	00	44	43		Slight, distant.
18	Poona	Z	eP	00	47	14		Distant, phases not clear.
	Bombay	NE N E	eP PP PPP eS SS SSS	00 51 51 52 54 55 55	39 55 02 58 17 35		2000	Very feeble.
8	Dehra Dun	N	e	04	29	45		Tremor.
8	Dehra Dun	NE	i i	06 42	26 35			Slight, phases not clear.



International
Seismological
Centre

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



eb.
954
9
Epc: $11\frac{1}{2}^{\circ}$ N., $87\frac{1}{2}^{\circ}$ W. Off the Coast of Nicaragua;
O = 00h 40m 25s (U.S.C.G.S.)

Felt at Managua.

Magnitude - 7.0 (Prahá), $6\frac{3}{4}$ - 7 (Pasadena), $6\frac{1}{4}$ (Roma, Strasbourg, Tacubaya).

Chatra	Z	ePKP	01	00	01		Slight, very distant. Surface waves.
	E	e		53	--		
Shillong	Z	ePKP	01	00	01		Slight.
	N	ePKP ₁		00	01		
		PP		03	08		
		PKS		03	48		
		PS		13	26		
		PPP ₂		15	06		
		PPS		15	15		
		SS		21	22		
		SSS		26	34		
		LQ		39	34		
		LR		46	15		
	M		58	12			
Poona	Z	ePKP	01	00	11		Distant, phases not clear.
Hyderabad	N	ePKP	01	00	17		Per. = 22 secs μ = 13.
	E	M	02	02	20		
Bombay	E	1PKP ₁	01	00	21		Distant.
	N	PP		02	22		
		PKS ₂		04	16		
	E	PPP		06	53		
	N	PPP		06	56		
	E	e		10	35		
	N	e		13	17		
		PS		14	14		
	PPS		16	13			
Colombo	E	L	02	02	22		Amp = 0.3mm.
		M		13	22		
19	Dehra Dun	NE	e	12	32		Slight, phases not clear.
i				33	16		
i				33	52		
i				35	21		
19	Epc: 45° N., $91\frac{1}{2}^{\circ}$ E. Sinkiang China, O = 13h 28m 26s (USCGS) Magnitude - 6 (Kiruna, Uppsala), $5\frac{3}{4}$ (Prahá).						
Chatra	Z	e(P)	13	32	46		Slight, near.
	E	e(S)		36	09		
		e		38	56		
New Delhi	NE	eP	13	32	59	2190	Slight.
		i		33	07		
		PP		33	19		
	E	PPP		33	28		
	N	i		33	34		
		iS		36	36		
		M		39	29		

DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954 19 Contd.	Shillong	Z	i	13	33	00		Slight.
		N	iS LQ M		36 39 42	38 53 38		
	Calcutta	E	e i i	13	34	34		Slight, near.
	Poona	EZ E	eP e(S)	13	34	39	4110	Slight, phases indefinite.
	Bombay	N E NE N E NE	e e i i e i i	13	35	08		
	Hyderabad	N E N	e M M	13	39	29		Per. = 12 secs μ = 3. Per. = 12 secs μ = 3.
19	Hyderabad	N	M	15	01	26		Per. = 24 secs μ = 8.
19	Epc: 30° S., 178° W. Kermadec Island; 0 = 19h 07m 44s (USCGS) Felt at Raoul Island (Press report from Wellington) Mag. - 7 - 7½ (Wellington), 7 - 7½ (Berkeley), 7.0 (Praha), 7 (Roma, Pasadena), 6½ (Kiruna, Uppsala, Strasbourg), 7½ (Hurbanovo).							
	Shillong	Z N	eP ePKP ₁ e i i i i i i M	19	21	48		Moderate.
	Colombo	E	(P) (S) L M	19	22	01		Amp = 0.6 mm.
	Chatra	Z E	eP e	19	22	08		Slight, distant.
	Bombay	N E NE E N E	ePKP ₁ e PP i PPP PS e e M M	19	26	08		Distant.
								Per. = 18 secs μ = 6. Per. = 21 secs μ = 8.



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS	
				h.	m.	s.			
Feb. 1954 Contd.	Poona	E	e(P)	19	26	14	10200	Moderate.	
			PPP		30	05		(?)	
			eSKS		37	13			
			PS		38	32			
			PPS		39	15			
			LQ		52	44			
			M		55	18			
	Calcutta	E	PP	19	26	21	10330	Moderate.	
			SKS ₂		32	48			
			PS		35	41			
			PPS		36	47			
			SS		41	15			
			SSP		41	34			
			M	20	07	53			
Mn		14	21		Per. = 20 secs μ = 40.				
	New Delhi	E	ePKP	19	26	30		Moderate.	
			e		37	24			
	Hyderabad	N	PPP	19	29	27			
			E	e		36	33		
			N	e		42	52		
			E	L		54	54		
			N	M	20	04	18		Per. = 18 secs μ = 11.
			M		04	21		Per. = 20 secs μ = 18.	
19	Epc: $12\frac{1}{2}^{\circ}$ N., $87\frac{1}{2}^{\circ}$ W. Off the Coast of Nicaragua; $0 = 21$ h 34m 41s (U.S.C.G.S.) $11\frac{3}{4}^{\circ}$ N., 88° W. $0 = 21$ h 34m 45s (B.C.I.S.) Felt at Managua and San Salvador (U.S.C.G.S.) Magnitude - 7.1 (Praha), $6\frac{3}{4}$ - 7 (Pasadena), $6\frac{3}{4}$ (Kiruna, Roma), $6\frac{1}{2}$ - $6\frac{3}{4}$ (Strasbourg), $6\frac{1}{4}$ (Uppsala, Tacubaya).								
	Shillong	Z	ePKP	21	54	10		Slight.	
	Chatra	Z	ePKP	21	54	13		Slight, distant.	
	Poona	Z	ePKP	21	54	20		Moderate, very distant.	
	Bombay	N	e	21	54	24		Phases not clear.	
e				56	50				
e				57	42				
	Calcutta	E	e	21	54	33		Slight, distant.	
	Colombo	E	PKP	21	54	43			
e			22	06	21				
L				58	51				
M			23	08	49		Amp = 21 secs μ = 11.		
	Hyderabad	E	M	22	50	22		Per. = 21 secs μ = 11.	
N			M		50	31			



International
Seismological
Centre

DATE	STATION	COMPT.	PHASE	G. M. T.			△	REMARKS
				h.	m.	s.		
Feb. 1954	Epc: 7° S., 124½° E. Flores Sea; h = 600 km ca, 0 = 18h 35m 05s (U.S.C.G.S.)							
	6°9 S., 124°5 E., h = 600 km ca; 0 = 18h 35m 07s (B.C.I.S.)							
	Magnitude - 7.2 (Wellington), 6¾ - 7 (Kiruna), 6¾ (Hurbanovo), 6½ - 6¾ (Pasadena), 6½ (Uppsala, Skalnate Pleso).							
	Shillong	Z N	iP iP i ipP i S isS i M	18	42	36		Moderate.
	Calcutta	E N E NE E	iP iP PP iS SS	18	42	43	4590	Moderate, first movement West and South.
	Colombo	E	iP S L M	18	42	44		Amp = 41 mm.
	Madras	E	iP PP PcP PPP ScP S SS LQ LR	18	43	01	4600	Moderate.
	Chatra	Z E	iPY ePY PP PcP PPP iS PS PPS SS LQ SSS LR M	18	43	08	4780	Moderate, probably deep focus.
	Hyderabad	EN E N E EN N E	iP i e iS iS i SS L M M	18	43	21	4990	Per. = 12 secs μ = 13. Per. = 11 secs μ = 9.



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954 Contd.	Dehra Dun	NE	eP i pP iS e e e e	18	43	33		Moderate.
20	Poona	Z N E N E N E N	iP i sP PcS eS ScS SS LQ SSS LR M	18	43	53	5490	Moderate.
	Bombay	NE N NE E N NE E N E N N	iP i PcP pP PP PPP i i iS i ScS ScS SSS SSS SSS(LQ)	18	44	01	6390	Moderate, and deep.
	New Delhi	NE E N NE N	iP PcP pP PP i iS sS SS i LR	18	44	05	5630	Moderate, deep focus. Direction of first motion East.
20	Kodaikanal	E	e	19	26	30		Per. = 18 secs μ = 23.
20	Shillong	Z N	iP e	21	17	38		Slight.
20	Colombo	E	P M	21	46	51		Amp = 0.2 mm.
	Hyderabad	E	e	21	57	13		



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954								
21	Dehra Dun	NE	eP iS S* SS SSS	06	51	41	220	Slight, other phases not clear.
21	Poona	Z	e	09	53	18		Tremor.
21	Shillong	Z	i(P) i i	11	49	09		Slight, tremor.
21	Shillong	Z	i	14	32	34		Slight.
21	Shillong	Z	iPg eSg	14	37	54	70	Slight.
21	Shillong	Z	iP i	16	20	39		Slight.
	Poona	Z	e	16	22	04		Tremor.
21	Kodaikanal	E	iP PP S SS LQ LR M	18	43	13	4890	Moderate.
21	Shillong	Z	iP	19	04	01		Slight.
21	Shillong	Z	iP	19	39	04		Slight.
21	Kodaikanal	E	e	22	22	37		Presumably after shock.
22	Dehra Dun	NE	eP PP P* Pg LQ iS SS LR SSS S* Sg/M	01	18	55	900	Moderate.
	Shillong	Z	iP	01	21	26		Slight.
22	Epc: 34½° N., 141° E. Off the Coast of South Hondo, Japan; 0 = 06h 11m 26s (U.S.C.G.S.) 34°3 N., 141°7 E. h = 60 km ca; 0 = 06h 11m 28s . Felt (C.M.O., Japan) Magnitude - 6½ (Roma), 6 (Kiruna, Praha).							
	Shillong	Z	eP i	06	19	28		Slight, phases not clear.
		N	e e e(L)	25	52			
				29	34			
				33	37			



23

DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954								
22	Dehra Dun	N	e	06	21	34		Tremor.
Contd.	Poona	Z	e(?)	06	21	43		Tremor.
	Hyderabad	E	M	06	48	54		Per. = 24 secs u = 5.
22	Shillong	Z	iP	08	58	06		Slight.
		N	e(M)	09	26	44		
22	Shillong	Z	i	10	15	33		Slight.
	Poona	Z	e(?)	10	37	00		Tremor.
22	Shillong	Z	e	10	34	44		Slight.
			i		35	35		
		N	e		41	13		
			M		22	--		
22	Shillong	Z	iPg iSg	11	53	59	70	Slight.
					54	07		
22	Epc: 56 $\frac{1}{2}$ ^o S., 26 $\frac{1}{2}$ ^o W. Sandwich Island; 0 = 12h 03m 23s (U.S.C.G.S.)							
	57 $\frac{1}{2}$ ^o S., 26 $\frac{1}{2}$ ^o W. 0 = 12h 03m 23s (B.C.I.S.)							
	Mag. - 6.8 (Wellington), 6 $\frac{1}{2}$ (Skalnate Pleso), 6 $\frac{1}{4}$ (Kiruna, Uppsala, Praha).							
	Poona	Z	e(P)	12	21	27		Slight, phases doubtful.
		E	e		23	10		
			e		28	19		
			e		28	22		
			e		31	34		
			M		38	26		
	Colombo	E	PP	12	21	50		Amp = 0.2 mm.
			L		48	--		
			M		57	00		
	Shillong	Z	iPKP	12	22	28		Slight.
		N	ePKP		22	29		
			e(PP)		24	23		
			e(PPP)		26	43		
			e(SKS)		29	20		
			e		31	02		
			e		34	14		
			e		40	43		
			LR	13	01	--		
			M		10	--		
	Bombay	NE	PP	12	22	40	13220	Distant.
			SKS		28	23		
		N	e		29	25		
		NE	PS		31	57		
		N	PPS		33	12		
		E	PPS		33	15		
			e		34	22		
			SS		37	46		
			e		39	18		
		N	e		39	24		

DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954								
22	Hyderabad	EN	PP	12	22	46	12740	
Contd.		E	SKS		28	28		
		EN	SKKS		29	32		
			PS		32	13		
			SS		38	19		
		N	M		59	33		Per. = 15 secs μ = 4.
		E	M		59	38		Per. = 15 secs μ = 5.
	Calcutta	E	e	12	23	18		Slight, distant.
			e		25	02		
			i		29	12		
			e		30	13		
			i		40	32		
22	Shillong	Z	iP	18	44	12		Slight.
22	Shillong	Z	iP	22	09	00	130	Slight.
		E	eP		09	01		
		NE	iSg		09	16		
22	Shillong	Z	eP	22	23	03		Slight.
22	Shillong	Z	e	22	57	33		Slight.
			i		58	19		
			i		58	37		
23	Shillong	Z	iPg	02	54	54	120	Slight.
			iSg		55	08		
23	Shillong	Z	eP	05	47	48		Slight.
		ZN	i		48	17		
			e		49	03		
			e		49	38		
			e		49	50		
	Poona	Z	e	05	50	41		Very feeble.
	Bombay	NE	i	05	54	44		
		N	i		56	33		
		E	iX		57	18		
		N	eX					
	Hyderabad	E	M	05	57	16		Per. = 10 secs μ = 3.
23	Epc: 27 $\frac{1}{2}$ ^o N., 91 ^o E. Bhutan; 0 = 06h 40m 30s (U.S.C.G.S.)							
	27 $\frac{3}{4}$ ^o N., 91 $\frac{1}{2}$ ^o E. 0 = 06h 40m 33s (B.C.I.S.)							
	27 ^o N., 91 ^o E. 0 = 06h 40m 41s (Shillong)							
	Mag. - 6 $\frac{1}{2}$ - 6 $\frac{1}{2}$ (Kiruna), 6 (Skalnate Pleso, Praha, Strasbourg),							
	5 $\frac{3}{4}$ (Roma), 5.6 (Shillong). Felt at Shillong, Gauhati,							
	Lakhimpur, Tezpur etc.							
	Shillong	ZN	iP	06	41	13	200	Moderate.
		N	iSg		41	40		
	Chatra	Z	iPX	06	41	39	430	Moderate.
		NE	ePX					
			iPg		41	53		
			LQ		42	12		
			iS		42	35		
			S*		42	36		
			Sg		42	47		



STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
			h.	m.	s.		
Calcutta	NE E	iP	06	42	07	610	Great, first movement East.
		P*		42	18		
		Pg		42	27		
		iS		43	11		
		S*		43	31		
		Sg		43	46		
Dehra Dun	NE	eP	06	43	29	1280	Moderate.
		PP		43	37		
		PPP		43	43		
		P*		43	59		
		Pg		44	30		
		LQ		45	31		
		iS		45	39		
		SS		45	52		
		LR		46	01		
		SSS		46	04		
		S*		46	26		
		Sg/M		47	00		
New Delhi	NE	iP	06	43	35	1380	Moderate, direction of first movement East.
		PP		43	45		
		LQ		45	44		
		iS		45	55		
		SS		46	07		
		SSS		46	17		
		LR		46	27		
		M		47	28		
Hyderabad	E EN E	iP	06	44	14	1680	Per. = 15 secs μ = 100.
		iS		47	03		
		L		48	21		
		M		48	42		
Madras	E	iP	06	44	45	1950	Great.
		PP		45	02		
		PPP		45	07		
		iS		47	59		
		SS		48	18		
		SSS		48	35		
		LR		48	48		
		PcP		49	11		
		M		50	17		
		ScP		52	39		
ScS		56	11				
Poona	Z E N	iP	06	44	52	1920	Moderate.
		PP		45	04		
		PPP		45	25		
		eS		48	04		
	E N	SS		48	21		
		SSS		48	34		
		LR		48	50		
		M		50	19		
Bombay	NE N E	iP	06	45	04	2020	Moderate.
		PP		45	20		
		PPP		45	28		
		i		46	20		



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
Feb. 1954								
23	Bombay	N	LQ	06	48	21		
Contd.	Contd.	NE	iS		48	25		
			SS		48	42		
		N	i		48	49		
		E	i (SSS)		49	34		
		N	M		50	--		
		E	M		51	--		
	Kodaikanal	E	iP	06	45	31	2540	Slight.
			PPP		46	04		
			iS		49	10		
			LQ		49	38		
			SSS		50	34		
			LR		51	07		
			M		53	10		
	Colombo	E	P	06	45	48		
			(S)		50	04		
			M		58	--		Amp = 0.6 mm.
23	Shillong	Z	iP	14	08	06	200	Slight.
			iSg		08	33		
23	Shillong	Z	e	14	57	45		Feeble.
23	Shillong	Z	eP	15	11	12	210	Feeble.
					11	40		
23	Shillong	Z	iP	16	23	20	200	Slight.
			iSg		23	46		
23	Shillong	Z	eP	16	31	45	210	Slight.
			iSg		32	14		
23	Shillong	Z	eP	18	03	39		Slight.
23	Shillong	Z	eP	18	08	37	2120	Slight.
					09	07		
23	Shillong	Z	e	18	18	38		Feeble.
23	Shillong	Z	eP	18	22	56	270	Feeble.
			eSg			37		
23	Shillong	Z	iPg	20	03	03	210	Slight.
			iSg		12	59		
23	Shillong	Z	iPg	22	52	13		Slight, local.
23	Shillong	Z	eP	23	01	17	430	Slight.
			e(S)		02	04		
			i(Sg)		02	21		
24	Dehra Dun	N	eP	00	27	16	750	Slight.
			P*		27	32		
			eS		28	33		
			LR		28	42		
			SS		28	46		
			SSS		28	55		
			S*		28	57		
			Sg/M		29	15		





DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
24	Shillong	Z	eP eSg	02	00	53 01 22	210	Slight.
24	Shillong	Z	e(P) iSg	02	18	55 18 24	210	Slight.
24	Shillong	Z N	iP M	05	16	40 37 --		Slight.
	Hyderabad	E N	M M	06	27	41 29 01		Per. = 12 secs $\mu = 3.$ Per. = 15 secs $\mu = 3.$
24	Shillong	Z N E Z NE	iP eP eP iSg iSg	06	44	57 44 58 45 00 45 25 45 26	200	Slight.
	Chatra	Z	eP iS	06	45	26 46 12	425	Feeble.
24	Poona	Z	eP	12	16	28		Feeble.
	Shillong	Z N	eP i	12	17	01 25 52		Slight.
24	Poona	Z	i	17	28	36		Tremor.
	Bombay	NE	e e e	17	28	36 36 28 46 --		Feeble.
	Shillong	Z N	iP i e(L)	17	30	05 39 12 50 --		Slight.
24	Poona	Z	i	17	38	04		Tremor.
	Hyderabad	E	M M	17	46	41 46 48		Per. = 15 secs $\mu = 4.$ Per. = 15 secs $\mu = 4.$
24	Shillong	Z	eP	19	43	29		Slight.
	Poona	Z	i	19	47	25		Tremor.
	Bombay	N E N	e e e	19	56	39 56 48 57 35		Feeble.
24	Shillong	Z	eP i	20	52	38 54 18		Slight.
	Poona	Z	i	20	54	48		Feeble, phases not well developed.
25	Shillong	Z	ePg i	06	28	44 28 48		Slight.



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
1954	Shillong	Z	eP e	19	08	57 09 26	210	Slight.
	Poona	Z	i	22	34	59		Tremor.
	Shillong	Z	eP	22	35	04		Slight.
	New Delhi	NE	iP _g iS _g iS*	22	55	37 55 45 55 47	70	Slight, direction of first movement West.
	Dehra Dun	NE	eP PP iS S* S _g SS SSS	22	56	01 56 08 56 24 56 25 56 29 56 32 56 44	190	Slight, near.
25	Shillong	Z N	eP e M	23	59	45 00 09 35 16 --		Slight.
26	Poona	Z	i	00	01	59		Tremor.
26	Shillong	Z	iP	03	29	51		Slight.
26	Epc: (36°5 N., 70°5 E., h = 220 km) Hindu Kush. 0 = 18h 46m 27s (B.C.I.S.) 37° N., 71½° E. 0 = 18h 46m 04s (U.S.C.G.S.) 37° N., 70° E. h = 220 km; 0 = 18h 46m 11s (Shillong). Felt at Drosh and Cherat (Press report from Quetta).							
	Dehra Dun	NE	eP PP PPP LR i iS e e M	18	48	13 48 26 48 30 49 32 49 41 49 54 50 06 50 12 50 32	850	Moderate.
	New Delhi	NE E N NE	iP PP PPP i i i S i M	18	48	26 48 41 48 45 49 13 49 16 50 06 50 18 50 37 51 03	970	Slight.
	Chatra	Z NE	i(P) i(S)	18	49	59 52 55	1670	Slight, probably deep focus.



DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
1904 Contd.	Bombay	NE	eP	18	50	17	1950	Deep focus.
		N	e		50	29		
		NE	i		50	51		
		E	LQ(?)		53	20		
		NE	iS		53	32		
		N	e		54	10		
	Poona	Z	iP	18	50	20	2000	Slight.
		E	PP		50	32		
			PPP		50	47		
			eS		53	39		
			LQ		53	42		
			SSS		54	22		
			M		56	07		
	Calcutta	E	eP?	18	50	47		Slight.
			PPP?		51	25		
			iS?		54	29		
			SS		55	01		
	Shillong	ZN	iP	18	50	48	2450	Moderate.
		N	pP		51	26		
			sP		51	52		
			iS		54	31		
			sS		55	24		
	Hyderabad	N	iPP	18	51	13	1900	
		E	e		54	05		
		N	S		54	23		
		E	M		56	33		
		N	M		56	59		
	Madras	E	eP	18	51	24		Slight.
			PP		52	08		
			PPP		52	20		
			iS		55	50		
			LQ		56	37		
			SS		56	51		
			SSS		57	08		
			LR		57	48		
			ScP		58	15		
			e		19	10		
	Colombo	E	eP	18	52	20		
			e		58	15		
	Kodaikanal	E	(P)	18	52	26		Slight.
			(S)		56	53		
			LQ		57	56		
			e		58	32		
			LR		59	11		
			M		01	26		
27	Dehra Dun	N	e	03	32	40		Feeble.
			i		33	08		
27	Shillong	Z	ePg	08	05	47	100	Slight.
			iSg		05	57		

Per. = 6 secs μ = 6.
Per. = 6 secs μ = 2.

STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
			h.	m.	s.		
Shillong	Z	e	09	13	55		Slight.
Shillong	Z	iPg	10	16	11		Slight, local.
Shillong	Z	e	11	21	18		Slight.
Shillong	Z	iPg iSg	13	09	25 09 35	100	Slight.
Dehra Dun	N	e i	15	18	49 20 27		Feeble.
Shillong	Z N	iP eP i	23	46	51 46 58 57 07		Slight.
Calcutta	E	e i	23	46	56 57 27		Tremor.
Poona	Z	i	00	18	03		Tremor.
Epc: 27° N., 131° E. Riu Kiu Island; 0 = 00h 55m 22s. Felt along Southern Kiu-Shiu Japan (USCGS) 27° N., 130½° E. 0 = 00h 55m 24s (B.C.I.S.) 27¾° N., 131° E. h = 200 km; 0 = 00h 55m 35s (C.M.O. Japan). Magnitude - 5¾ - 6 (Pasadena), 6 - 6¼ (Uppsala), 6½ (Praha, Roma), 6½ - 6¾ (Strasbourg).							
Shillong	Z N	iP iS LR M	01	02	16 07 44 11 13 14 17	3820	Moderate. Per. = 24 secs μ = 56.
Chatra	Z E	iP X eP X PP PPP eS SS LQ SSS LR M	01	02	50 04 12 04 42 08 43 11 19 11 30 11 57 13 19 16 30	4220	Slight.
Calcutta	E	eP PP iS M Mn	01	02	51 04 20 08 48 16 57 19 30	4290	Moderate. Per. = 20 secs μ = 65.
New Delhi	N	eP iS SS LR M	01	03	56 10 45 14 04 17 40 20 50	5180	Moderate.

DATE	STATION	COMPT.	PHASE	G. M. T.			△ km.	REMARKS
				h.	m.	s.		
b. 54 ontd.	Dehra Dun	NE	eP	01	03	56		
			PcP		05	21		
			PP		05	37		
			PPP		06	08		
			eS		10	31		
			PS		10	37		
			PPS		10	45		
			SS		13	49		
			LQ		14	39		
			SSS		14	57		
			LR		16	59		
			M		20	48		
	Colombo	E	(P)	01	04	11		
			S		12	06		
			L		21	21		
			M		27	36		Amp = 0.1 mm.
	Madras	E	P	01	04	14	5510	Moderate.
			PcP		05	24		
			PP		06	11		
			iS		11	22		
			PS		11	29		
			PPS		11	38		
	Poona	Z E	iP	01	04	41	5890	Moderate.
			PcP		05	34		
			PP		06	46		
			PPP		07	52		
			eS		12	10		
			PS		12	15		
			PPS		12	25		
			ScS		14	07		
			SS		15	44		
			LQ		17	35		
			LR		20	12		
			M		24	45		
				Bombay	E	eP	01	04
iS		12				21		
	Hyderabad	N E	(S)	01	11	14		Per. = 18 secs μ = 15.
			M		21	12		Per. = 18 secs μ = 9.
28	Shillong	Z	i	03	45	09		Slight, local.
			i		45	29		
28	Poona	Z	i	18	57	50		Tremor.
28	Kodaikanal	E	e	23	58	12		Tremor.



-: Voluntary Observers' Report :-

The following table contains a list of earthquakes reported as felt by Voluntary Observers during February, 1954.



Station	Date	Time G.M.T. h. m. s.	Duration in secs	Intensity R.F.Scale	No. of shocks	Remarks
Tezpur	6.2.54	16 42 00	3	IV-V	1	-
Shillong	10.2.54	00 00 00	About 20	IV	1	-
Jerjeeling	10.2.54	05 20 00	5	V	2	-
Srinagar	16.2.54	02 25 00	3	IV-V	1	-
Shillong	22.2.54	22 20 00	20	IV	1	-
Twang (N.E.F.A.)	23.2.54	06 30 00	60	VII	-	Many building at Monastery near and in surrounding villages demolished.
Shillong	23.2.54	06 40 00	20	IV	1	-
Tezpur	23.2.54	06 40 00	6	VII	2	-
Gauhati	23.2.54	06 42 00	30	V	1	-
North Lakhimpur	23.2.54	06 45 00	30	V	3	-
Srinagar	26.2.54	18 48 00	15	VII	5	-

@@@*@@*@@*@@*@@*@@*

SARKER
10.4.56



GOVERNMENT OF INDIA
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

*March - Dec
1954*



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

Instruments and their constants

Station	Instrument	Compt.	Period in secs	Static Magnifi- cation	Damping ratio	Paper Speed mm/min
Bombay	Milne-Shaw	N-S	12.0	350	18:1	16
	Milne-Shaw	E-W	12.0	350	9:1	8
	Sprengnether Microseismo- graph	E-W	To = Tg = 7.0	-	-	30
Calcutta	Milne-Shaw	E-W	10.0	150	20:1	8
	Wood-Anderson	N-S	2.0	870	Critical	30
	Omori-Ewing	N-S	18.0	32	-	25
	Omori-Ewing	E-W	19.0	30	-	25
Chatra	Benioff	Z	To=0.72 Tg=0.45	-	Critical	60
	Wood-Anderson	N	1.0	1000	30:1	60
	Wood-Anderson	E	1.0	1000	40:1	60
	Milne-Shaw	E	12.0	250	20:1	16
Colombo	Milne-Shaw	E-W	12.0	250	20:1	-
Dehra Dun	Milne-Shaw	N-S	12.0	250	20:1	16
	Milne-Shaw	E-W	12.0	250	20:1	16
	Wood-Anderson	N-S	0.8	800	60:1	60
	Wood-Anderson	E-W	0.8	950	60:1	60
Hyderabad	Milne-Shaw	N-S	12.0	252	20:1	8
	Milne-Shaw	E-W	12.0	253	20:1	8
Kodaikanal	Milne-Shaw	E-W	10.0	250	20:1	8
Madras	Sprengnether Microseismograph	E-W	To = Tg = 7.2	-	-	30
New Delhi	Milne-Shaw	N-S	12.0	288	20:1	8
	Wood-Anderson	N-S	4.0	1070	20:1	16
	Wood-Anderson	E-W	2.0	1841	30:1	60
	Omori-Ewing	E-W	28.0	30	1	12
Poona	Sprengnether Microseismograph	Z	To=1.5 Tg=1.5	-	-	30
	Wood-Anderson	E-W	4.0	1100	20:1	16
	Milne-Shaw	N-S	12.0	250	20:1	8
Shillong	Milne-Shaw	N-S	12.0	250	20:1	8
	Benioff Short Period	Z	To=1.0 Tg=0.18	-	-	60
	Wood-Anderson	E-W	0.8	1000	-	30
	Wood-Anderson	N-S	0.8	1000	-	30
	Wood-Anderson	N-S	4.0	1120	-	30

DATE	STATION	COM-P.	PHASE	G. M. T.	REMARKS
				h. m. s.	km.
Mar. 1954					
01	Shillong	Z	e	18 57 57	Feeble.
01	Shillong	Z	i	21 55 07	Tremor.
02	Shillong	Z	e	04 39 58	Tremor.
			i	40 12	
			e	40 45	
02	Shillong	Z	e	10 04 04	Tremor.
02	Shillong	Z	i	17 19 48	Tremor.
			i	20 07	
02	New Delhi	E N,E	eP P* Lq iS SS SSS S*	18 46 14 46 33 47 28 47 41 47 54 48 04 48 09	840 Slight.
	Dehra Dun	N,E	eP iS Lr SS S*	18 46 17 47 23 47 28 47 34 47 41	610 Slight.
02	Shillong	Z	i	21 34 51	Tremor.
			i	34 59	
			i	35 21	
03	Epc: $5\frac{1}{2}^{\circ}$ S, $142\frac{1}{2}^{\circ}$ E; New Guinea; 0 = 06h 02m 55s (U.S.C.G.S) Magnitude = $7\frac{1}{4}$ (Pasadena, Berkeley, Christ Church), 7 (Kiruna), 6.8 (Skalnate Pleso), $6\frac{3}{4}$ (Uppsala)				
	Shillong	Z	iP N N	06 12 52	6360 Moderate.
			eP PcP PPP PcS iS PS ScS SS SSS Lq Lr M	13 41 16 21 17 48 20 47 20 54 22 40 24 27 26 55 27 14 28 44 32 29	
	Calcutta	E N E N E	iP iP iS iS ScS Lq	06 13 09 13 15 21 27 21 29 23 10 29 27	6780 Moderate, first move- ment West and North.

