

JAN, 1954 - DEC 1955

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GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

January, 1954.

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Director General of Observatories.

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 ; O = 13h 04m 17s (U.S.C.G.S.) 9° S., $123\frac{1}{2}^{\circ}$ E., $h = 100$ km ca; O = 13h 04m 19s (B.C.I.S.) $8^{\circ}0$ S., $122^{\circ}0$ E., O = 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.	km.	
Jan. 1954						
01	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		
01	Dehra Dun	NE	e	22 20 38		Slight.
			i	21 33		
02	Shillong	Z	iP	05 37 44		Tremor.
02	Shillong	Z	iP	07 09 35		Tremor.
02	Shillong	Z	eP	09 57 44		Tremor.
02	Shillong	Z	iP	11 29 26		Tremor.
02	Shillong	Z	eP	13 17 50		Tremor.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS
				h. m. s. km.	
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.		REMARKS
				h. m. s.	km.	
Jan. 1954						
05	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		
06	Dehra Dun	N	e	08 47 33		Slight, phases not clear.
06	Shillong	Z	i	11 00 37	20	Slight, local. Felt at Shillong.
		N	i(Pg)	00 38		
			i(Sg)	40		
06	Epc: 7 ⁰ .6 N., 7 ⁰ E. SW of Spit-zbergen ; 0 = 15h 53m 59s (U.S.C.G.S.)					
	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	iPY	16 04 50	7370	Slight.
		E	ePY			
			i	13 08		
			eS	13 39		
	Poona	Z	iP	16 04 53		Tremor.
07	Shillong	Z	i	00 34 31		Slight, local.
			i	34 40		
07	Shillong	Z	iP	19 30 45		Slight, near.
			i	31 28		
		N	e	31 33		
			e	31 39		
			i	32 27		
07	Shillong	N	e	19 47 25		Slight, near.
			i	48 16		
08	Shillong	Z	e	00 26 13		Slight.
08	Dehra Dun	N	e	02 29 01		Slight, phases not clear.
			i	29 59		
			i	30 10		

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Jan. 1954						
08	Dehra Dun	NE	eP PP PPP iS SS and LR SSS S*	03 36 06 36 13 36 20 37 31 37 43 37 53 37 58	820	Slight.
	New Delhi	E	eP PPP	03 36 22 36 37	870	Slight.
		NE	eS LR	37 52 38 09		
	Shillong	Z	i	03 38 41		Slight.
08	Dehra Dun	NE	e e	18 14 10 14 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	iP eP PP i iS	18 08 31 08 31 08 38 08 50 08 56	220	Slight, felt.
		NE N	iSg SS SSS	09 02 09 07 09 18		
	Chatra	Z	i i	18 09 30 10 51		Slight, near.
10	Shillong	Z	iPg Sg	07 39 02 39 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	eP P* eS SS	13 41 30 41 58 43 34 43 46	1210	Slight.
		E NE	SSS S*	43 56 44 18		
	Chatra	Z	e	13 42 33		Slight, distant.

DATE	STATION	COMPT.	PHASE	G. M. T.			Δ	REMARKS
				h.	m.	s.	km.	
Jan. 1954								
10	Shillong	Z	e	13	43	21		Slight.
Contd.	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.		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 24		
			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.
			iY	50 00		
		N	eY			
		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.	Δ	REMARKS
				h. m. s.	km.	
Jan. 1954						
12	Dehra Dun	NE	eP PPP iS SS SSS	07 50 11 50 23 50 30 50 40 50 51	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	ePY ePY e	14 30 22 15 15 --		Slight, distant Surface waves.
12	Shillong	Z N	eP S	14 34 07 45 24	10665	Slight, phase doubtful.
	Colombo	E	P SKS L M	14 33 43 44 11 58 51 15 08 15	of phases to the earlier shock. Phases doubtful due to superposition due to the earlier shock. Amp = 1.0 mm.	
	Madras	E	1P PP PPP SKS SKKS SKKKS iS PPS SS e	14 34 00 37 54 40 07 44 25 44 49 44 53 45 11 47 10 51 47 16 25 40	10500	Moderate, phases doubtful due to superposition of phases due to the earlier shock.
	Calcutta	E	eP SKS ₁ S? PS ? SSS SKKS ₂ ? SKKKS	14 34 07 44 35 45 32 47 08 53 10 56 03 57 59 15 00 53 01 37	10920	Moderate.
	Hyderabad	E N E NE N	eP PP SKS iS PS SSP L M M	14 34 23 38 30 44 53 45 54 47 24 52 09 15 06 51 09 39 09 47	11080	Per. = 18 secs μ = 23. Per. = 18 secs μ = 13.
	Bombay	E N E	iPKP ₁ ePKP ₁ PP i PPP PKS ₁ SKS	14 34 29 34 51 36 11 37 25 38 01 41 14		Moderate, phases mixed up with that of the succeeding shock.

