

JUN 18 1951

International
Seismological
Centre

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

January, 1952.

Published under the direction of
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Instruments and their Constants.

Station	Instrument	Compt.	Period in secs.	Static Mag- nification	Damping ratio	Paper Speed mm/min.
Bombay	Milne-Shaw	N	12	350	6:1	16.0
	Milne-Shaw	E	12	350	4:1	8.0
	Sprengnether	E	7	-	-	30.0
Calcutta	Milne-Shaw	E	12	250	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
Colombo	Milne-Shaw	E	12	250	16:1 20:1	8.0 from 18.1.52
Dehra Dun	Omori	N	30	12	-	-
Hyderabad	Milne-Shaw	E	12	249	20:1	8.0
	Milne-Shaw	N	12	249	20:1	8.0
Kodaikanal	Milne-Shaw	E	10	250	20:1	8.0
New Delhi	Milne-Shaw	N	12	288	20:1	8.0
	Wood-Anderson	N	4	1000	20:1	16.0
	Wood-Anderson	N	2	2000	30:1	60.0
	Omori-Ewing	E	30	30	-	12.0
Poona	Milne-Shaw	N	12	250	20:1	8.0
	Wood-Anderson	E	4	1100	20:1	16.0
	Sprengnether	E	7.2	-	-	30.0
	Benioff	Z	To = 1.0 Tg = 0.28	-	-	60.0

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Jan. 1952	Bombay	N,E	e	00 01 -		Very feeble.
1			Epc: 33°N., 84½°E., Karokorum; H = 04h 00m 45s (B.C.I.S.); 32°5N., 85°E.; 0 = 04h 00m 44s (Poona).			
	New Delhi	N,E	eP	04 02 39	830	Slight.
			PP	02 46		
			PPP	02 52		
			P*	02 54		
			Pg	03 15		
			iS	04 06		
		E	e	04 13		
		N	SS	04 16		
			SSS	04 26		
			S*	04 32		
			Sg	04 52		
	Hyderabad	N,E	P	04 04 20	1,700	
		E	S	07 11		
			i	09 12		
			M	10 07		Per. = 9 secs. $\mu = 3.$
		N	M	10 27		Per. = 10secs. $\mu = 4.$
	Poona	Z	iP	04 04 36	1,810	Slight.
		E	PP	04 50		
		Z,E	iS	07 37		
		E	SS	07 58		
			SSS	08 10		
			LR	08 21		
			M	09 44		
	Bombay	N,E	eP	04 04 47	1,780	Moderate.
		E	ePP	04 59		
			iS _X	07 45		
		N	eS _X			
		N,E	SS	08 06		
		N	LR	08 25		
		E	LR	08 40		
		N	Mn	10 21		Per. = 8 secs. $\mu = 3.$
		E	Mn	10 24		Per. = 6 secs. $\mu = 3.$
	Kodaikanal	E	eS	04 09 54		Slight.
			M	12 37		
			e	12 57		
			e	14 28		Per. = 9 secs. $\mu = 5.$
1	Poona	Z	iP	08 22 17	2,590	Slight.
		E	i	22 24		
			PcP	25 54		
			eS	26 26		
			LQ	26 55		
			SS	27 19		
			SSS	27 26		
			M	29 50		
	Bombay	N,E	eS	08 26 20		Slight.
			M	29 18		
		E	Mn	31 14		Per. = 8 secs. $\mu = 1.$
	Hyderabad	E	e	08 28 19		
			M	48 27		Per. = 15 secs. $\mu = 3.$
	Kodaikanal	E	e	08 29 19		Tremor. Phases not clear.

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Jan. 1952	Poona	Z	e	09 57 48		Tremor.
			i	58 28		
	Bombay	N,E	e	09 58 -		Feeble.
			Mn	10 12 -		
1			Epc: Probably same as that of earthquake shock of 04h 00m; 0 = 10h 01.8m (Poona).			
	New Delhi	E	eP	10 03 36	830	Slight.
		N,E	eS	05 03		
			i	05 10		
		E	SS	05 13		
		N	Sg	05 51		
1	Poona	Z	iP	10 05 37		Tremor.
			i(S)	08 32		
1	Kodaikanal	E	eM	10 12 31		Tremor.
	New Delhi	N,E	eP	15 08 30		Slight. Near.
		E	e	10 06		
		N,E	i	10 14		
1	Poona	Z	i	15 14 41		Tremor.
			i	15 05		
1			Epc: 24°N., 142½°E.; H = 15h 15m 16s (B.C.I.S.); Borin Island Region; H = 15h 15m 20s (U.S.C.G.S.).			
	Poona	Z	iP	15 25 58		
1			Epc: Central Chile; H = 21h 28m 38s; h = 100 kms (U.S.C.G.S.); 35½°S., 70¼°W.; H = 21h 28m 31s; h = 100 kms (B.C.I.S.).			
	Poona	Z	i(PKP)	21 48 20		
			i	48 27		
1	Poona	Z	iP	23 30 18		
			i	33 41		
	Poona	Z	i	23 43 13		
			?	44 59		
2	Poona	E	i	08 21 51		Tremor.
			i	22 05		
2			Probable Epc: Near 30°N., 79°E. in Himalaya; 0 = 09h 14m 16s (Poona).			
	New Delhi	N,E	iP	09 15 06	340	Slight.
		E	P*	15 10		
			PP	15 13		
		N,E	Pg	15 17		
			LQ	15 36		
			iS	15 44		
		E	S*	15 51		
	Poona	Z	iP	09 17 14	1,360	Slight.
			PP	17 24		
			PPP	17 30		