DATE STATION COMPT. PHASE G. M. T. / REMARKS

h. m. s. km.

Mar.
1954

03 Chatra E aP 06 13 22 6870 Slight.
Contd. PcP 14 05
PP 15 43
PPP 17 09
PcS 17 54
eS 21 45
PS 21 55
PPS 22 09
ScS 23 01
SS 25 47
SSS 28 39
Lq 29 01
Lr 32 24
M 37 07

Madras E iP 06 13 37 7220 Moderate.
PcP 14 08
PP 16 05
PPP 17 38
PcS 18 05
iS 22 19
PS 22 46
PPS 22 51
ScS 23 32
SS 26 30
SSS 29 16
Lq 30 01
Lr 33 08
M 40 17

Kodaikanal E iP 06 13 50 7350 Slight.
iS 22 38
PS 23 02
PPS 23 17
SS 27 02
SSS 30 03
Lq 31 11
Lr 34 21
M 39 59

Hyderabad E iP 06 13 54
PP 16 24
iS 22 45
PS 23 01
SS 27 01
L 34 32
M 40 48
M 40 57

Per. = 24 Secs. / $\mu = 4$

Per. = 24 Secs. / $\mu = 4$
Per. = 21 Secs. / $\mu = 2$

New Delhi N,E iP 06 14 19 7850 Moderate.
N PcP 14 39
PP 17 05
PcS 18 58
iS 23 33
ScS 24 30

DATE STATION COMPT. PHASE G. M. T. / REMARKS

h. m. s. km.

Mar.
1954

03 Dehra Dum N,E aP 06 14 20 7890 Moderate.
Contd. N PcP 14 36
PP 17 03
PPP 18 40
N,E iS 23 36
N ScS/PS 24 12
PPS 24 28
SS 28 21
Lq 33 33
Lr 37 11
M 43 19

Poona E iP 06 14 22 7930 Moderate.
PcP 14 33
PP 17 10
PPP 18 46
N eS 23 40
E PS 24 18
PPS 24 31
SS 28 15
Lq 33 24
M 43 02

Bombay N aP 06 14 32 8090 Moderate. Another
E iP shock appears to
E PP 17 23 be superimposed on
N e 18 03 the coda of this
E e 23 25 shock.
N,E iS 23 58
PS 24 32
E PPS 24 49
N SS 28 37
E Lq 33 29
N Lq 33 35
E Lr 37 32
M 51 22

Per. = 23 Secs. / $\mu = 12$.

03 Shillong Z aP 07 54 30 Slight.
e 57 19

Chatra E e 07 57 58 Slight, distant.
e 08 04 32
e 19 -- Surface wave.

Dehra Dum N e 08 04 03 Tremor.

Hyderabad E M 08 15 45 Per. = 16 Secs. / $\mu = 6$.
N M 16 08 Per. = 16 Secs. / $\mu = 6$.

03 Shillong Z e 08 31 39 Tremor.

03 Shillong Z i 10 04 28 Tremor.

03 Shillong Z e 10 47 04 Slight.
i 47 07

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
Mar. 1954						km.	
03	Madras	E	iP PcP PP eS	10 47 47 48 23 50 11 56 29	7220		Slight, probably aftershock of the earlier shock at 0613 hrs.
	Poona	Z	i	10 48 32			Tremor.
03	Poona	Z	i	11 08 20			Tremor.
03	Dehra Dun	N	e	12 59 23			Feeble.
03	Epc: $5\frac{1}{2}^{\circ}$ S, $142\frac{1}{2}^{\circ}$ E; $0 = 15h 21m 27s$ (U.S.C.G.S)						
	Shillong	Z	e(P) e	15 31 27 31 34			Tremor.
	Madras	E	iP PcP PP PPP PcS eS PS PPS ScS SS Lq	15 32 10 32 41 34 36 36 11 36 36 40 55 41 15 41 34 41 56 44 57 48 41	7290		Slight, after shock of the earthquake at 0613 hrs.
	Poona	Z	i(P)	15 32 54			Tremor.
	Bombay	E	e(P) e	15 33 02 42 31			Very feeble.
	Dehra Dun	N	e	15 33 26			Feeble.
03	Shillong	Z	e	17 25 13			Tremor.
03	Shillong	Z	e	17 47 19			Tremor.
03	Shillong	Z	e	19 58 11			Tremor.
03	Shillong	Z	i i i i	20 58 19 58 28 58 34 58 38			Slight, near.
	Poona	Z	i	20 59 32			Tremor.
04	Shillong	Z	i	22 17 19			Tremor.
05	Shillong	Z	e	17 29			Tremor.
			e i e	03 42 08 42 21 43 19			Tremor.
05	Shillong	Z	i	03 51 54			Tremor.

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
Mar. 1954						km.	
05	Poona	Z	eP	04 23 50			Tremor.
	Shillong	N	M	04 38 30			Slight.
05	Dehra Dun	N	e(P) i(S)	07 54 19 55 53	910		Slight, phases not clear.
	Shillong	Z	e	07 56 49			Very feeble.
05	Epc: 3° S, 130° E; Ceram Island; $0 = 11h 17m 43s$ (U.S.C.G.S).						
	Poona	Z	eP	11 23 50			Tremor.
	Shillong	Z	eP i i	11 26 04 26 24 26 53			Slight.
	Madras	E	iP e eS i	11 26 58 30 55 34 03 35 10			Slight, phases not clear.
	Dehra Dun	N	e	11 28 01			Feeble.
05	Epc: Hindu Kush; $0 = 15h 07m 01s$ (B.C.I.S).						
	Dehra Dun	N,E	eP Lq iS SS SSS Lr M PcP	5 19 5 12 16 12 20 12 36 12 54 13 00 14 22 14 32	1640		Moderate.
	Chatra	Z	e	15 11 17			Slight, distant.
	Shillong	Z	i	15 12 05			Tremor.
	Madras	E	e	15 17 18			Slight, phases not clear.
	Poona	Z	e	15 31 37			Feeble, phases not clear.
05	Shillong	Z	i	21 58 43			Slight.
06	Epc: 24° S, 180° ; Long Fiji Island; $h = 550$ km ca; $0 = 00h 29m 27s$ (U.S.C.G.S). Magnitude = 7 (Wellington), $6\frac{1}{2}$ (Berkeley).						
	Chatra	Z	eP e	00 42 31 52 22			Slight, distant.



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

Mar.
1954

06	Poona	E	eP?	00 46 50		Feeble, phases doubtful.
Contd.			i	47 54		
			i	50 11		
	Bombay	N,E	e	00 48 00		Distant and deep focus.
			e	53 07		
			e	58 13		
07	Shillong	Z	iP	06 08 54		Slight.
07	Shillong	Z	iP	07 53 54		Slight.
08	Poona	Z	eP	07 54 41		Tremor.
08	Poona	Z	eP	08 26 17		Tremor.
08	New Delhi	E	eP	16 33 30	470	Slight.
		N,E	Pg	33 47		
			eS	34 20		
		E	Lr	34 21		
			S*	34 31		
		N,E	Sg	34 44		
08	Poona	Z,E	eP	17 39 02		Feeble, phases doubtful.
08	Shillong	Z	e	19 12 28		Slight, near.
			e	12 40		
09	Shillong	Z	e	01 35 57		Beginning doubtful due poor light intensity.
09	Epc: 0.3°N , 29.8°W ; St. Paul Rock Atlantic Ocean; $1\frac{1}{2}^{\circ}\text{N}$, $30\frac{1}{2}^{\circ}\text{W}$; $0 = 02\text{h } 21\text{m } 41\text{s}$ (B.C.I.S). Magnitude = $6\frac{1}{2}$ (Kiruna), 6 (Uppsala). $0 = 02\text{h } 21\text{m } 43\text{s}$ (U.S.C.G.S).					
	Bombay	N	e	02 39 32		Very distant shock, feebly recorded.
		E	e	39 49		
			e	48 53		
			M	03 12 39		
	Poona	Z	e?	02 39 56		Tremor.
	Colombo	E	P	02 42 12		Amp. = 0.2mm. Slight, distant.
			M	03 26 25		
	Shillong	N	e	02 44 45		
			e	51 38		
			e	57 48		
			M	03 13 48		
	Kodaikanal	E	e	02 45 --		Time doubtful due failure of eclipse clock.
	Hyderabad	N	M	03 15 11		

DATE	STATION	COMPT.	PHASE	G. M. T.			△	REMARKS
				h.	m.	s.		
09	Epc: Chinghai Province of China; 32°N, 94°E; 32°N, 95°E;			0 = 05h 30m 48s (U.S.C.G.S). 0 = 05h 30m 47s (B.C.I.S). 0 = 05h 30m 52s (Shillong).				
	Shillong	Z,N,E	eP	05	32	39	790	Slight.
		N	Lq		33	53		
		Z,N,E	eS		34	01		
		N	SS		34	22		
			SSS		34	37		
		N,E	M		34	46		
	Chatra	Z,E	eP	05	32	51		Slight, near, phases not clear.
	Dahra Dun	N	eP	05	34	06	1610	Moderate, other phases not clear.
			e		34	11		
			rP		34	23		
			Lq		36	36		
			eS		36	48		
			PcP		39	12		
	N. w Delhi	N,E	eP	05	34	23	1750	Slight.
		N	Lq		37	02		
			eS		37	19		
			M		39	20		
	Hyderabad	N	P	05	35	32	2420	
			S		39	29		
			L		41	45		
			M		43	30		Per. = 8 Secs./ λ = 4.
	Calcutta	E	e	05	35	35		Slight, distant.
			i		37	03		
	Poona	Z	eP	05	35	54	2590	Slight.
		N	eS		40	03		
			SS		40	49		
			Lr		41	15		
			M		43	23		
	Bombay	N,E	eP	05	36	03	2610	Feeble.
			eS		40	14		
		E	Lq		40	47		
			Lr		41	50		
	Madras	E	i(P)	05	36	06		Slight, succeeding phases mixed up with the phases of another shock.
			e		41	39		
	Kodaikanal	E	e	05	44	47		Time uncertain due failure of eclipse clock.

DATE STATION COMPT. PHASE G. M. T. REMARKS

h. m. s. km.

Mar.
1954

09 Epc: 50°N, 157°E. Off the South Coast of Kamchatka;
- H = 05h 39m 24s (U.S.C.G.S)
50°N, 157 $\frac{1}{4}$ °E. - H = 05h 39m 24s (B.C.I.S)
Magnitude = 6 $\frac{3}{4}$ (Praha), 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ (Pasadena), 6 $\frac{1}{4}$ (Kiruna),
6 (Uppsala).

Shillong N,Z eP 05 49 00 6050 Moderate.
PP 51 01
PPP 52 16
eS 56 38
ScS 58 39
SS 06 00 31
Lr 05 31
M 09 16

Chatra Z iP 05 49 14 Slight, distant.
E e 06 09 30 Surface waves.

New Delhi N,E eP 05 49 48

Hyderabad N P 05 50 34 7800
eS 59 46
L 06 12 35
M 17 38

Per. = 16 Secs./u.u. 9.

Poona Z iP 05 50 47 7870 Moderate.
N PcP 51 02
PP 53 24
eS 06 00 02
PS 00 21
PPS 00 47
SSS 07 30
Lq 09 24
M 18 34

Madras E i 05 50 48
Lr 06 21 14
M1 25 34
M2 29 27

Bombay N,E eP 05 50 49
N e 51 09
e 53 39

N,E e(S) 06 00 26
E e 01 15
N M 19 03
M 19 11

Colombo E P 05 51 20
S 06 01 05
L 18 --
M 30 --

09 Shillong Z iP 19 58 23

Slight, phases not clear due to superposition with that of another one.

Per. = 23 Secs./u = 5.
Per. = 23 Secs./u = 10.

Amp. = 0.2mm.

Slight.



DATE STATION COMPT. PHASE G. M. T. REMARKS

h. m. s. km.

Mar.
1954

10 Epc: Hindu Kush; - H = 04h 16m 38s (Quetta).
36°N, 71.5°E. - H = 04h 16m 35s (Shillong).

Dehra Dun N,E eP 04 18 38 870 Slight.
Lq 19 51
iS 20 06
Lr 20 15
SS 20 18
SSS 20 27
S* 20 29

New Delhi N,E eP 04 18 44 960 Slight.
E P* 19 08
Pg 19 28
N,E eS 20 23
S* 20 56
Sg 21 23

Chatra Z eP 04 20 15 Feeble, near.
iS 23 10

Shillong Z iP 04 20 48 Slight, near.
PP 21 08
PPP 21 18
S 24 20
Lq 14 27
PcP 24 52

Poona Z,E e? 04 21 24 Slight shock, phases
E i? 22 59 not clear.
e 25 46

Madras E eP 04 26 37 Very feeble. Other
phases not clear.

10 Shillong Z,N Pg 05 46 41 Slight, local.
Sg 46 49

10 Shillong Z eP 08 04 55 Feeble, near.

10 Shillong Z iP 15 38 16 Very feeble.

10 Shillong Z e 21 50 37 Tremor.

10 Shillong Z e 22 03 38 Tremor.

10 Shillong N,Z eP 22 38 43 Feeble.
eS 40 30
SS 40 41
M 41 19

Chatra Z e 22 39 20 Slight, distant.

11 Shillong Z e 05 15 18 Slight, near.
e 16 21

11 Poona Z eP 10 49 37 Tremor.

DATE STATION COMPT. PHASE G. M. T. REMARKS

h. m. s. km.

Mar.
1954

12 Madras E • 05 32 56
12 Poona Z e? 11 31 30
12 Shillong Z e 21 51 02 Slight, near.
e 51 34

13 Epc: Southern Pakistan; - H = 00h 58m 53s (U.S.C.G.S)
28.1°N, 65.6°E. - H = 00h 59m 02s (B.C.I.S)
28°N, 66.5°E. - H = 00h 59m 00s (Shillong).