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				h. m. s.	km.	
Jan. 1954						
12	Bombay	N	PS	14 44 11		
Contd.	Contd.	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	14 34 46		Moderate.
		E	PP	33 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	12 52		
12	Bombay	E	iPKP ₁	14 33 27		Moderate, phases
		NE	PP	35 51		mixed with that of
			PPP	41 03		preceding shock.
		E	FES ₁	41 42		
		N	SES 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 Moderate.
			PPP	41 47		
			SKS	45 35		
			SKKS	46 27		
			ES	48 50		
			PPS	49 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), 7½ (Pasadena), 7 (Praha), 6½ - 7 (Hurbanovo, Strasbourg), 6½ (Kiruna, Uppsala).					
	Colombo	E	eP	00 25 01		L and M lost while
			S	36 51		changing the chart.
	Madras	E	eP	00 25 47		10860 Moderate.
			PP	30 48		
			SKS	37 21		
			SKKS	37 46		
			is (Sec)	38 10		
			PS	39 48		
			PPS	40 33		
			SS	44 52		

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Jan. 1954 13 Contd.	Calcutta	E	e(P) e e M	00 27 07 37 34 40 00 01 07 58		
	Chatra	NEZ NE	eP PP SKS ₁ SKKS ₁ eS SKS ₂ PS PPS SS SSP PKKS ₁ SSS SKKKS LQ LR M	00 27 08 31 21 37 49 38 13 38 39 38 56 40 32 41 05 45 28 45 47 46 50 49 50 54 20 55 24 01 00 09 09 --	11090 Slight.	Phases doubtful.
	Hyderabad	E EN E N EN N E N	eP PP SKS iS S PS SS L L M M	00 27 19 31 21 37 42 38 34 38 44 40 07 45 29 01 00 03 00 20 02 18 02 20	10900 Slight.	Per. = 18 secs μ = 9. Per. = 18 secs μ = 19.
	Poona	Z E	eP e e S PS e LQ M	00 27 25 30 54 37 58 39 17 39 47 44 02 52 09 01 04 03		Moderate.
	Kodaikanal	E	PP? S PPS LQ LR M	00 30 01 37 13 39 16 52 25 56 46 01 04 31	10520 Moderate.	Per. = 15 secs μ = 10.
	Bombay	NE E N E NE E N NE	ePKP ₁ PP e PPP PKS SKS SKS ₁ SKKS ₁ eS PS	00 30 53 32 00 32 10 34 05 34 21 37 30 37 57 38 14 39 14 41 00		Moderate and distant.

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				h. m. s.	km.	
Jan. 1954						
13	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		
13	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		
13	Shillong	Z	eP	16 23 01		Tremor.
13	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	eP	20 35 56	770	Slight.
		E	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	eP)	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.		REMARKS
				h. m. s.	km.	
Jan. 1954						
14	Shillong	Z	iP	22 47 31		Slight.
15	Bombay	E	e e	23 46 35 47 27		
17	Poona	Z	eP?	03 14 14		Tremor.
17	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.	△	REMARKS
				h. m. s.	km.	
Jan. 1954						
17	Poona	Z	eP	20 56 02		Tremor.
17	Poona	Z	eP	22 09 34		Tremor.
17	Bombay	E	e	23 03 41		Slight.
		NE	i	09 45		
		E	e	11 01		
			e	12 43		
			e	14 02		
		N	e	16 11		
		NE	e	16 49		
	Dehra Dun	N	e	23 09 16		Tremor.
	Hyderabad	E	e	23 13 38		Tremor.
18	New Delhi	NE	P	00 10 11		Begining uncertain due
			i	15 13		starting of time break.
			i	20 12		
18	Dehra Dun	N	e	03 42 07		Tremor.
18	Dehra Dun	NE	i	07 50 16		Feeble.
18	Poona	Z	eP	10 57 25		Tremor.
	Bombay	E	e	10 57 34		Feeble.
			e	58 05		
			e	59 50		
			i	11 01 44		
		N	e	03 21		
		E	e	05 28		
		N	e	05 37		
		E	i	05 48		
			e	06 18		
	Dehra Dun	N	e	10 57 38		
			e	11 24 11		
18	Shillong	Z	eP	11 18 36		Slight.
		N	eS	19 06		
18	Poona	Z	eP	14 55 26		Tremor.
	Bombay	E	e	15 05 19		Feeble.
			e	08 52		
19	Poona	Z	eP?	09 17 06		Tremor.
19	Poona	Z	eP	13 40 28		Tremor.
20	Bombay	N	e	04 36 22		Long distance.
			e	41 06		
			e	43 24		
			e	46 08		
			e	47 35		
			e	48 17		
			i	51 45		
			e	52 06		
			e	52 43		
			e	53 13		
			e	55 13		