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Jan. 1952					
2	Poona (Contd)	Z	S	09 19 32	
			SS	19 43	
			SSS	19 57	
			S*	20 22	
			M/Sg	20 57	
	Bombay	N,E	Mn	09 21 16	Feeble; near.
	Hyderabad	N	M	09 22 10	Per. = 10 secs. $\mu = 2.$
3			Epc:	40 $\frac{1}{2}$ ^o N., 41 $\frac{1}{2}$ ^o E., Erzurum Province, Turkey; H = 06h 03m 52s (U.S.C.G.S.); Heavy casualties and extensive proper damage; 39 ^o 39'N., 41 ^o 40.5'E. (Istanbul); 39.5N., 40.5E., Northern Turkey; O = 06h 03m 50s (Poona); Mag. 5.6 (Roma).	
	New Delhi	N,E	iP	06 10 13	3,550 Slight.
			PP	11 19	
		N	eS	15 25	
			PcS	16 35	
			i	16 55	
			SSS	17 40	
			LR	18 50	
			M	21 29	
	Bombay	E	iPY	06 10 43	3,735 Moderate.
		N	ePY		
		E	PP	12 04	
			iSY	16 05	
		N	eSY		
		N,E	SS	18 28	
			LR	20 16	
		N	Mn	25 31	Per. = 18 secs. $\mu = 3.$
		E	Mn	25 40	Per. = 17 secs. $\mu = 4.$
	Poona	Z	iP	06 10 46	3,790 Moderate.
		E	PP	12 10	
			PPP	12 33	
			eS	16 23	
			ScP	16 40	
			LQ	18 59	
			SSS	19 21	
			M	23 -	
	Hyderabad	N,E	P	06 11 17	4,210
		N	PP	12 50	
			eS	17 09	
		E	M	26 13	Per. = 18 secs. $\mu = 14.$
		N	M	26 24	Per. = 18 secs. $\mu = 11.$
	Kodaikanal	E	e	06 16 00	Slight. Phases not clear.
			e(S)	18 31	
			e(PPS)	18 41	
	Colombo	E	S	06 19 14	Amp = 0.5mm.
			e	30 29	
			M	32 59	

3 Epc: 16^oN., 99^oW., Off South Coast of Mexico. Felt;
H = 10h 05m 05s (U.S.C.G.S.);
16^o42'N., 98^o12'W.; H = 10h 05m 15s (Tacubaya);
17^o2N., 98^o3W.; H = 10h 05m 17s (B.C.I.S.).