New Delhi N,E iP 01 01 13 1000 Slight.
i 01 25
i 01 41
N i 01 55
Lq 02 48
N,E iS 02 56
SS 03 08
Lr 03 13
SSS 03 19
N S* 03 30
N,E i 03 40
Sg 04 04

Dehra Dun N,E eP 01 01 26 1090 Slight.
PPP 01 44
P* 01 53
Lq 03 09
iS 03 18
SS 03 32
Lr 03 36
SSS 03 42
S* 03 55
Sg/M 04 24

Bombay N,E eP 01 01 30 1150 Slight.
PP 01 40
PPP 01 46
Lq 03 17
eS 03 39
SS 03 39
SS 03 42
M 05 --
M 05 09

Poona Z eP 01 01 36
E eS 03 51
M 05 42
Per. = 5 Secs./ μ = 10
Slight.

Chatra N,E,Z eP 01 03 10 1960 Slight.
PP 03 29
PPP 03 40
iS 06 25
SS 06 48
Lr 07 22
M 08 44



DATE STATION COMPT. PHASE G. M. T. REMARKS

h. m. s. km.

Mar.
1954

13 Madras E eP 01 03 23 2190 Slight.
Contd. PP 03 44
PPP 03 54
iS 07 00
Lq 07 15
SS 07 35
SSS 07 46
Lr 08 08
M 09 43
ScP 10 51

Kodaikanal E iP 01 03 35 2310 Slight.
iS 07 17
Lq 07 31
M 10 17

Calcutta E eP 01 03 41 2410 Slight.
iS 07 37
SS 08 12
Lr 09 06

Shillong Z iP 01 04 01 2500 Slight.
N eP 04 01
Z i 04 15
Z,N PP 04 27
Z PPP 04 38
N,Z eS 08 04
Lq 08 25
N Lr 10 04
M 11 28

Colombo E P 01 04 11
S 08 46

13 Shillong Z,N,E e 11 51 07 Slight, near.
N,E e 51 30
i 51 35

13 Kodaikanal E e 17 20 48 Tremor.

13 Epc: 8½°S, 117°E. Sunda Island; - H = 18h 14m 45s (B.C.I.S).

Colombo E eP 18 22 20
S 28 20
M 41 05 Amp. = 0.1 mm.

Chatra Z e 18 23 08 Slight, distant.
E e 29 54

Calcutta E e 18 24 06 Slight, distant.
i 29 04
i 32 30

Madras E e 18 29 00
e 32 30
e 32 46
M 41 24

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
<u>Mar.</u> 1954							
13	Hyderabad	N	M	18	42	54	Per. = 15 Secs./u = 3.
Contd.							
13	Shillong	Z	i	22	06	29	Slight, near.
		E	e		06	29	
		E,N	e		06	41	
13	Shillong	Z,N	aP	23	22	37	
		Z	i		22	39	
			i		22	44	
			i		22	53	
		N	eS		28	42	
			Lq		31	51	
			Lr		33	48	
			M		37	36	
14	Shillong	N	e	09	08	37	Slight, distant.
			i		17	18	
			e		17	52	
			e		18	22	
			e		19	07	
			i		22	10	
	Kodaikanal	E	e	09	07	48	Tremor.
	Madras	E	M	10	26	54	
14	Shillong	Z	e	15	07	00	Tremor.
14	Shillong	Z	e	15	34	42	Tremor.
14	Shillong	N,Z	e	17	47	34	Slight, distant.
		N	e		54	19	
			e		54	30	
			e		56	32	
			e		58	33	
			i	18	02	07	
			e		07	26	
			M		15	30	
	Chatra	Z	e	17	54	33	Slight, distant.
		E	e	18	18	--	Surface wave.
	Bombay	N,E	aP	17	56	06	8220 Feeble.
		N	PcP		56	20	
		N,E	eS	18	05	38	
		E	ScS		06	04	
			SS		10	26	
	Calcutta	E	e	17	56	17	Slight, distant.
			Mn	18	24	22	
	Hyderabad	E	M	18	25	35	Per. = 12 Secs./u = 3.
		N	M		26	25	Per. = 12 Secs./u = 2.
	Madras	E	M	18	31	07	

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
<u>Mar.</u> 1954							
15	Poona	Z	eP	17	56	05	Probably very distant earthquake, phases doubtful.
16	Bombay	N	e	08	56	34	The disturbance may be due to causes other than real earthquake movement.
			e	09	02	07	
16	Epc: $11\frac{1}{2}^{\circ}N, 58^{\circ}E$. - H = 14h 24m 16s (B.C.I.S)						
	Bombay	N	e	14	24	00	Slight.
		E	i				
		E	e		26	35	
		N	e		27	17	
		E	e		27	22	
	Poona	Z	eP	14	24	04	2060 Slight.
		E	PP		24	21	
			PPP		24	33	
			eS		27	36	
			Lq		27	42	
			SS		28	01	
			SSS		28	18	
			M		29	12	
	Kodaikanal	E	iP	14	24	42	Tremor.
			PP		25	00	
			PPP		26	09	
			SS		27	17	
			SSS		27	33	
			Lr		27	46	
			M		29	06	
	Hyderabad	E	iP	14	24	57	2460
			iS		28	58	
			L		30	22	
			M		32	30	Per. = 10 Secs./u = 2
	Madras	E	iP	14	25	10	2600 Slight.
			i		25	19	
			PP		25	36	
			eS		29	20	
			Lq		29	42	
			SS		30	06	
			SSS		30	28	
			Lr		30	48	
			M		33	25	
16	Poona	Z	e	15	38	40	Tremor.
18	Shillong	Z	i	05	06	29	Feeble.
18	Dehra Dun	N	e	06	05	26	Slight.
18	Dehra Dun	N	e(P)	12	52	27	530 Feeble.
			i(S)		53	24	



DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
Mar. 1954							
18	Shillong	Z,E	i	13	50	43	Slight, felt locally.
18	Shillong	Z,N	i	16	55	03	
			i		55	33	
			e		55	52	
			i		56	07	
			i		56	22	
18	Dehra Dun	N	e	17	00	35	Feeble.
	Poona	Z	eP	17	01	56	Tremor.
19	Dehra Dun	N	e	08	35	06	Slight.
			i		38	01	
19	Madras	E	M	11	14	--	Phases not clear.
19	Shillong	Z	i	16	15	35	Feeble.
19	Madras	E	P	23	39	27	Slight, short period movement, other phases not certain.
	Shillong	Z	e	23	39	47	Tremor.
	Poona	Z	eP	23	40	57	Tremor.
19	Poona	Z	i?	23	44	33	
20	Bombay	E	e	08	36	19	Feeble.
			e		37	19	
	Poona	Z	e	08	37	30	Feeble shock, phases not clear.
20	Madras	E	e	14	15	07	Slight.
			eS?		23	01	
	Poona	Z	eP	14	15	11	Tremor.
21	Shillong	Z	iP	06	19	04	Slight.
21	Shillong	Z	iP	11	09	27	Slight, local.
21	Epc: 24 ¹ / ₂ °N, 95°E. N W Burma; h = 150 km; - H = 23h 42m 05s (U.S.C.G.S)						
	24.6°N, 95.2°E; h = 150 km; - H = 23h 42m 09s (B.C.I.S).						
	Shillong Z,N,E		iP	23	43	04	Great. Felt strongly. Slight damage to property. Pendulum clock stopped. Coupler overthrown in Milne-Shaw seismograph.

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS
				h.	m.	s.	
Mar. 1954							
21	Calcutta	E	iP	23	43	45	630 From Milne-Shaw. The instrument was thrown out of adjustment after the first impulse.
		N	iP		43	46	
			PP		43	47	
			P*		43	59	
		E	P*		44	00	Great. Felt locally and over a wide area in Assam, Bengal, Bihar and Orissa.
		N	Pg		44	13	
			iS		44	51	
		E	iS		44	52	
	Chatra	Z	iP	23	44	01	810 First movement down.
		N	iP		44	02	$\mu = 2.0$. First movement South.
		E	eP				
		E	iP		44	02	First movement East.
		N,E	iS?		45	25	Long Period instrument.
							First movement East. This shock was locally felt at Chatra on the morning of 22nd March, 1954 at 0515 hrs. I.S.T. People who were awake at the time only felt it. The shock was also felt at Biratnagar, Belka and Barahashetra by people who were awake. The oscillations following the primary phase had a high frequency and large amplitude. The sensitivity of recording paper was insufficient to record the trace of the shock. Wenner Accelerograph worked for the first time and recorded the tremor.
21	New Delhi	N,E	iP	23	45	56	1710 Great. Direction of first motion South and East.
			PP		46	07	
			PPP		46	19	
		N	i		46	35	
			Lq		48	43	
		N,E	iS		48	48	
			SS		49	06	
		N	Lr		49	32	
			M		50	39	
21	Dehra Dun	N,E	eP	23	45	56	1710 Great.
			PP		46	09	
		E	PPP		46	17	
		N,E	Lq		48	44	
			iS		48	48	
		E	SS		49	05	
		N	SSS		49	17	
			Lr		49	27	
		N	M		50	40	
21	Hyderabad	E,N	iP	23	46	02	1780
		E	S		49	00	
			SS		49	21	
			M		52	21	
		N	M		52	21	
							Per. = 14 Secs./ $\mu = 20$. Per. = 12 Secs./ $\mu = 16$.



DATE	STATION	COMPT	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Mar. 1954						
21	Madras Contd.	E	iP iS	23 46 15 49 27	1920	Great. First movement of trace corresponds to Pendulum movement toward West. Due to large movements other phases not identifiable. Shock felt over the whole of India.
21	Poona	Z N,S	iP PP eS M	23 46 43 47 56 50 24 53 02	2220	Great.
	Bombay	N	iP iS	23 46 54 50 38		Great earthquake of North Western Burma.
21	Colombo	S	iPP S L M	23 47 01 49 19 50 59 52 30		
22	New Delhi	N,E	iPg iSg	06 36 04 36 06	170	Slight.
22	Dehra Dun	N	e	09 25 38		Tremor.
22	Poona	Z	eP	16 37 58		Tremor.
22	Poona	Z	eP	17 30 16		Tremor.
22	Poona	Z	i	19 09 43		Tremor.
	Shillong	N	e	19 29 00		Slight, surface waves.
24	Madras	E	e	00 19 55		
24	Poona	Z	i	01 42 36		Tremor.
24	Dehra Dun	N	e	11 14 11		Tremor.
24	Poona	Z	i	12 38 42		Tremor.
24	Shillong	N	e	13 04 56		Slight, surface waves.
24	Poona	Z	i	17 33 13		Tremor.
	Shillong	N	e	17 53 43		Slight, surface waves.
24	Dehra Dun	N,S	eP iS S3 Lr Sg/M	18 08 37 10 10 10 23 10 25 10 59	900	Slight.

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Mar. 1954						
21	New Delhi	N,E E	eP PPP eS S3	18 08 50 09 05 10 18 10 32	850	Slight.
		N,E	S3S S*	10 40 10 45		
25	Epc: Probable region Pamir (B.C.I.S.) 38°N, 72°E. - H = 06h 47m 30s (Shillong).					
	Dehra Dun	N,E	eP PP Lq iS S3 Sg/M	06 49 51 50 00 51 35 51 44 51 56 52 52	1110	Moderate.
	New Delhi	N,E E	eP PP PPP Lq	06 50 35 50 15 50 23 51 52	1140	Slight.
		N,E	eS S3	52 02 52 15		
		N	S*	52 45		
			Sg	53 16		
	Poona	Z	eP	06 51 58		Tremor.
5	Poona	Z E N	e e e	06 53 51 58 07 07 00 40		Slight, phases doubtful.
25	Shillong	N	iPg iSg	07 18 25 18 28	30	Slight.
26	Dehra Dun	N	e	03 44 39		Tremor.
26	Bombay	N	e e	04 43 14 45 45		Feeble.
	Dehra Dun	N	e	04 44 50		Tremor.
	Poona	Z,S,W	e	04 45 41		Very feeble shock. Phases not clear.
26	Poona	Z	e?	09 58 54		Tremor.
26	Poona	Z	i	10 57 56		Tremor.
26	Poona	E,W,Z	eP	18 42 49		Feeble, phases doubtful.
27	Bombay	E	e e	02 05 42 09 33		Feeble.
	Poona	Z	eP	02 05 45		Feeble.

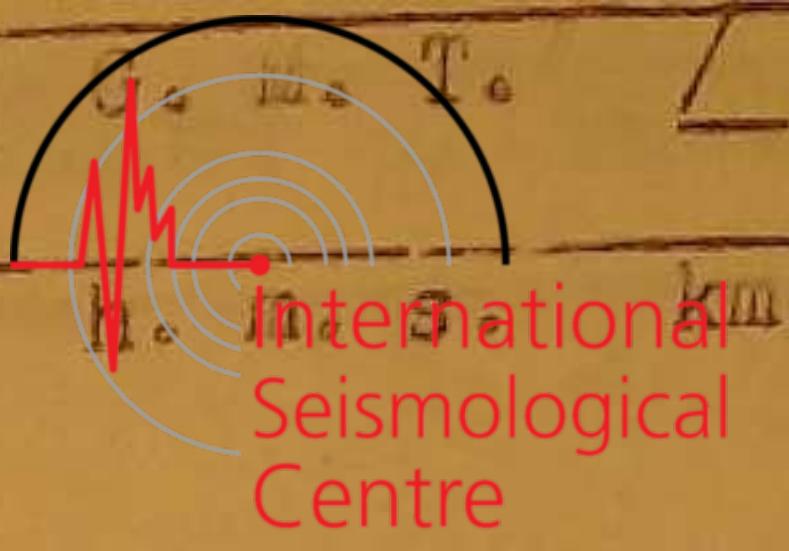
h. m. s. km.