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
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 24 17 25 51 26 11		Slight, phases not clear.
21	Dehra Dun	NE	e i(S)?	23 07 40 07 59		Feeble.
22	Hyderabad	E	e	10 41 30		
22	Bombay	E NE E N	e e i i i i	11 34 25 38 05 39 19 40 43 42 30 43 00		Feebly recorded.
	Shillong	Z N	eP eS	11 35 40 36 53		Slight.
	Dehra Dun	NE	eP PP PPP Pg iS SS S* SSS Sg	11 36 11 36 18 36 25 36 43 37 30 37 32 37 51 37 53 38 07	770	Moderate.
	New Delhi	NE N NE	eP PPP S Sg	11 36 17 36 52 37 46 38 28	820	Slight.
	Poona	Z E	e e M	11 37 52 40 30 42 13		Slight.
22	Bombay	E NE E N N	eP SKS eS PS PPS e e SS	11 51 32 12 01 34 01 41 02 39 03 02 03 57 03 47 07 32	9000	
22	Epc: 20° S., 169° E. Loyalty Island; h = 100km ca; 0 = 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.
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	iPX	16	10	54	2100 Feeble.
		E	ePX				
		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.		REMARKS
				h. m. s.	km.	
Jan. 1954						
23	Poona	Z	eP	16 10 55	2170	Moderate.
Contd.		E	PP	11 12		
			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	1P	16 11 12	2170	Moderate, first move-
		N	eP	11 14		ment East.
		E	PPP	11 42		
			S	14 47		
		N	S	14 48		
		E	?	14 56		
			LR	15 49		
			M	17 24		
	Hyderabad	N	1P	16 11 12	2300	Moderate.
		NE	iS	14 59		
		E	SS	15 40		
			L	17 03		
			M	17 47		Per. = 8 secs μ = 11.
		N	M	18 02		Per. = 11 secs μ = 35.
	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		Amp = 42 mm.
***			LR	19 26		
	Kodaikanal	E	e	16 16 10		Short distance, phases not clear.
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.	Δ	REMARKS
				h. m. s.	km.	
Jan. 1954						
23	New Delhi	N	eP	17 14 18	1000	Slight.
Contd.			PPP	14 33		
		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 28		Per. = 12secs μ = 8.
		N	M	23 29		Per. = 12 secs μ = 9.
	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.

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Jan. 1954						
25	Hyderabad	N	M	03 57 07		Per. = 15 secs μ = 4.
25	Dehra Dun	NE	e i	17 11 27 13 08		Slight, phases not identifiable.
28	Poona	Z	eP	23 41 07		Tremor.
30	Bombay	E	e e e e e e	18 42 02 42 10 52 08 52 50 53 04 53 44		Slight.
30	Poona	Z	i?	21 01 03		Tremor.
30	Bombay	E	e e e e e e e	21 48 06 49 25 51 51 52 10 52 23 22 01 13 04 51		Slight.
30	Poona	Z	i?	22 04 37		Tremor.
31	Bombay	N	e e	11 54 11 54 35		Slight.
31	Hyderabad	E NE E N	eP S L M M	11 54 49 12 04 14 19 00 24 55 25 02	8070	Slight. Per. = 14 secs μ = 5. Per. = 13 secs μ = 4.
	Bombay	E	eP e PP eS ScS PPS SSS N M	11 54 57 55 11 57 31 12 04 19 04 45 05 17 09 19 34 42	8020	Slight. Per. = 12 secs μ = 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
Kothagudium (Deccan)	5-1-54	23-45-00	10	V	5	Sounds like bla- sting in the underground heard.
Shillong	6-1-54	11-00-00	8	-	1	
Gauhati	11-1-54	01-23-00	15	V	1	
Srinagar	17-1-54	08-49-00	12	IV	3	