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Jan. 1952					
3	New Delhi	N,E	eP	12 59 52	1,080 Slight.
			eS	13 01 42	
		N	i	01 52	
		E	SS	01 55	
		N,E	SSS	02 04	
		E	S*	02 20	
	Poona	Z	i	20 47 23	
4			Epc:	22 ^o S., 169 $\frac{1}{2}$ ^o E., Loyalty Islands; H = 05h 47m 31s (U.S.C.G.S.); 21 ^o 8S., 169 ^o 2E.; H = 05h 47m 32s (B.C.I.S.).	
	Bombay	E	e(PKP)	06 03 30	Feeble; Distant.
			ePPP	05 53	
		N,E	ePPS	15 11	
			M	56 -	
	Colombo	E	PPP	06 03 36	Amplitude very small.
			M	37 18	
	Poona	E	Mn	06 55 28	Slight; distant.
5			Probable Epc:	Within 30 miles of 29 $\frac{1}{2}$ ^o N., 77 $\frac{3}{4}$ ^o E. Felt slightly New Delhi and Meerut.	
	New Delhi	N,E	iPg(?)	06 33 58	Slight; near. Felt locally. First movement North.
		N	i	34 03	
			Sg(?)	34 15	
	Bombay	E	e(S)?	06 38 05	Feeble.
		N,L	e	39 05	
		E	i	39 14	
	Poona	Z	i(S)?	06 38 10	Slight.
			e	39 01	
			e	39 14	
			e	39 31	
			e	39 48	
			Epc:	North of Trebizon (Turkey); H = 18h 31.9m (B.C.I.S.).	
	Poona	Z	iP	18 45 06	3,555 Slight.
		E	eS	50 18	
			ScP	51 18	
			i	51 38	
			LQ	52 17	
			SS	52 25	
			i	53 26	
	Bombay	N,E	e	18 51 -	Feeble; Surface waves.
6			Epc:	27 $\frac{1}{2}$ ^o N., 97 ^o E., Assam; Tibet Border Region; H = 00h 06m 49s (B.C.I.S.); 31 ^o N., 97 ^o E.; O = 00h 06m 46s (Poona).	
	Calcutta	E	iS	00 12 08	1,280 Slight. Δ from SSS-S.
			SSS	12 33	
			M	13 38	
			PcP	15 43	
			PcS	19 08	
			ScS	22 31	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Jan. 1952 6 (Contd)	New Delhi	E	eP PP PPP LQ eS SS	00 10 51 11 05 11 12 13 58 14 00 14 21	1,890 Slight.
✓	Hyderabad	N,E N E	P eS M M	00 11 25 15 12 18 34 19 17	2,300 Per. = 9 secs. $\mu = 2$. Per. = 11 secs. $\mu = 2$.
	Poona	Z E	iP PPP eS LQ SSS LR ScP	00 11 58 11 47 16 11 16 41 17 12 17 40 19 15	2,630 Moderate.
✓	Bombay	E N E N E N E	iPY ePY PPP iSY eSY LR Mn Mn	00 12 06 12 58 16 23 18 09 20 09 20 12	2,700 Moderate. Per. = 5 secs. $\mu = 3$. Per. = 5 secs. $\mu = 2$.
7	Bombay	N,E	e	03 40 -	Very feeble. Surface waves.
7	Bombay	E N	e	18 11 - Congestion of lines.	Very feeble. Surface waves.
10				Epc: 18°05', 12°W., in the Atlantic Ocean; H = 00h 11m 24s (B.C.I.S.).	
	Kodaikanal	E	e(?)	00 56 03	Tremor. Phases not clear.
	Bombay	N,E	e	00 59 -	Very feeble; surface waves.
11				Epc: 7°S., 145½°E., Eastern New Guinea; H = 04h 00m 35s (U.S.C.G.S.); 7°25', 145°5E.; H = 04h 00m 34s (B.C.I.S.).	
	New Delhi	N,E N	iP i iS PS i SS	04 12 16 12 41 21 38 22 10 22 51 26 23	8,020 Moderate. Deep focus. First movement South and East.
	Poona	E	iP PcP PP iS SKS ScS PS SS LQ	04 12 21 12 26 15 00 21 44 22 03 23 11 23 26 26 33 31 50	8,055 Slight.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Jan. 1952 11 (Contd)	Bombay	E N N,E	iPY ePY eS PS	04 12 29 22 01 22 27	8,220 Slight.
	Hyderabad	E	e	04 22 58	
11				Epc: 45°N., 149°E., Kurile Islands; H = 07h 03m 00s; h = 100 kms (U.S.C.G.S.); 42.6N., 148.3E.; h = 80 kms (CMO, Japan); 45.3N., 148.5E.; H = 07h 03m 01s; h = 80 kms (B.C.I.S.).	
	New Delhi	N,E	eP	07 12 46	Slight.
	Poona	Z	iP i(pP)	07 13 46 14 20	Tremor.
11	New Delhi	N,E E N,E N	eP PP iS i SSS S*	07 41 04 41 12 42 45 42 50 43 08 43 18	980 Slight.
	Poona	Z	e i i i i i	07 42 34 42 50 43 05 43 26 46 36 46 48	Tremor. Phases not clear.
12	New Delhi	N,E	eP(?) Pg i LQ iS Sg i	03 18 48 19 01 19 04 19 21 19 32 19 47 20 02	400 Slight.
	Poona	Z	e e E Z	03 22 04 24 50 25 02 25 20 26 06	Slight.
	Bombay	E N	iY eY	03 25 00	Tremor.