Mar.
1954

Date	Station	Compt.	Phase	h. m. s.	km.	Remarks		
27	Madras	E	IP	02 06 02	2380	Slight.		
			PP	06 28				
			PPP	06 43				
			eS	09 56				
			Lq	10 20				
			SSS	11 03				
			Lr	11 33				
	M	13 45						
27	Shillong	Z	e	09 26 48		Slight.		
27	Shillong	Z	iPg	11 41 48	90	Slight.		
			iSg	41 58				
27	Shillong	Z	i	11 46 56		Slight.		
27	Poona	E,W,Z	eP	18 40 33	430	Slight.		
			eP	18 40 34				
			eS	41 21				
			SS	41 32				
	SSS	41 43						
27	New Delhi	N	eP	18 40 34	430	Slight.		
			eS	41 21				
		E	SS	41 32				
			SSS	41 43				
27	Shillong	Z	e	18 40 46	560	Slight.		
			e	45 27				
27	Poona	Z	e?	19 00 28		Tremor.		
28	Shillong	Z	e?	09 16 31	560	Slight.		
			eP	09 24 52				
			Pg	25 12				
			Lq	25 38				
			Lr	25 53				
			Sg/M	26 18				
28	Shillong	Z	e	09 43 19	2450	Slight.		
			e	44 14				
28	Kodai kanal	E	eP	13 11 04	2870	Slight.		
			eS	15 04				
			Lq	15 31				
			SS	15 49				
			SSS	16 03				
			Lr	16 37				
			M	18 25				
				IP			13 11 39	
				PP			12 09	
				PPP			12 30	
	S	16 05						
	Lq	16 43						
	SS	16 57						
	SSS	17 09						
	Lr	17 51						
	M	19 39						

Per. = 10 Secs./u = 14

DATE STATION COMPT. PHASE h. m. s. km. REMARKS



Mar.
1954

Date	Station	Compt.	Phase	h. m. s.	km.	Remarks		
28	Poona	Z	eP	13 12 02	3190	Slight, phases not clear.		
28	Hyderabad	E	eP	13 12 07	3190	Per. = 12 Secs. λ = 9. Per. = 12 Secs. λ = 4.		
			N	iS			16 56	
			E	M			20 58	
			N	M			21 01	
28	Bombay	N,E	e	13 13 02		Feeble.		
			E	e			17 02	
28	Shillong	Z	e	13 24 03		Tremor.		
28	Shillong	Z	e	17 22 27		Slight.		
28	Poona	Z	eP	17 23 47		Tremor.		
28	Shillong	Z	e	20 44 39				
28	Chatra	Z	e?	20 44 51				
28	Epc: 52°N, 176°E.		Rats Island; Aleutian Island;					
			- H = 20h 36m 22s (U.S.C. G.3) - H = 20h 36m 20s (Uccle).					
			Magnitude = 6 $\frac{1}{4}$ (Kiruna).					
28	Shillong	N	IP	20 47 13	7360	Moderate.		
			Z	IP			47 14	
			N	PP			49 48	
				PPP			51 05	
				PcS			51 54	
				iS			56 01	
				PPS			56 39	
				ScS			57 22	
				SS			21 00 17	
				SSS			03 00	
				Lq			03 46	
				Lr			06 39	
	M	25 45						
28	Chatra	N,E,Z	eP	20 47 27	7640	Slight.		
			E	PcP			47 51	
				PP			50 04	
				PPP			51 38	
				eS			56 31	
				SK3 ₁			57 22	
				SS			21 00 50	
				Lq			05 15	
				Lr			08 31	
				M			13 08	
28	New Delhi	N,E	eP	20 47 55	8040	Moderate.		
			N	PcP			48 09	
				PP			50 45	
				PPP			52 30	
				iS			57 18	
				SK3			57 59	
				M			21 15 18	

Mar.
1954

Date	Location	Station	Time	Mag.	Depth (km)	Intensity	Remarks		
28	Hyderabad	E,N	iP	20 48 33	9010				
		N	S	58 43					
		E	PS	59 05					
			SS	21 03 49					
		N	L	14 22					
			M	19 25			Per. = 15 /u = 13		
		E	M	19 29			Per. = 16 /u = 14		
		28	Poona	Z	iP	20 48 49	9220	Moderate	
				N	PP	51 05			
PPP	53 00								
E	eS			59 09					
	ScS			59 15					
	PPS			21 00 27					
	SS			04 41					
	N			SSS	08 03				
				Lq	11 33				
	Lr			15 29					
M	21 22 00								
28	Madras			E	iP	20 48 50	10840	Moderate	
					PP	53 01			
		PPP	55 07						
		SKS	59 15						
		SKKKS	59 49						
		SKS ₁	21 00 05						
		S	00 13						
		PS	01 45						
		PPS	02 29						
		SS	06 38						
		SSP	06 58						
		N,E,S	eP		20 48 51	9260	Slight		
			PP		52 04				
			eS		59 12				
iS	59 37								
i	59 37								
N	PPS	21 00 29							
	M	22 34							
E	M	22 26			Per. = 19 /u = 14				
					Per. = 24 /u = 7				
28	Kodaikanal	E,W	iP	20 49 18	9350	Slight			
			PP	52 27					
			PPP	54 26					
			iS	59 38					
			PS	21 00 42					
			PPS	01 08					
			SS	05 21					
			SSS	08 45					
			M	23 45					

Mar.
1954

Date	Location	Station	Time	Mag.	Depth (km)	Intensity	Remarks	
28	Poona	Z	i	21 10 29				
	Bombay	N	e	21 10 31			Shock superimposed on the earlier shock from the same region.	
		E	e	20 50 21 00				
29	Epc: 191/2°N, 121°E. Off the North Coast of Luzon, Phillipines; - H = 04h 01m 10s (U S C G S). 19°N, 121.4°E. - H = 04h 01m 14s (Shillong). Magnitude = 6 ^{3/4} (Kiruna), 6 ^{1/2} (Uppsala), 6 (Praha, Skalnaté Pleso).							
	Shillong	N	eP	04 07 02	3050	Slight		
Z		iP	07 03					
N		PP	07 45					
		PPP	08 10					
		iS	11 42					
Lq	12 58							
SSS	13 22							
Lr	15 08							
M	16 26							
29	Calcutta	E	eP	04 07 11	3820	Moderate		
			?	07 34				
			S	12 39				
			SSS	15 05				
			ScS	17 28				
29	Chatra	Z	i	04 07 43		Slight, distant. Surface waves.		
			e	12 55				
			e	21 38				
29	Madras	E	iP	04 08 50	4410	Moderate		
			i	09 00				
			PP	10 28				
			PcP	10 50				
			PPP	11 00				
			ScP	14 32				
			iS	14 54				
			i	15 07				
			i	15 20				
			Lq	18 19				
			SSS	18 32				
			Lr	20 13				
			M	23 04				
29	Hyderabad	E	iP	04 08 52	4470			
			PP	10 18				
			PcP	10 46				
			** iS	15 00				
			SS	18 23				
			L	21 03				
			M	24 30				
			N	M	25 08			Per. = 16 Secs. /u = 10
								Per. = 16 Secs. /u = 10
			29			** iS	15 02	



Mar.
1954

h. m. s. km.

DATE	STATION	COMPT	PHASE	G. M T	km.	REMARKS
29	Dehra Dun	N	eP	04 08 55		Slight, not id
Contd.	New Delhi	N,E	eP	04 08 58		Slight.
		N	e	14 51		
			eS	15 06		
			e	18 59		
			e	26 05		
	Colombo	E	eP	04 09 01		Surface
			S	15 21		
			L	26 16		
			M	29 09		
	Poona	Z	eP	04 09 28	4950	Amp. = 0.2 Moderate.
		E	eP			
			PcP	10 53		
			PP	11 10		
			PPP	11 51		
			eS	16 04		
			PPS	16 15		
			Lq	20 09		
			M	26 18		
29	Bombay	N,E	eP	04 09 38	5020	Slight.
		N,E,S	PP	11 26		
		E,S	PPP	12 09		
		N,E	eS	16 18		
		N,E,S	SS	19 29		
		N	Lq	20 21		
		E,S	Lr	22 34		
		E	M	32 47		
29	Shillong	Z	i	04 37 01		Per. = 14 /u = 3.
			i	37 27		Tremor.

29 Epc: 36.9°N, 3.3°W. Near South Coast of S₁ in; h = 620
 37°N, 31/2°W. h = 650 km. Ca; H = 06h 17m 06s (BCIS)
 Magnitude = 7 1/4 - 7 1/2 (Pasadena), 7 1/4 (Tacubaya),
 7-7 1/4 (Berkeley, Kiruna), 6.5 (Praha).
 Felt over large area of Spain. Extensive property
 damage at Granada and Malaga.

DATE	STATION	COMPT	PHASE	G. M T	km.	REMARKS
	Dehra Dun	N,E	eP	06 26 55	6520	Moderate.
			PP	27 46		
			PPP	28 05		
			iS and PcP	34 59		
			Lq	35 26		
			SS	36 11		
			Lr	37 36		
			M	40 55		

DATE STATION COMPT PHASE G. M T / REMARKS

h. m. s. km.

Mar.
1954

DATE	STATION	COMPT	PHASE	G. M T	km.	REMARKS
29	New Delhi	N,E	iP	06 26 58	6460	Moderate. Deep focus. Direction of the first motion South and East.
Contd.		N	i	27 20		
			PP	29 35		
			iS	34 59		
			PS	35 11		
			i	35 54		
			i	39 54		
			i	40 56		
	Bombay	N,E	iP	06 27 08	7690	Moderate.
			i	27 21		
		N	i	27 26		
		E	iS	35 23		
			i	36 02		
		N,E	i	36 13		
	Poona	Z,E	iP	06 27 13	6700	Moderate.
		N	PcP	28 04		
			PP	29 32		
			PPP	30 43		
			PcS	31 59		
			eS	35 27		
			PS	35 34		
			PPS	35 51		
			ScS	36 55		
			SS	39 27		
			SSS	41 51		
			Lq	42 07		
			Lr	44 39		
			M	49 59		
	Hyderabad	N	iP	06 27 33	7210	
		E	iP	27 36		
			PP	30 47		
			iS	36 15		
			SS	40 13		
			e	44 52		
		N	M	55 43		Per. = 16 Secs. /u = 10
		E	M	57 22		Per. = 15 Secs. /u = 9
	Chatra	E,Z	iP	06 27 47	7330	Moderate.
		E	PcP	28 19		
			PP	30 16		
			PPP	31 49		
			PcS	32 15		
			iS	36 34		
			PS	36 56		
			PPS	37 04		
			SKS _i	37 34		
			SS	41 02		
			SSS	44 00		
			Lq	45 02		
			Lr	48 11		
			M	53 56		

Mar.
1954

29 Madras
Contd.

Station	Direction	Phase	h.	m.	s.	km.	Remarks
Shillong	Z	1P	06	28	00	7710	Great.
		i		28	10		
		i		28	20		
		i		28	35		
		PP		30	53		
		PPP		32	33		
		S		36	55		
		PS		37	15		
		PPS		37	35		
		SS?		37	49		
		i		38	09		
		sS		41	01		
		SSS		44	13		
		Lq		45	52		
		Lr		48	54		

Shillong

Station	Direction	Phase	h.	m.	s.	km.	Remarks
Shillong	Z	1P	06	28	09	8780	Moderate
		i					
		pp		30	13		
		PP		31	18		
		PPP		33	04		
		iS		37	17		
		sS		40	49		
		SS		42	13		
		SSS		46	13		
		Lr		53	04		

Colombo

Station	Direction	Phase	h.	m.	s.	km.	Remarks
Colombo	S	P	06	28	19		
		S		37	31		

Calcutta

Station	Direction	Phase	h.	m.	s.	km.	Remarks
Calcutta	N	1P	06	29	15	7930	Moderate movement Time doubt
		e		14	17		

29 Dehra Dun

Station	Direction	Phase	h.	m.	s.	km.	Remarks
29 Dehra Dun	N	iP	18	17	26		Tremor.
		Sg		17	59		

29 Shillong

Station	Direction	Phase	h.	m.	s.	km.	Remarks
29 Shillong	Z	e	10	56	57		Slight, local
		i		10	58		

30 Dehra Dun

Station	Direction	Phase	h.	m.	s.	km.	Remarks
30 Dehra Dun	N	e	16	05	07		Tremor.
		i		16	33		

Poona

Station	Direction	Phase	h.	m.	s.	km.	Remarks
30 Poona	Z	e	18	58	44		Tremor.
		i		19	00		

30 Shillong

Station	Direction	Phase	h.	m.	s.	km.	Remarks
30 Shillong	N	e	18	58	44		Tremor.
		i		19	00		

Poona

Station	Direction	Phase	h.	m.	s.	km.	Remarks
30 Shillong	N	e	18	58	44		Tremor.
		i		19	00		

Madras

Station	Direction	Phase	h.	m.	s.	km.	Remarks
Madras	E	e	18	58	44		Feeble, phases not clear.
		e		59	51		
		i		16	28		
		M		30	04		
		1S?		19	07		

Station	Direction	Phase	h.	m.	s.	km.	Remarks
Madras	E	e	19	07	19		Phases not clear.
		i		08	53		
		i		11	32		

DATE STATION COMPT PHASE G. M. T REMARKS

Mar.
1954

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
30	Bombay	E	e	19	07	46	Distant shock.
			e		09	12	
			e		12	00	

Contd.

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	Poona	Z	e?	07	35	37	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	New Delhi	N,E	eP	08	00	02	720 Slight.
			i		00	13	
			i		00	19	
			Lq		01	07	
			eS		01	17	
			SS		01	31	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	Dehra Dun	N,E	e(P)	08	00	33	440 Slight, phases not clear.
			i(S)		01	17	
			i		01	25	
			i		01	34	
			i		02	15	
			i		02	37	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	New Delhi	E	eP	12	37	32	910 Slight.
			PP		37	41	
			Lq		38	56	
			eS		39	06	
			SS		39	16	
			SSS		39	26	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS	
31	Dehra Dun	N,E	e	12	37	43	Slight, phases not clear.	
			i		39	25		
			e?		12	40		07

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS	
31	Poona	Z	e?	12	40	07	Feeble.	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	Bombay	E	iP	18	29	23	Great, other phases doubtful due superposing of traces.
			e		32	21	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	Poona	Z	iP	18	29	34	1850 Great.
			iS		32	39	
			M?		34	45	

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
31	Epc:			13 1/2°N, 58°E.	Arabian Sea; - H = 18h 25m 48s (USCGS).		
				12 1/2°N, 58°E.	- H = 18h 25m 47s (BCIS).		

Magnitude = 7 1/4 - 7 1/2 (Pasadena, Uppsala), 7 1/4 (Kona).

Mar.
1954

Place	Direction	Phase	Time (h. m. s.)	Distance (km)	Per. (secs)	Remarks
31 Kodaikanal Contd.	E	iP	18 30 14	2250	Great.	Very great. First movement East.
			30 41			
			30 53			
		iSS	34 11			
		SSS	34 30			
			34 47			
	35 07					
	35 34					
	M	37 20				
Hyderabad	N	iP	18 30 23	2250	Great.	
		iS	34 06			
		M	37 59			
Madras	E	iP	18 30 39	2510	Great.	
		iS	34 43			
New Delhi	N,E	iP	18 31 06	2760	Great.	of first South and
		PP	31 42			
	N	PPP	31 51			
		i	32 06			
	N,E	PcP	34 34 39			
		iS	35 26			
	N	SS	36 26			
		SSS	36 41			
		Lr	37 27			
		PcS	38 29			
		M	41 17			
		Mn	43 21			
	Dehra Dun	N,E	eP	18 31 11	2800	Great.
		PP	31 47			
		PPP	31 57			
		PcP	34 50			
		iS	35 34			
		Lq	36 13			
		SS	36 30			
		SSS	36 42			
	N	Lr	37 20			
		M	39 32			
Chatra	E,Z N,E E	iP	18 32 05	3550	Great.	
		eP	33 10			
		PP	33 28			
		PPP	34 58			
		PcP	37 16			
		iS	38 44			
		PcS	39 16			
		SSS	39 31			
		i	40 30			
		Lr	42 47			
		M				

Per. = 15
/u = 373

Per. = 12.4
/u = 166.