Sarker/27.3.56

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

February, 1954.

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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
Bombay	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
Chatra	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
Calcutta	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
Colombo	Milne-Shaw	E-W	11.8 secs	250	17:1 from	8
			from 1.2. 54 to 15.2.54 12.0 secs from 15.2.54 to 28.2.54		1.2.54 to 15.2.54 20:1 from 15.2.54 to 28.2.54	
Dehra Dun	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
Hyderabad	Milne-Shaw	E-W	12	253	20:1	8
	Milne-Shaw	N-S	12	251	20:1	8
Kodaikanal	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
Poona	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), 7½ (Pasadena), 7 (Uppsala, Kiruna, Praha, Hurbanovo), 6½ (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	iPY	01 15 51	5520	Slight.
		E	ePY			
			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 1	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.	REMARKS
				h. m. s.	km.
Feb. 1954					
01	New Delhi	NE	eP	01 16 50	6450 Moderate.
Contd.		E	PcP	17 57	
			PP	18 58	
		N	PPP	20 13	
		NE	iS	24 50	
		N	ScS	26 36	
			SS	28 49	
			M	38 19	
	Madras	EW	iP	01 17 05	6830 Moderate.
			PcP	17 43	
			PP	19 22	
			PPP	20 49	
			PcP	21 40	
			iS	25 15	
			PS	25 36	
			PPS	25 46	
			ScS	26 42	
			SS	29 09	
			SSS	31 45	
			LQ	32 18	
			LR	35 09	
	Hyderabad	EN	iP	01 17 05	6660
		E	PcP	17 51	
		EN	iS	25 17	
		N	PS	25 32	
		E	SS	29 20	
			L	35 51	
			M	41 06	
		N	M	41 27	
					Per. = 21 secs μ = 30.
					Per. = 21 secs μ = 20.
	Colombo	E	P	01 17 20	
	Kodaikanal	EW	iP	01 17 28	7000 Slight.
			PP	19 46	
			PPP	21 25	
			iS	25 58	
			SS	30 13	
			LQ	33 43	
			LR	36 43	
			M	42 04	
					Per. = 21 secs μ = 29.
	Poona	ZE	iP	01 17 30	7000 Moderate.
		E	PcP	17 59	
			PP	19 43	
			e	21 07	
			e	25 27	
			S	26 07	
			SS	30 01	
			e	32 49	
			M	42 01	
	Bombay	NE	iP	01 17 35	7240 Great.
		E	PcP	18 05	
		N	PcP	18 13	
			i	18 29	
			i	19 05	
		NE	PP	20 05	
			PPP	21 38	

5

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), 5½ - 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.
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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.
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PP	59 24
PPP	59 31
iS	16 00 54
SS	01 05
SSS	01 16
i	01 35

Chatra	Z	eP	16 00 54		Slight, near.
		i	03 55		

Bombay	E	eP	16 00 56		Slight.
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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.	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: $45\frac{1}{2}^{\circ}$ N., $148\frac{1}{2}^{\circ}$ E. Kurile Island; h = 100 km ca; 0 = 18h 23m 53s (U.S.C.G.S. and B.C.I.S.) $44\frac{1}{2}^{\circ}$ 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: $4\frac{1}{2}^{\circ}$ 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), $6\frac{3}{4}$ - 7 (Pasadena), $6\frac{3}{4}$ (Skalnate Pleso), 6.7 (Wellington), $6\frac{1}{2}$ - $6\frac{3}{4}$ (Kiruna), $6\frac{1}{2}$ (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	Chatra	Z	iPY	09 31 05	7870	Slight.
Contd.		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		Per. = 23 secs μ = 19
		N	M	02 03		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		

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.	REMARKS
				h. m. s.	km.
Feb. 1954 07	Epc: 15° S., $167\frac{1}{2}^{\circ}$ E. New Hebrides; h = 100 km ca O = 06h 15m 21s G.M.T. (U.S.C.G.S.) Magnitude - $6\frac{1}{2}$ - $6\frac{3}{4}$ (Berkeley), 6 (Pasadena).				
	Chatra	Z E	iP i	06 28 10 38 26	Slight, distant.
	Poona	ZE E	eP eS	06 28 55 39 20	9360 Feeble.
	Bombay	E	eP PP i N E NE E N E N E N E	06 29 02 33 02 33 29 34 14 35 09 39 25 39 51 40 17 40 19 41 50 41 55 43 15 47 01 50 33	10700 Moderate.
	Hyderabad	E	e e N E N	06 36 54 38 55 39 23 40 32 40 33	Per. = 11 secs $\mu = 4$ Per. = 10 secs $\mu = 2$
	Colombo	S	S M	06 38 36 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 PP eSg	08 42 03 42 10 42 25	160 Slight.
08	Poona	Z	eP	13 01 05	Tremor.
08	Epc: $22\frac{1}{2}^{\circ}$ 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 E N E N E NE E NE	ePKP ₁ i e PP i BPP PS e eSS	14 38 33 39 05 41 14 41 47 42 15 45 07 48 29 52 28 56 35 15 00 24	15890 Distant, moderate.

10						
DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Feb. 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; 0 = 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 iS PS PPS	17 52 40 52 54 53 08 54 38 18 03 42 03 55 05 18 05 54	10245	Feeble.
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.

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS
				h. m. s.	km.	
Feb. 1954						
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., $101\frac{1}{2}^{\circ}$ 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), $7\frac{1}{4}$ (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 - $7\frac{1}{4}$ (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 MY MY	00 34 10 34 26 34 34 37 30 37 33 37 52 38 06 38 22 39 44	2010	Great.
	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.

Per. = 16 secs $\mu = 9$

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS
				h. m. s.	km.	
Feb. 1954						
11	Hyderabad	EN	1P	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	1P	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	1P	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	1P	00 36 44	3480	Great.
			PP	37 50		
			PPP	38 07		
			iS	41 51		
	Kodaikanal	EW	1P	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	1P	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		

						13		
DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	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	56 14				
			e	59 05				
			eS	59 19				
			i	02 01 05				
			e	04 31				
12	Epc: Off the Coast of Java; 0 = 21h 22m 30s (U.S.C.G.S.) 6° S., 110½° E. 0 = 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 Sg	06 56 00 56 12	100	Slight.		
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 e	22 44 38 44 49		Slight, near.
15	Poona	Z	e	02 42 27		Tremor.
15	Bombay	E	e(P) e(PP) e	03 42 30 45 32 04 01 18		Distant shock, feebl recorded.
15	Poona	Z	e	16 00 35		Tremor.
15	Dehra Dun	NE	e e	19 08 27 09 32		Feeble.
15	New Delhi	NE	iPg iSg	19 23 40 23 45	44	Slight, direction of first movement East.
	Dehra Dun	NE	eP P* PP iS LR S* SS SSS	19 24 05 24 06 24 12 24 28 24 29 24 32 24 37 24 49	190	Slight, near.
	Shillong	Z	e	19 29 09		Feeble.
15	Bombay	E	e e e e	20 10 46 11 12 14 10 26 40		Possibly distant sho of slight intensity.
	Poona	Z	e	20 10 50		Tremor.
16	Epc: 34° N., 74 $\frac{3}{4}$ ° E.; 34° N., 74° E.;			0 = 02h 23m 32s (B.C.I.S.) 0 = 02h 23m 41s (Shillong).		
	Dehra Dun	NE	eP PP PPP Pg LQ iS LR SS S* SSS Sg	02 24 56 25 04 25 11 25 17 25 40 25 54 25 55 26 03 26 06 26 14 26 17	550	Moderate.
	New Delhi	NE E NE E NE E NE	eP PP PPP i Pg LQ iS LR SS i Sg	02 25 12 25 20 25 27 25 30 25 37 26 07 26 20 26 27 26 31 26 46 26 55	640	Slight.