Per. = 18.0

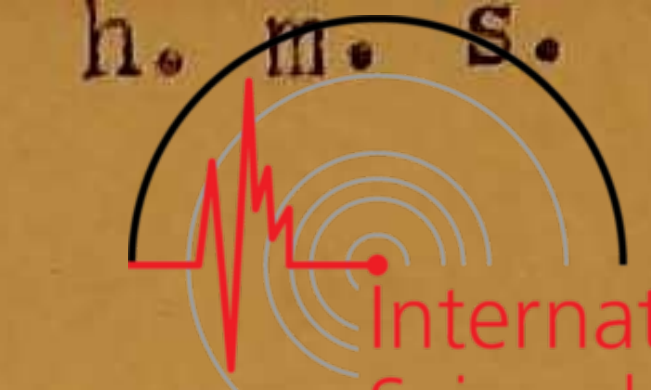
doubtful

Place	Direction	Phase	Time (h. m. s.)	Distance (km)	Per. (secs)	Remarks
Calcutta	E N E N E N E	iP	18 32 06	3480		Very great. First movement East.
		eP	32 12			
		PPP	33 31			
		PPP	33 34			
		PcP	35 12			
		iS	37 13			
		iS	37 16			
		Lr	40 14			
Shillong	N	iP	18 32 40	3970		Great.
		PP	34 00			
		** PFP	34 18			
		SS/Lq	40 22			
		SSS	40 56			
		Lr	42 27			
		ScS	43 10			
		M	44 56			
** iS	38 17					

Earthquake Reports
(Non Instrumental Reports)

The following table contains a list of earthquakes that were reported by Voluntary Observers from various stations during the month of March, 1954.

Place at which felt	Date in G.M.T.	Time in G.M.T. (h. m.)	Duration in secs.	Intensity R. F. scale	No. of shocks	Remarks
Sirsa	21	23 15	1	IV	-	-
Jaspur	21	23 20	5	VII	-	-
Kohima	21	23 30 (roughly)	30	VIII	-	Direction of motion South.
Naga Hills	21	23 30 (roughly)	30	VIII	-	In some streams water level raised and in some other streams water level lowered.
Midnapore	21	23 30 (roughly)	2	-	-	-



International
Seismological
Centre

Station	Date	Time	Duration	Intensity	Direction	Remarks	Time		Duration	Intensity	Direction	Remarks
							G. M. T	h. m.				
Mandi	21	23 42	20	VI	-	-	21	23 45	56	VIII	2	-
Khoragpur	21	23 42	2	IV	-	-	21	23 45	3	VI	1	-
Garhbeta	21	23 42	30	VI	-	-	21	23 45	30	V	1	-
Deragaon	21	23 42	90	VII	-	-	21	23 45	30	VI	-	Direction from East
Sibsagar	21	23 42	120	VII	-	-	21	23 45	-	-	2	-
Khagaria	21	23 42	3	IV	-	-	21	23 45	120	VII	-	-
Behampur	21	23 42	2	-	-	-	21	23 45	60	IV	-	Direction N-S.
Nawabgunj	21	23 42	-	VI	-	-	21	23 45	180	IV	-	-
Kalna	21	23 42	7	IV	-	-	21	23 45	20	IV	-	-
Darjeeling	21	23 42	40	V	-	-	21	23 45	43	IV	1	Brisky movement with a swing from N to S.
Dibrugarh	21	23 42	60	VII	-	-	21	23 45	25	-	4	-
Tinsukia	21	23 42	70	IV	-	-	21	23 45	30	IV	-	Direction N-S.
Naharakotia	21	23 42	-	-	-	-	21	23 45	30	IV	-	Direction from E-W.
Barkagaon	21	23 43	12	VI	2	Direct South	21	23 45	5	IV	-	-
Agartola	21	23 43	60	-	1	-	21	23 45	120	IV	-	Sound heard like rumbling noise. Direction East to West.
Khajuha	21	23 43	10	IV	-	-	21	23 45	2	V	-	-
Saugar Islands	21	23 43	2	IV	-	Direct East	21	23 45	120	VII	-	Slight damage. Rumbling noise.
Burdwan	21	23 43	60	IV	2	-	21	23 45	5	-	-	Direction N to S.
Shillong	21	23 44	120	VII	2	Direct East	21	23 45	3	VI	2	Direction E-W.
Bagdogra	21	23 44	70	VI	2	Direct East	21	23 45	50	VI	3	Direction S to N.
Gangajalghati	21	23 44	2	VI	2	Article from Basing	21	23 45	90	VII	2	Direction N to S.
Lalbag	21	23 44	90	VII	-	-	21	23 45	60	-	-	-
Siliguri	21	23 44	-	-	-	-	21	23 45	2	-	-	-
Alipore	21	23 44	25	VI	2	-	21	23 45	30	VI	-	Motion from South West.
Gauhati	21	23 45	75	IV	2	-						



International
Seismological
Centre

Place at which felt	Date in		Duration in secs	Intensity R.F. scale	No. of shocks	Remarks
	G. M. T	G. M. T				
Gaya	21	23 46	2	-	-	-
Katwa	21	23 46	30	VIII	-	Direction West to
Bermu (Ranchi)	21	23 47	-	-	2	-
Dhanbad	21	23 48	35	I	2	-
Kurseong	21	23 48	8	IV	-	-
Narayangunj	21	23 50	60	VI	2	-
Khulna	21	23 50	35	VI	4	Direction
Comilla	21	23 50	30	VII	3	-
Cox's Bazar	21	23 50	5	IV	2	Direction
Rangpur	21	23 50	15	VII	2	Direction
Jorhat	21	23 50	-	VII	-	Rocked
North Lakhimpur	21	23 53	-	VII	-	-
Fakiragram	21	23 54	60	IV	-	Direction
Satkhira	21	23 54	2	VI	-	Direction
Sylhet	21	23 55	120	VII	-	Knocking appearing North.


 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	Instrument	Compt.	Period in secs	Static Magnifi- cation	Damping ratio	Paper Speed mm/alt
Bombay	Milne-Shaw	N-S	12.0	350	18:1	16
	Milne-Shaw	E-W	12.0	350	9:1	8
	Sprengnether Microseismo- graph	E-W	To = Tg = 7.0	-	-	30
Calcutta	Milne-Shaw	E-W	10.0	150	20:1	8
	Wood-Anderson	N-S	2.0	870	Critical	30
	Omori-Ewing	N-S	18.0	32	-	25
	Omori-Ewing	E-W	19.0	30	-	25
Chatra	Benioff	Z	To=0.72 Tg=0.45	-	Critical	60
	Wood-Anderson	N	1.0	1000	30:1	60
	Wood-Anderson	E	1.0	1000	40:1	60
	Milne-Shaw	E	12.0	250	20:1	16
Colombo	Milne-Shaw	E-W	12.0	250	20:1	-
Dehra Dun	Milne-Shaw	N-S	12.0	250	20:1	16
	Milne-Shaw	E-W	12.0	250	20:1	16
	Wood-Anderson	N-S	0.8	800	60:1	60
	Wood-Anderson	E-W	0.8	950	60:1	60
Hyderabad	Milne-Shaw	N-S	12.0	252	20:1	8
	Milne-Shaw	E-W	12.0	253	20:1	8
Kodaikanal	Milne-Shaw	E-W	10.0	250	20:1	8
Madras	Sprengnether Microseismograph	E-W	To = Tg = 7.2	-	-	30
New Delhi	Milne-Shaw	N-S	12.0	288	20:1	8
	Wood-Anderson	N-S	4.0	1070	20:1	16
	Wood-Anderson	E-W	2.0	1841	30:1	60
	Omori-Ewing	E-W	28.0	30	1	12
Poona	Sprengnether Microseismograph	Z	To=1.5 Tg=1.5	-	-	30
	Wood-Anderson	E-W	4.0	1100	20:1	16
	Milne-Shaw	N-S	12.0	250	20:1	8
Shillong	Milne-Shaw	N-S	12.0	250	20:1	8
	Benioff Short Period	Z	To=1.0 Tg=0.18	-	-	60
	Wood-Anderson	E-W	0.8	1000	-	30
	Wood-Anderson	N-S	0.8	1000	-	30
	Wood-Anderson	N-S	4.0	1120	-	30



DATE	STATION	COMPT.	PHASE	G	M	T	/	REMARKS
				h.	m.	s.		
<u>Apr.</u> 1954								
01	Dehra Dun	N	i i	09	19	49 20 25		Feeble, phases not clear.
01	Shillong	N	e i	14	09	35 14 00		Very feeble.
01	Shillong	N	P/Pg Sg S	16	12	58 13 10 13 14		Local, felt.
01	Epc: 46 1/2°N, 153 1/2°E. Kurile Island; h = 60 km. - H = 18h 18m 47s (USCGS). Magnitude = 6 1/4 (Pasadena).							
	Shillong	N	iP PP PPP iS ScS SS SSS Lq Lr M	18	27	58 29 41 31 06 35 34 37 31 39 20 41 15 41 33 44 22 47 45	6020	Slight.
	Chatra	Z E	iP eP eS e	18	28	16 36 00 50 --	6170	Slight, distant. Surface waves.
	Dehra Dun	N,E	eP i i	18	28	41 29 03 29 17		Feeble, phases not clear.
	New Delhi	N,E N	eP eS M	18	28	56 37 15 57 31	6790	Slight.
	Hyderabad	E,N E E,N E N E	iP PP iS ScS SS L M M	18	29	39 32 06 38 36 39 39 43 07 50 12 56 09 56 36	7510	Slight. Per.=18 Secs./u= 7. Per.=18 Secs./u= 7.
	Madras	E	iP PcP PP PPP iS PS PPS SS Lr M	18	29	52 30 23 32 25 34 07 38 55 39 18 39 26 43 22 51 30 19 05 32	7630	Slight.


DATE	STATION	COMPT	PHASE	G	M	T	REMARKS		
				h.	m.	s.		km.	
Apr. 1954									
01 Contd.	Poona	Z E N	eP	18	29	53	7800	Moderate.	
			PcP			30			11
			PPP			34			15
			eS			43			05
			SS			43			58
			SSS			46			56
			M			57			27
	Bombay	N,E E N N,E N E	eP	18	29	59	7810	Slight.	
			PP			32			33
			PPP			34			19
			eS			39			11
			PS			39			43
			PS(SKS)			39			46
			PPS			40			01
	Kodaikanal	E	iP	18	30	18	8050	Slight.	
			PP			33			00
			PPP			34			45
			iS			39			42
			PPS			40			29
			M			59			00
01	Dehra Dun	N,E	e i	20	2	54 28 24	Feeble, phases not clear.		
02	Dehra Dun	N	e(P) e e(S) SS Lr	01	56	30 44 42 56 06	1300 Slight, other phases not clear.		
02	Shillong	N	e i e	05	32	58 01 33	Slight.		
	Dehra Dun	N	e i	05	38	50 56	Feeble, phases not clear.		
02	Shillong	N	P Pg Sg	05	42	58 03 34	Slight.		
	Dehra Dun	N	e	05	48	40	Tremor.		
02	Colombo	E	L M	11	09	-- 51			
02	Poona	Z	e	11	26	02	Tremor.		
02	Shillong	Z	e	15	15	20	Slight.		
	Poona	Z	e	15	17	02	Tremor.		
	Madras	E	M	15	58	--	Other phases not clear.		



DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h.	m.	s.	km.	
<u>Apr.</u> 1954								
02	Shillong	Z	i	20	35	28		Slight.
03	Shillong	Z	e	00	14	30		Feeble.
03	Shillong	Z	i	01	30	57		Slight.
03	Shillong	Z	P	11	14	20		Slight.
			Pg		14	24		
			PP		14	27		
			S		14	43		
			Sg		14	49		
03	Bombay	E	e	20	55	35		Feeble, tremor.
			e		55	39		
	Poona	Z, E, W	e	20	55	46		Tremor.
	Madras	E, W	e	20	56	47		Tremor.
04	Epc: 42°N, 142 1/2°E. Off the South Coast of Hokkaido; - H = 23h 13m 55s (USCGS and BCIS). 41°9' N, 142°8' E. h = 50 km; - H = 23h 14m 01s Felt (CMO. Japan).							
	Shillong	Z	iP	23	22	12		Slight.
	Chatra	Z	iP	23	22	34		Slight, distant.
		E	eS		29	23		Surface wave.
			e		42	--		
	Dehra Dun	N, E	eP	23	23	05		Slight, phases not clear.
	New Delhi	N, E	iP	23	23	22		Slight.
		N	iS		30	57		
✓	Hyderabad	E	eP	23	24	02		Per. = 15 Secs. ✓ u = 2.
		E, N	i		32	39		
		E	M		49	51		
	Poona	Z	iP	23	24	21	6820	Slight.
		E	PcP		24	48		
			PP		26	39		
			PPP		28	12		
			PcS		28	39		
			eS		32	43		
			PPS		33	12		
			SSS		39	46		
			M?		49	10		
	Madras	E	iP	23	24	22	6610	Slight.
			PcP		24	55		
			PP		26	27		
			iS		32	31		
			PS		32	54		



International
Seismological
Centre

DATE	STATION	COMPT	PHASE	G M T			REMARKS
				h.	m.	s.	
							 International Seismological Centre
Apr. 1954							
04 Contd.	Bombay	N, E N	eP PcP PP	23	24	24	7150 Feeble.
					2	43	
					26	46	
		N, E, S	eS		33	02	
		E, S	PS?		33	17	
		N	PS		33	20	
	Colombo	E	eS M	23	33	06	
					54	21	
05	Poona	Z	iP	18	1	48	Tremor.
	Dehra Dun	N, E	e	18	12	05	Feeble, phases not clear.
			i		12	31	
			i		12	59	
			i		13	37	
06	Shillong	N, E	e	11	59	07	Slight, near.
			i		59	45	
06	Dehra Dun	N	e	12	04	47	Tremor.
06	Bombay	E	e	14	39	41	Near, feeble shock.
			e		43	27	
	Poona	Z, E E	eP i?	14	39	53	Feeble, phases not clear.
					43	45	
	Dehra Dun	N, E	e	14	40	03	Feeble, phases not clear.
06	Shillong	N	e	15	47	56	Slight, distant
			e		54	42	
07	Poona	Z	e?	16	46	40	Slight.
07	Shillong	Z	eP	21	18	26	190 Slight.
			P*		18	27	
			Pg		18	29	
			iSg		18	52	
			SS		18	59	
08	Shillong	Z	iP	07	07	48	190 Slight.
			P*		07	49	
			Pg		07	51	
			PP		07	54	
			S		08	10	
			S*		08	14	
		Z, N, E	iSg		08	17	
			SS		08	24	
08	Poona	Z E	eP?	16	58	13	Distant, feeble shock. Phases not clear.
			i?	17	06	11	
			i?		06	49	