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	i	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.		REMARKS
				h. m. s.	km.	
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 19 47 43 56 17 56 39 56 53 12 04 39	7510	Feeble.
17	Poona	Z	eP	12 03 35		Tremor.
17	Dehra Dun	NE	e i	15 22 45 22 57		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 35 31 42 43 54 19 54 34	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 16 43 38 46 31 46 58 47 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 39 51 55 52 02 54 58 55 17 55 35	2000	Very feeble.
18	Dehra Dun	N	e	04 29 45		Tremor.
18	Dehra Dun	NE	i i	06 42 26 42 35		Slight, phases not clear.

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Feb. 1954						
19	Shillong	Z	i	13 33 00		Slight.
Contd.		N	iS	36 38		
			LQ	39 53		
			M	42 38		
	Calcutta	E	e	13 34 34		Slight, near.
			i	37 50		
			i	41 30		
	Poona	EZ	eP	13 34 39	4110	Slight, phases
		E	e(S)	40 25		indefinite.
	Bombay	N	e	13 35 08		
			e	36 26		
		E	i	40 31		
		NE	i	41 01		
		N	e	41 24		
		E	i	41 38		
		NE	i	45 31		
	Hyderabad	N	e	13 39 29		
		E	M	45 12		Per. = 12 secs μ = 3.
		N	M	47 08		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 - 7¼ (Berkeley), 7.0 (Praha), 7 (Roma, Pasadena), 6¾ (Kiruna, Uppsala, Strasbourg), 7½ (Hurbanovo).					
	Shillong	Z	eP	19 21 48		Moderate.
		N	ePKP ₁	21 48		
			e	25 42		
			i	32 25		
			i	35 14		
			i	43 48		
			i	56 48		
			i	20 01 33		
			i	09 55		
			M	18 33		
	Colombo	E	(P)	19 22 01		
			(S)	32 46		
			L	55 51		
			M	20 06 06		Amp = 0.6 mm.
	Chatra	Z	eP	19 22 08		Slight, distant.
		E	e	32 41		
	Bombay	N	ePKP ₁	19 26 08		Distant.
			e	27 05		
			PP	27 21		
		E	i	27 41		
		NE	PPP	29 54		
		E	PS	37 24		
		N	e	37 25		
			e	38 48		
			M	20 18 46		Per. = 18 secs μ = 6.
		E	M	19 43		Per. = 21 secs μ = 8.

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

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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.
SKS₂ 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
N e 37 24

Moderate.

Hyderabad N PPP 19 29 27
E e 36 33
N e 42 52
E L 54 54
M 20 04 18
M 04 21

Per. = 18 secs μ = 11.
Per. = 20 secs μ = 18.

19 Epc: $12\frac{1}{2}^{\circ}$ N., $87\frac{1}{2}^{\circ}$ W. Off the Coast of Nicaragua;
O = 21 h 34m 41s (U.S.C.G.S.)
 $11\frac{1}{4}^{\circ}$ N., 88° W. O = 21h 34m 45s (B.C.I.S.)
Felt at Managua and San Salvador (U.S.C.G.S.)
Magnitude - 7.1 (Praha), $6\frac{1}{4}$ - 7 (Pasadena), $6\frac{1}{4}$ (Kiruna, Roma),
 $6\frac{1}{2}$ - $6\frac{1}{4}$ (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
Hyderabad E M 22 50 22
N M 50 31

Amp = 21 secs μ = 11.

Per. = 21 secs μ = 11.

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

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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), 6½ - 7 (Kiruna), 6½ (Hurbanovo),
6½ - 6½ (Pasadena), 6½ (Uppsala, Skalnate Pleso).

Shillong	Z	iP	18 42 36	Moderate.
	N	iP	42 36	
		i	42 58	
		ipP	44 17	
		i	45 04	
		S	48 35	
		isS	51 35	
		i	52 05	
		M	57 05	
Calcutta	E	iP	18 42 43	4590 Moderate, first movement West and South.
	N	iP	42 46	
	E	PP	44 32	
	NE	iS	48 58	
	E	SS	51 44	
Colombo	E	iP	18 42 44	Amp = 41 mm.
		S	47 22	
		L	50 10	
		M	52 12	
Madras	E	iP	18 43 01	4600 Moderate.
		PP	44 39	
		PcP	44 47	
		PPP	45 13	
		ScP	48 30	
		S	49 17	
		SS	52 16	
		LQ	52 50	
		LR	54 51	
Chatra	Z	iPY	18 43 08	4780 Moderate, probably deep focus.
	E	ePY		
		PP	44 53	
		PcP	45 00	
		PPP	45 30	
		iS	49 34	
		PS	49 42	
		PPS	49 48	
		SS	52 38	
		LQ	53 04	
		SSS	53 27	
		LR	55 14	
		M	59 49	
Hyderabad	EN	iP	18 43 21	4990
		i	45 11	
	E	e	47 04	
	N	iS	50 00	
	E	iS	50 07	
		i	52 17	
	EN	SS	53 03	
	N	L	56 46	
		M	19 00 41	
	E	M	01 03	

Per. = 12 secs μ = 13.
Per. = 11 secs μ = 9.

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Feb. 1954						
20	Dehra Dun	NE	eP	18 43 33		Moderate.
Contd.			i	44 16		
			pP	44 32		
			iS	50 56		
			e	51 26		
			e	51 56		
			e	52 24		
			e	53 05		
			e	56 12		
20	Poona	Z	iP	18 43 53	5490	Moderate.
		N	i	45 55		
			sP	46 40		
		E	PcS	48 48		
		N	eS	51 00		
		E	ScS	53 18		
			SS	54 23		
		N	LQ	55 31		
			SSS	55 39		
		E	LR	58 12		
		N	M	19 01 59		
	Bombay	NE	iP	18 44 01	6390	Moderate, and deep.
			i	44 21		
		N	PcP	45 15		
		NE	pP	45 46		
		E	PP	45 59		
			PPP	47 06		
		N	i	48 23		
			i	49 52		
		NE	iS	51 13		
			i	52 57		
		E	ScS	53 36		
		N	ScS	53 47		
		E	SSS	54 24		
		N	SSS	54 38		
			SSS(LQ)	55 56		
	New Delhi	NE	iP	18 44 05	5630	Moderate, deep focus.
		E	PcP	45 23		Direction of first
		N	pP	45 53		motion East.
			PP	46 26		
			i	48 02		
		NE	iS	51 20		
			sS	53 05		
		N	SS	54 51		
			i	55 33		
			LR	58 44		
20	Kodaikanal	E	e	19 26 30		Per. = 18 secs μ = 23.
20	Shillong	Z	iP	21 17 38		Slight.
		N	e	18 35		
20	Colombo	E	P	21 46 51		
			M	22 27 11		Amp = 0.2 mm.
	Hyderabad	E	e	21 57 13		

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
<u>Feb.</u>						
<u>1954</u>						
21	Dehra Dun	NE	eP iS S* SS SSS	06 51 41 52 06 52 08 52 16 52 23	220	Slight, other phases not clear.
21	Poona	Z	e	09 53 18		Tremor.
21	Shillong	Z	i(P) i i	11 49 09 49 26 50 48		Slight, tremor.
21	Shillong	Z	i	14 32 34		Slight.
21	Shillong	Z	iPg eSg	14 37 54 38 02	70	Slight.
21	Shillong	Z	iP i	16 20 39 20 56		Slight.
	Poona	Z	e	16 22 04		Tremor.
21	Kodaikanal	E	iP PP S SS LQ LR M	18 43 13 44 58 49 46 52 58 53 43 55 55 59 37	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 19 02 19 14 19 34 20 18 20 28 20 39 20 41 20 50 20 58 21 20	900	Moderate.
	Shillong	Z	iP	01 21 26		Slight.
22	Epc: $34\frac{1}{2}^{\circ}$ N., 141° E. Off the Coast of South Hondo, Japan; O = 06h 11m 26s (U.S.C.G.S.) $34^{\circ}.3$ N., $141^{\circ}.7$ E. h = 60 km ca; O = 06h 11m 28s . Felt (C.M.O., Japan) Magnitude - $6\frac{1}{2}$ (Roma), 6 (Kiruna, Praha).					
	Shillong	Z	eP i	06 19 28 21 19		Slight, phases not clear.
		N	e e e(L)	25 52 29 34 33 37		