DATE	STATION	COMPT	PHASE	G M T			△	REMARKS
				h.	m.	s.		
Apr. 1954								
08 Contd.	Shillong	N	e	17	04	53		Slight, distant.
			e		23	43		
			e	18	01	21		
08	Bombay	E	M	18	03	--		Feeble.
	Hyderabad	N	M	18	05	32		Per. = 18 Secs. $\Delta = 7$.
	Madras	E	M	18	19	32		Other phases not clear.
09	Dehra Dun	N,E	e	05	15	24		Feeble, phases not clear.
09	Epc: $19^{\circ} \frac{1}{2}' N, 121^{\circ} \frac{1}{2}' E$. Off the North Coast of Luzon, Philippines; - H = 07h 15m 03s (USCGS). Felt at Calayan (V) and Aparri (Press report from Manila).							
	Shillong	N	eP	07	20	34	3500	Slight.
			PP		21	29		
			eS		25	42		
			Lq		27	05		
			Lr		29	39		
			M		31	33		
	Chatra	Z	iP	07	21	34		Slight, distant. Surface waves.
		E	e		35	--		
	Poona	Z,E	iP	07	23	19		Slight.
	Bombay	E	eP	07	23	28	5060	Very feeble.
			PP		25	15		
			eS		30	11		
09	Shillong	Z	iPg	11	19	06	50	Slight.
		E,N	ePg		19	06		
		Z,E,N	iSg		19	12		
10	Shillong	Z	e	00	35	09		Tremor.
10	Poona	Z	e	02	49	22		Tremor.
10	Shillong	Z	eP	11	12	33	200	Slight.
			P*		12	35		
			PP		12	40		
			PPP		12	51		
			iSg		13	00		
11	Epc: $7^{\circ} S, 155^{\circ} E$. Solomon Island; - H = 03h 03m 03s (USCGS).							
	Shillong	Z	iP	03	13	30		Feeble.
/	Hyderabad	E	eP	03	15	18	8840	Slight.
			iS		25	20		
			M		50	06		
		N						Per. = 15 Secs. $\Delta = 3$. ✓



DATE	STATION	COMPT	PHASE	G	M	T	REMARKS
				h.	m.	s.	
<u>Apr.</u>							
<u>1954</u>							
11	Poona	Z	eP	03	15	42	Slight, distant
Contd.	Madras	E	eS	03	25	10	Tremor.
11	Shillong	Z	iP	03	25	17	Tremor.
	Bombay	N,E	e	03	26	20	Very feeble.
11	Dehra Dun	N	e	05	59	44	Feeble.
11	Epc: 11°N , 57°E . Arabian Sea.			- H = 10h 25m 21s (USCGS).			
	10 $\frac{1}{2}^{\circ}\text{N}$, 57°E .			- H = 10h 25m 23s (BCIS).			
	Bombay	N,E	iP	10	29	24	2000 Moderate.
			PPP		29	50	
		N	i		30	12	
		N,E	eS		32	43	
		N	Lq?		32	53	
		E	Lq		32	58	
		N	SS		33	00	
		E	SSS		33	19	
		N	Lr		33	22	
			M		36	23	
		E	M		41	07	Per.=13 secs./ Δ Per.=13 secs./ Δ
	Poona	Z,E	iP	10	29	32	2010 Moderate.
		N	PP		29	44	
			PPP		29	55	
			eS		32	52	
			SS		33	08	
			M		35	10	
	Kodaikanal	E	iP	10	30	04	2450 Moderate.
			PPP		30	47	
			iS		34	04	
			Lq		34	46	
			M		37	49	
	Hyderabad	E	iP	10	30	11	2490
		N	iS		34	14	
		E	iS		34	18	
			SS		35	05	
		N	SS		35	21	
			M		37	10	
		E	M		37	41	Per.=15 secs./ Δ Per.=12 secs./ Δ
	Colombo	E	iPP	10	30	21	
			S		34	27	
			L		36	18	
			M ₁		38	32	
			M ₂		42	--	

DATE	STATION	COMPT	PHASE	G M T			△ km.	REMARKS
				h.	m.	s.		
Apr. 1954								
11 Contd.	Madras	E	iP	10	30	25		Great.
	Dehra Dun	N,E	e(P)	10	31	13		Moderate.
			e(PPP)		32	31		
			e(S)		36	01		
			M		41	06		
	New Delhi	N,E N	PP	10	31	43	2890	Moderate.
			PPP		31	57		Beginning lost
			iS		35	32		within hour
			SS		36	37		mark.
			i		37	01		
			i		37	25		
			M		41	25		
	Chatra	E	eP	10	31	55	3550	Moderate.
			PP		33	00		
			PPP		33	21		
			PcP		34	45		
			eS		37	07		
			Lq		39	03		
			SSS		39	32		
			Lr		40	25		
			M		43	00		Per.=12 secs./u=19.
	Calcutta	E	eP	10	31	55	3490	Moderate.
			PcP		34	56		
			iS		37	03		
	Shillong	Z N	eP	10	32	25	3890	Moderate.
			PP		33	55		
			PPP		34	55		
			iS		38	01		
11	Epc: 37°N, 70 1/2° E. Hindukush; h = 60 km. - H = 10h 53m 20s (USCGS).							
	Dehra Dun	N,E	eP	10	55	33	890	Moderate.
			PP		55	41		
			PPP		55	46		
			P*		55	52		
			Lq		56	55		
			eS		57	05		
			SS		57	18		
			Lr		57	20		
			SSS		57	29		
			S*		57	35		
			Sg/M		57	59		
	New Delhi	N,E	iP	10	55	45	970	Slight.
			PP		55	53		Direction of
			i		56	14		first motion
		N	Pg		56	34		South and
			i		57	06		East.
		N,E	iS		57	25		
		N	SSS		58	43		



DATE	STATION	COMPT	PHASE	G M T			△	REMARKS
				h.	m.	s.		
<p>Apr. 1954</p> <p>13 Epc: $34\frac{1}{2}^{\circ}$ N, $133\frac{1}{2}^{\circ}$ E. South Coast of Hondo; - H = 15h 25m 48s (USCGS and BCIS). $32^{\circ}9$ N, $134^{\circ}4$ E. h = 20 km; - H = 15h 25m 40s; Felt (CMO. Japan).</p>								
	Shillong	Z N	iP iS PS SS SSS/Lq Lr M	15	32	57		Slight.
	Chatra	Z E	eP e	15	33	26		Slight, distant. Surface waves.
	Poona	Z,E	i	15	35	16		Slight, phases not clear.
	Calcutta	E	eS	15	39	37		Slight, distant.
	Hyderabad	E	M	15	59	58		Per.=15 secs. $\lambda=4$.
13	Shillong	Z	e	16	52	00		Tremor.
13	Dehra Dun	N,E	eP P* iS SS Lr SSS S* Sg/M	17	04	49	900	Slight.
	New Delhi	E	eP PP PPP P* Pg eS SS SSS i	17	05	16	940	Slight.
13	Poona	Z	e	17	10	59		Tremor.
13	Shillong	Z	i	17	45	11		Tremor.
13	Shillong	Z	P Pg Sg	18	13	36		Local.
13	Shillong	Z	Pg Sg	23	48	42		Local.



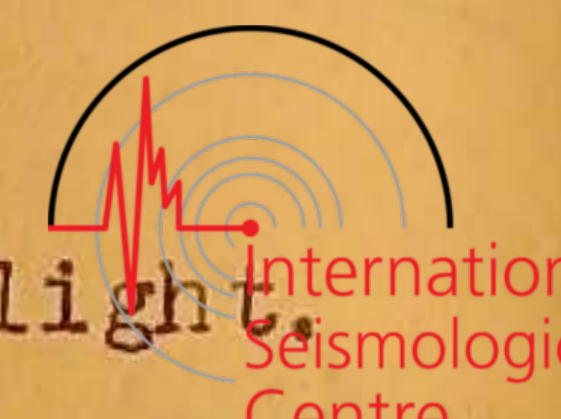
DATE	STATION	COMPT	PHASE	G	M	T	△ km.	REMARKS	
				h.	m.	s.			
<u>Apr.</u> 1954									
11 Contd.	Chatra	N	iP	10	57	19	1780	Moderate.	
			PP			57			32
			PPP			57			40
			Lq	11	00	13			
			iS			00			17
			SS			00			33
			SSS			00			47
			Lr			00			58
			M			02			22
				Bombay	N,E	iP			10
PP						57	47		
N	PPP					57	53		
	iS	11			00	40			
E	SSS					01	19		
	Lr					01	27		
	M					02	58		
	Poona	Z N,S	iP	10	57	32	1850	Moderate.	
			PP			57			40
			PPP			57			48
			eS	11	00	36			
			SS			00			54
			SSS			01			09
			Lr			01			34
			M?			02			47
	Hyderabad	N	iP	10	57	52	2120		
			iS	11	01	22			
	Calcutta	E N E	iP	10	57	59		First movement East.	
			i(S)	11	01	43			
			SS			02			08
	Shillong	Z	eP	10	58	03			
			iS	11	01	40			
13	Shillong	Z	P	04	36	37		Slight, local.	
			P*		36	40			
			Pg		36	46			
			Lq		36	58			
			Sg		37	26			
13	Poona	Z	e	07	55	33		Tremor.	
	Madras	E	iP	07	55	43		Slight.	
	Shillong	Z	i	07	56	05		Tremor.	
13	Shillong	Z	i		56	48			
			e	15	13	32		Slight.	



DATE	STATION	COMPT	PHASE	G	M	T	REMARKS
				h.	m.	s.	
<u>Apr.</u>							
<u>1954</u>							
14	Poona	Z	e	08	13	47	Tremor.
14	Dehra Dun	N	eP.	09	43	40	870 Slight.
			PP		43	46	
			P*		43	58	
			iS		45	09	
			SS/Lr		45	21	
			SSS		45	34	
			S*		45	39	
			Sg/M		46	00	
14	Epc: 10° N, 93° E. Andaman Island Region; - H = 13h 24m 47s (USCGS) 10° N, 93 ¹ / ₄ ° E. -H = 13h 24m 46s (BCIS). 995 N, 93° 5' E. -H = 13h 24m 44s (Shillong).						
	Madras	E,W	iP	13	27	52	1420 Slight.
			PP		28	01	
			PPP		28	06	
			i		28	31	
			iS		30	17	
			Lq		30	19	
			SS		30	35	
			SSS		30	44	
			Lr		30	52	
			M		32	12	
	Calcutta	E	eP?	13	28	04	1600 Moderate.
		N	iP		28	04	
		E	iS		30	45	
			SS?		31	10	
	Kodaikanal	E	iP	13	28	25	2380 Slight.
			PPP		28	56	
			S		32	19	
	Shillong	Z	eP	13	28	27	Slight.
		N	PP		28	36	
			PPP		28	47	
			eS		31	17	
			Lr		31	43	
			M		32	54	
	Hyderabad	E,N	iP	13	28	34	1750
		E	eS		31	30	
			SS		31	42	
			M		34	38	
	Chatra	Z	iP	13	28	57	2010 Slight.
		E	eP				
			PP		29	16	Per.=16 secs. $n=9$
		E,Z	PPP		29	28	
		E	iS		32	17	
			SS		32	46	
			SSS		33	01	
			Lr		33	20	
			M		34	46	



No.	STATION	COMPT	PHASE	G M T			△ km.	REMARKS
				h.	m.	s.		
14	Poona	ZEN N,S	iP PP eS Lq SS SSS M	13	29	27	2280	Moderate.
14	Bombay	N E N,E,S E N N E N,E N E N	eP iP PPP PPP PcP eS iS Lq SS SSS Lr	13	29	40	2500	Slight.
14	New Delhi	N,E N	iP PP eS Lq SS	13	30	02	2570	Slight.
14	Dehra Dun	N,E	eP PP PPP iS Lq SSS Lr PcS M ScS	13	30	11	2890	Moderate.
14	Dehra Dun	N	e	20	11	10		Feeble, phases not clear.
14	Shillong	Z	e	21	44	47		Tremor.
15	Poona	Z	e?	03	08	31		Tremor.
15	Dehra Dun	N,E	eP PP P* Pg iS Lr SS S* SSS Sg/M	05	56	05	520	Moderate.

DATE	STATION	COMPT	PHASE	G M T			REMARKS
				h.	m.	s.	
<div style="text-align: right;">  International Seismological Centre </div>							
Apr. 1954							
15	New Delhi	E	eP	05	56	22	620 Slight.
Contd.			PP		56	30	
		N	Lq		57	14	
		N,E	iS		57	27	
			Lr		57	31	
			SS		57	37	
			S*		57	42	
			Sg		58	08	
	Shillong	Z	e	05	58	48	Tremor.
15	Shillong	Z	e	06	06	38	Slight, local.
			e		06	44	
			i		06	57	
15	Shillong	Z	e	10	13	52	Tremor.
15	Dehra Dun	N,E	e	22	01	53	Slight, phases not clear.
			i		33	48	
	New Delhi	N,E	eP	22	02	03	1090 Slight.
		E	PPP		02	30	
			P*		02	41	
			Pg		03	11	
			eS		04	05	
			Lr		04	45	
			S*		05	02	
16	Shillong	Z	e	04	58	53	Tremor.
16	Shillong	Z	i	06	11	40	Tremor.
			i		12	08	
	Poona	Z	e	06	13	51	
16	Shillong	Z	e	09	50	03	Slight, local.
			i		50	08	
16	Shillong	Z	i	10	06	52	Tremor.
16	Poona	Z	e	10	40	43	
16	Shillong	Z	P	17	37	41	Slight.
			P*		37	42	
			Sg		38	09	
			SS		38	14	
			SSS		38	25	

17 Epc: $51\frac{1}{2}^{\circ}$ N, 179° W. Andreanov Island, Aleutian Island;
 - H = 20h 10m 37s Felt Adak (U.S.C.G.S)
 Magnitude = $6\frac{3}{4}$ -7 (Pasadena), $6\frac{3}{4}$ (Berkeley), 6.6 (Rome)
 $6\frac{1}{2}$ (Kiruna, Uppsala).



STATION	COMPT	PHASE	G	M	T	△	REMARKS
			h.	m.	s.	km.	
Shillong ntd.	Z N N	iP X PcP iS PS ScS SS Lq Lr M	20	21	50	7530	Moderate.
Chatra	Z N, Z	i(P) e(S)	20	22	00 31 14		Slight.
Dehra Dun	N, E	eP PPP iS ScS PS PPS SS SSS Lq M	20	22	16 26 49 31 42 32 14 32 23 33 25 36 35 39 44 41 47 51 27	8110	Moderate.
Calcutta	E	eP iS SS?	20	22	18 31 46 36 45	8130	Moderate.
New Delhi	N, E N	iP PcP iS PS PPS SSS M	20	22	28 22 41 32 04 32 31 32 47 39 44 50 45	8300	Moderate.
Hyderabad	E N E	iP iS SS L M M	20	23	10 33 30 38 59 51 00 54 52 55 11	9230	Moderate. Per.=18 secs./u=24. Per.=20 secs./u=26.
Poona	Z E	iP PP iS PS PPS SS M?	20	23	19 28 45 33 48 34 52 35 18 39 41 58 17		Moderate.