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
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	11 53 59	70	Slight.
			iSg	54 07		
22	Epc: $56\frac{1}{2}^{\circ}$ S., $26\frac{1}{2}^{\circ}$ W. Sandwich Island; 0 = 12h 03m 23s (U.S.C.G.S.) $57\frac{1}{2}^{\circ}$ S., $26\frac{1}{2}^{\circ}$ 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.	Δ	REMARKS
				h. m. s.	km.	
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	iY	57 18		
		N	eY			
	Hyderabad	E	M	05 57 16		Per. = 10 secs μ = 3.
23	Epc: 27 $\frac{1}{2}$ ° N., 91° E. Bhutan; 0 = 06h 40m 30s (U.S.C.G.S.)					
	27 $\frac{3}{4}$ ° N., 91 $\frac{1}{2}$ ° E. 0 = 06h 40m 33s (B.C.I.S.)					
	27° N., 91° 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	iPY	06 41 39	430	Moderate.
		NE	ePY			
			iPg	41 53		
			LQ	42 12		
			iS	42 35		
			S*	42 36		
			Sg	42 47		

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
Feb. 1954						
23	Calcutta	NE	iP	06 42 07	610	Great, first movement
Contd.		E	P*	42 18		East.
			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
			PP	43 45		of first movement East.
			LQ	45 44		
			iS	45 55		
			SS	46 07		
			SSS	46 17		
			LR	46 27		
			M	47 28		
	Hyderabad	E	iP	06 44 14	1680	
		EN	iS	47 03		
		E	L	48 21		
			M	48 42		Per. = 15 secs μ = 100.
	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	iP	06 44 52	1920	Moderate.
		E	PP	45 04		
		N	PPP	45 25		
			eS	48 04		
			SS	48 21		
		E	SSS	48 34		
		N	LR	48 50		
			M	50 19		
	Bombay	NE	iP	06 45 04	2020	Moderate.
		N	PP	45 20		
		E	PPP	45 28		
			i	46 20		

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS
				h. m. s.	km.	
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 28		
			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.	Δ km.	REMARKS
				h. m. s.		
Feb. 1954						
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	06 16 40 37 --		Slight.
	Hyderabad	E N	M M	06 27 41 29 01		Per. = 12 secs μ = 3. Per. = 15 secs μ = 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 μ = 4. Per. = 15 secs μ = 4.
24	Shillong	Z	eP	19 45 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.		REMARKS
				h. m. s.	km.	
Feb. 1954						
25	Shillong	Z	eP e	19 08 57 09 26	210	Slight.
25	Poona	Z	i	22 34 59		Tremor.
	Shillong	Z	eP	22 35 04		Slight.
25	New Delhi	NE	iPg iSg iS*	22 55 37 55 45 55 47	70	Slight, direction of first movement West.
25	Dehra Dun	NE	eP PP iS S* Sg 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.	Δ	REMARKS
				h. m. s.	km.	
Feb. 1954						
26	Bombay	NE	eP	18 50 17	1950	Deep focus.
Contd.		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		Per. = 6 secs μ = 6.
		N	M	56 59		Per. = 6 secs μ = 2.
	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 50		
	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		

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
				h. m. s.	km.	
Feb. 1954						
27	Shillong	Z	e	09 13 55		Slight.
27	Shillong	Z	iPg	10 16 11		Slight, local.
27	Shillong	Z	e	11 21 18		Slight.
27	Shillong	Z	iPg iSg	13 09 25 09 35	100	Slight.
27	Dehra Dun	N	e i	15 18 49 20 27		Feeble.
27	Shillong	Z N	iP eP i	23 46 51 46 58 57 07		Slight.
	Calcutta	E	e i	23 46 56 57 27		Tremor.
28	Poona	Z	i	00 18 03		Tremor.
28	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.) 27½° N., 131° E. h = 200 km; 0 = 00h 55m 35s (C.M.O. Japan). Magnitude - 5½ - 6 (Pasadena), 6 - 6½ (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.	$\triangle$	REMARKS
				h. m. s.	km.	
Feb. 1954						
28	Dehra Dun	NE	eP	01 03 56		
Contd.			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	iP	01 04 41	5890	Moderate.
		E	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 47	5900	Phases ill defined.
			iS	12 21		
	Hyderabad	N	(S)	01 11 14		
			M	21 12		Per. = 18 secs μ = 15.
		E	M	21 14		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	-
Derjeeling	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

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