DATE	STATION	COMPT	PHASE	G M T			REMARKS
				h.	m.	s.	
Apr. 1954							
17	Madras Contd.	E	iP PcP PP SKS S PS PPS SS	20 23 26 33 33 34 35 39	21 27 52 42 53 56 16 17	9500	Moderate.
	Bombay	N,E E	eP PP PPP e iS	20 26 28 33 33	23 48 47 41 51	9510	Moderate.
		N E E	eS iS PS	33 33 34	55 51 51		
		N E	PPS M M	35 59 59	24 00 00		Per.=18 secs./u =10 Per.=19 secs./u =10
	Colombo	E	ePP S L M	20 34 56 21	57 45 02 07		
17	Kodaikanal	E	iP iS M	21 34 22	42 32 00	9850	Very slight. Per.=18 secs./u =16.7
17	Shillong	Z	i	22	29 10		Tremor.
18	Colombo	E	ePP M	03 04	28 50 06 53		
19	Dehra Dun	N,E	eP Pg eS SS Lr SSS S* Sg/M	11 32 32 33 34 34 34 34 34	18 58 49 02 04 13 23 42	880	Slight.
	New Delhi	N,E E	eP PP PPP Pg Lq	11 32 32 32 33	31 39 47 15 59	950	Slight.
		N,E N N,E N	iS i SS SSS S* Sg	33 34 35 34 34 34 35	59 09 18 21 29 38 08		



DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h.	m.	s.	km.	
Apr. 1954								
19	Poona	Z	e	16	39	01		Very feeble.
19	Dehra Dun	N, E	eP e Pg Lq iS SS Lr S* Sg/M	16	55	39	340	Slight.
	New Delhi	N, E E	eP P* Lq eS Lr SSS S* Sg	16	55	57		Slight.
19	Bombay	E	e e	17	01	50		Very feeble.
	Madras	E	eP? S?	17	05	16		
21	Poona	Z	e	00	15	57		
21	Chatra	Z	e	10	04	52		Slight, distant.
21	Poona	Z	i	20	42	51		Tremor.
22	Chatra	Z	i	15	02	27		Slight.
	Poona	Z	i	15	04	01		Tremor.
	Bombay	E	i i	15	04	11		Very feeble.
22	New Delhi	E	eP P* Pg i Lq S* Sg	23	01	50	470	Slight.
		N, E						
	Dehra Dun	N, E	eP P* PP Pg PPP Lq Lr iS S* SS Sg SSS	23	01	56	360	Slight.
		N						



DATE	STATION	COMPT	PHASE	G M T			△	REMARKS
				h.	m.	s.		
25	Bombay	N E N	e e e	03	52	14 00 29		Very feeble and near shock.
25	Shillong	Z	iP	09	26	15		Feeble.
25	Shillong	Z	eP	18	13	03		Tremor.
25	Shillong	Z	eP	18	21	11		Tremor.
25	Shillong	Z	eP	22	02	03		Tremor.
26	Shillong	Z	eP	00	40	32		Tremor.
26	Shillong	Z	eP	02	19	20		Tremor.
26	Poona	Z	e?	02	29	29		Tremor.
26	Shillong	Z	eP Pg S SSS Sg	11	00	26 55 39 55 07	700	Slight.
	Dehra Dun	N	e(P) PP e(S)	11	02	46 06 22	1550	Slight. Phases not clear.
	Calcutta	E	e i i	11	03	37 14 59		Slight, near.
	Poona	E	e	11	08	27		Very distant feeble shock. Phases not clear.
	Bombay	E N E	e e e e	11	08	31 45 20 39		Very feeble shock.
26	Shillong	Z	iPg P Sg	16	45	50 52 59.5	80	Slight, local, felt.
26	Epc:	52°N, 159°E.	Off the SE Coast of Kamchatka;	h = 60 km.				
			- H = 20h 24m 47s (B C I S)					
		51°N, 158½°E.	h = 60 km Ca.					
			- H = 20h 24m 44s (U S C G S)					
		52°N, 159° E.	h = 100 km Ca.	- H = 20h 24m 52s (CMO. Japan).				
		Magnitude = 6½ - 6¾	(Pasadena), 6½ (Kiruna, Uppsala, Berkeley), 6.4 (Roma).					



DATE	STATION	COMPT	PHASE	G I T			REMARKS
				h.	m.	s.	
							km.
<u>Apr.</u> 1954							
23	Dehra Dun	N, E	e i	11	06 07	29 27	Feeble, phases not clear.
23	Chatra	Z	e	18	24	37	Slight, near.
23	Calcutta	E	e i	18	27 29	05 27	Slight, near.
	Dehra Dun	N	eP PP S SS SSS PcP PcS	18	27	07 14 29 42 03 14 43	1400 Slight.
	Madras	E	e	18	27	32	Tremor.
	New Delhi	W	eS SS SSS M	18	29	15 45 59 51	2280 Slight.
	Hyderabad	E, N E N	iS M M	18	31	06 55 25	Per. = 9 secs. $\Delta = 2$ Per. = 9 secs. $\Delta = 2$
	Bombay	N, E N, E, S	e e	18	32	13 18	Feeble.
24	Dehra Dun	N	e	23	15	58	Tremor.
25	Poona	Z	e?	00	40	52	Very distant, feeble shock, phases not clear.
	Bombay	E, S	e e	00	44	25 23	Distant and feeble.
	Kodaikanal	E, W	e?	00	44	44	Very slight, tremor.
	Madras	E, W	eP	00	45	08	Slight, phases not clear.
	Hyderabad	E	eS M	00	51	42 50	Per. = 17 secs. $\Delta = 6$
25	Colombo	E	M	02	11	45	
25	Shillong	Z	iP	02	42	44	Slight.
25	Shillong	Z	iP P* Pg S? Sg/M	03	43	24 36 50 19 46	510 Slight, near.



DATE	STATION	COMPT	PHASE	G M T			km.	REMARKS
				h.	m.	s.		
Apr. 1954								
26 Contd.	Shillong	Z	eP PPP S ScS Lq M	20	34	25 47 14 30 21 56	6230	Distant, slight.
	Chatra	Z	eP	20	34	38		Slight, distant. Probably deep focus.
	Dehra Dun	N	e i	20	34	55 24		Slight, phases not clear.
	Calcutta	E	eP eS Lq Lr	20	34	58 04 39 14	6550	Slight.
	New Delhi	N,E N	iP PcP iS PS i SS SSS Lr M	20	35	08 32 57 16 51 26 14 32 00	7370	Moderate.
	Hyderabad	E,N N	iP iS L M	20	35	57 59 19	7600	
		E	M	21	03	35		Per.=21 secs. $\lambda = 18.$
	Poona	Z E	eP i	20	36	07		Per.=18 secs. $\lambda = 10.$
	Madras	E	iP PcP PP PPP iS SKS ScS PPS	20	36	11 18 54 40 40 28 52 56 07	7910	Moderate.
	Bombay	N,E E N,E E N,E E N,E E N	iP eP PP PPP eS PS PPS M M	20	36	12 12 56 41 31 02 18 08 11	7950	Slight.
								Per.=19 secs. $\lambda = 8.$ Per.=18 secs. $\lambda = 7.$



STATION	COMPT	PHASE	G	M	T	△	REMARKS
			h.	m.	s.		
Kodaikanal	E	e	20	36	35		Very slight, tremor.
Colombo	E	P	20	36	42		
		S		46	25		
		L	21	02	50		
		M		10	35		
Epc: $6^{\circ}\text{N}, 82\frac{1}{2}^{\circ}\text{W}$; - H = 10h 06m 24s (U S C G S) $5\frac{3}{4}^{\circ}\text{N}, 82\frac{1}{2}^{\circ}\text{W}$; H = 10h 06m 26s (B C I S) Magnitude = 7 (Pasadena), $6\frac{3}{4}$ (Berkeley), 6 (Uppsala, Roma).							
Colombo	E	e	10	24	50		Feeble.
		M	11	35	05		
Bombay	N,E	ePKP ₁	10	26	08		Distant shock.
		e		33	09		
Chatra	Z	e.	10	26	09		Slight, distant.
Kodaikanal	E	e	10	31	42		Very slight, tremor.
Poona	Z	e	10	36	11		Tremor.
Hyderabad	E	M	11	29	13		Per.=24 secs. $\mu = 8$.
Dehra Dun	N	e	15	30	25		Tremor.
Epc: $56^{\circ}\text{S}, 147^{\circ}\text{E}$. Off the South Coast of Tasmania; - H = 21h 21m 35s (U S C G S).							
Shillong	N	eP	21	35	10		Moderate.
		SKS ₁		45	36		
		SKKS ₁		45	51		
		iS		46	06		
		PS		47	32		
		PPS		48	07		
		PKKP ₂		51	48		
		SS		52	11		
		SSP		52	41		
		e?		55	41		
		Lr	22	05	41		
M		13	21				
Calcutta	E	e	21	37	06		Slight, distant.
		i(SKS)		45	33		
Bombay	E	e	21	38	10		Feeble.
		M	22	03	--		
Kodaikanal	E	e	21	44	54		Very slight, tremor.
Madras	E	eS	21	44	56		Slight, phases not clear.
Hyderabad	E	SKS	21	45	27		Per.=15 secs. $\mu = 6$. Per.=18 secs. $\mu = 12$.
		M	22	05	27		
		M		05	30		



DATE	STATION	COMPT	PHASE	G M T			km.	REMARKS
				h.	m.	s.		
Apr. 1954								
27	Poona	N	e	21	45	45		Slight, phases not clear.
Contd.								
28	Dehra Dun	N	e	16	08	41		Tremor.
29	Madras	E	eP	04	31	06		Moderate. Phase not clear.
29	Dehra Dun	N	e	08	36	10		Tremor.
29	Bombay	E	e	11	08	29		Distant. Moder
		N	e		08	44		
		E	e		10	39		
		N	e		12	22		
		E	e		12	34		
	Poona	Z	i	11	08	43		Slight, phase not clear.
	Kodaikanal	E	e?	11	33	41		Very slight,
29	Colombo	E	ePP	11	51	50		
			S	12	07	20		
			L		43	50		
			M	13	01	53		
29	Poona	Z	i	11	53	52		Moderate, lon shock. Phases
29	Bombay	N	e	11	54	02		Distant.
		N, E, S	e		57	25		
		E, S	e		58	26		
			e	12	07	--		
		E	M		56	--		
		N	M		59	--		
29	New Delhi	N	ePKP	11	55	05	12670	Moderate.
			PP		56	07		
			PPP		58	57		
		N	SKS	12	01	45		
			SKKS		02	58		
			PS		05	49		
			PPS		07	02		
			PKKS		09	50		
			SS		11	59		
			SSS		16	10		
29	Hyderabad	N	eP	11	57	19	10010	
			S	12	08	12		
		E	SS		13	31		
			M		39	44		Per.=18 sec
		N	M		40	05		Per.=18 sec





DATE	STATION	COMPT	PHASE	G	M	T	△	REMARKS
				h.	m.	s.		
Apr. 1954								
29	Calcutta	E	iPKP ₁	11	59	21	13780	Moderate.
			SKS ₂	12	06	38		
			PPS?		12	33		
			Mn		53	46		Per.=20 secs./u=72.
29	Dehra Dun	N,E	e	22	10	28		Slight. Phases not clear.
			i		10	34		
			i		10	47		
30	Poona	Z	i?	12	06	44		
30	Poona	Z	i	12	13	51		
30	Epc: 39.5°N, 22.2°E. Thessalonika Greece;							
	- H = 13h 02m 36s (B C I S).							
	39 ¹⁰ / ₂ °N, 22°E. - H = 13h 02m 36s (U S C G S)							
	New Delhi	N,E	iP	13	11	04	5050	Moderate.
			PP		13	53		
			PPP		14	52		
			iS		17	46		
		N	ScS		20	23		
			SS		20	58		
			SSS		22	10		
			Lr		24	49		
			M		28	58		
	Dehra Dun	N,E	eP	13	11	06	5050	Moderate.
			PcP		12	26		
			PP		12	59		
			PPP		13	44		
			PcS		16	22		
			iS		17	58		
			PPS		18	14		
			ScS		20	32		
			SS		21	06		
			Lq		22	15		
			SSS		22	25		
			Lr		24	14		
			M		28	12		
	Bombay	N,E,S	iP	13	11	18	5310	Moderate.
			PP		13	11		
		ES	PPP		14	07		
		N,E,S	iS		18	15		
		ES	PPS		18	33		
		N,E,S	SS		21	11		
		ES	i		21	47		
			i		22	09		
		N	Lq		22	34		
			SSS		22	46		
			M		34	16		Per.=17 secs./u = 9.

DATE	STATION	COMPT	PHASE	G M T			km.	REMARKS
				h.	m.	s.		
Apr. 1954								
30 Contd.	Poona	Z N, S	iP PP PPP PcS iS PS SS Lq SSS Lr M	13	11	25	5360	Moderate.
	Hyderabad	E, N E E, N E N E	iP PP iS L M N	13	11	53	5800	
								Per.=23 secs./u= Per.=22 secs./u=
30	Chatra	Z N, E N, E, Z	i(P)X e(P)X e(S)	13	12	06		Moderate, distant
	Kodaikanal	E, W	iP PPP PcS iS PPS M	13	12	25	6350	Slight.
								Per.=12 secs./u=
	Madras	E, W	iP PcP PP PPP PcS iS PS PPS ScS SS SSS Lq Lr	13	12	26	6250	Moderate.
	Calcutta	E	iP PP PPP iS ScS Lq PKKP ₁ M	13	12	32	6830	Moderate. First movement west.





DATE	STATION	COMPT	PHASE	G	M	T	Δ	REMARKS
				h. m. s.			km.	
r. 54								
0	Colombo	S	P	13	12	49.		
ntd.			S		21	01		
			L		36	--		
			M		42	14		
	Shillong	N	iP	13	12	55		Moderate.
			PP		14	44		
			PPP		16	37		
			PcS		17	37		
			iS		21	06		
			ScS		22	12		
			SS		24	31		
			SSS		27	24		
			M		34	54		
30	Kodaikanal	E,W	e?	22	59	39		Very slight, tremor.
30	Poona	Z	e	23	17	59		
30	Madras	E,W	e	23	22	36		Slight. Phases not clear.
30	Calcutta	E	e	23	27	06		Slight, distant.
			e		38	14		
30	Bombay	N	e	23	28	43		Distant and feeble.
		E,S	e		28	48		
	Hyderabad	E	S	23	28	43		
		N	L		45	18		
		E	M		52	24		Per.=18 secs. $\mu = 14$
		N	M		53	02		Per.=15 secs. $\mu = 7$.
	Colombo	S	P	23	31	16		
			L		51	49		
			M		58	51		

Earthquake Reports
(Non Instrumental Reports)

The following table contains a list of earthquakes that were reported by Voluntary Observers from various stations during the month of April 1954.

Station	Date	Time	Duration	Intensity	No. of	Remarks
	G. M. T.	G. M. T.	in secs	R. F. scale	shocks	
Shillong	01	16 15	6	III	-	-
Shillong	11	10 54	120	V	4	-
Shillong	23	11 05	1	III-IV	1	-
Shillong	26	16 30(?)	15	II	1	-