12				Epc: 10°S., 117°E.; H = 05h 59m 36s (B.C.I.S.).	
	Bombay	E N N,E	eP iSY eS LR	06 09 04 16 48 25 -	6,155 Feeble.
	Poona	Z	iP i i	06 09 00 09 42 10 35	Tremor.
12	New Delhi	N,E N N,E	eP i i eS i SSS	11 07 57 08 07 08 13 08 41 08 54 09 05	400 Slight.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Jan. 1952	Poona	Z	i	11 12 32	
(Contd)			i	13 05	
			i	14 33	
			i	15 06	
12					Epc: 53°N., 167°W., Fox Islands, Aleutian Islands; H = 20h 11m 38s (U.S.C.G.S.); 53.8N., 167.2W.; H = 20h 11m 38s (B.C.I.S.); Mag. 6½ (Pasadena); 6.25 (Rome); 6 ca (Praha).
	New Delhi	N,E N	eP PP SKS iS PS PPS SS LQ LR M	20 23 55 27 08 34 06 34 15 35 05 35 27 39 57 46 12 50 12 58 07	9,250 Moderate.
	Calcutta	E	iP SKS ₁ iS PS PKKP ₁ SSS PKKS ₁ LQ ₁ SKKS ₂ M Mn	20 23 56 34 17 34 30 35 21 41 47 43 40 45 20 47 23 48 52 58 32 21 05 50	9,555 Moderate. First movement East. Per. = 16 secs. $\mu = 16$.
	Hyderabad	N N,E E N	P PP iS M M	20 24 45 27 54 35 14 58 31 58 42	9,440 Per. = 18 secs. $\mu = 12$. Per. = 18 secs. $\mu = 12$.
	Poona	Z	eP PP PPP ScS SKKS PS PPS SS SSP	20 24 47 28 34 30 53 35 29 35 45 37 39 38 17 42 37 42 53	10,860 Slight.
	Bombay	N,E	eP ePP eSKS SKKS iS Mn Mn	20 24 52 28 33 35 23 35 36 35 50 21 10 18 11 18	10,165 Moderate. Per. = 17 secs. $\mu = 6$. Per. = 19 secs. $\mu = 4$.
	Dehra Dun	N	e	20 33 39	
	Kodaikanal	E	e e e	20 35 51 43 51 57 31	6,445? Slight; Distant. Per. = 21 secs. $\mu = 13$.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Jan. 1952					
13					Epc: 22°N., 124½°E., Off East Coast of Formosa. Felt Ryukyu Islands; H = 04h 03m 37s (U.S.C.G.S.); 25°N., 126½°E., Eastern Sea near Ryukyu Islands; O = 04h 03m 40s (Poona); Mag. 7½ (Pasadena); 7 ca (Praha); 6,9 (Rome).
	Calcutta	E	iP PPP iS PcS? SS SSS M Mn ₁ Mn ₂	04 10 34 12 09 15 59 17 04 18 06 18 42 23 09 25 24 29 06	3,780 Moderate. First movement West. Per. = 15 secs. $\mu = 179$. Per. = 13 secs. $\mu = 140$.
	New Delhi	N,E N	eP PP PPP PcS iS SS LR M	04 11 43 13 29 14 01 17 23 18 08 21 26 24 29 27 45	4,760 Moderate.
	Hyderabad	E N E N	iP iS SS L M M	04 11 54 18 27 22 01 25 38 29 11 30 04	4,880 Per. = 19 secs. $\mu = 42$. Per. = 20 secs. $\mu = 57$.
	Colombo	E	P S L M	04 12 13 19 03 27 18 30 35	5,180 Amp. = 0.8mm.
	Kodaikanal	E	iP PPP iS LR M	04 12 23 14 20 19 20 25 53 29 33	5,310 Moderate. Distant. Initial movements of P and PPP towards East. Per. = 21 secs. $\mu = 45$.
	Poona	Z,E	iP PP PPP ScP iS PS ScS SS SSS	04 12 24 14 17 15 05 17 38 19 24 19 40 22 00 22 52 24 28	5,455 Slight.
	Bombay	N,E E N N,E N E	iP PP PPP iS eS PPS SS i LQ Mn Mn	04 12 33 14 25 15 36 19 40 19 40 19 56 23 24 24 02 24 55 32 45 32 53	5,490 Moderate. Per. = 20 secs. $\mu = 22$. Per. = 20 secs. $\mu = 20$.

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS.
				h. m. s.	km.	
Jan. 1952						
13 (Contd)	Dehra Dun	N	eS e M	04 17 54 24 24 28 02	4,700	Amp. = 0.2". Per. = 18 secs.
13	Poona	Z	i i i	16 03 19 03 25 03 41		Tremor.
	Hyderabad	N	M	16 20 31		Per. = 18 secs. $\mu = 4$.
	Bombay	N,E	e	16 23 -		Very feeble.
14		Epc:		Near East Coast of Kamchatka; H = 00h 00m 20s (U.S.C.G.S.).		
	Poona	Z	iP i	00 11 41 11 47		Tremor.
	Bombay	N,E	e	00 41 -		Very feeble; surface waves.
15		Epc:		Central Burma; H = 02h 31m 25s (U. S. C. G. S.); 24°5N., 95°1E.; H = 02h 31m 26s (B.C.I.S.); 23°5N., 94°E.; O = 02h 31m 37s (Poona).		
				Felt at Gauhati, Shillong, Karimganj, Silchar, Tezpur and Imphal.		
	Calcutta	E	iP iS	02 33 01 34 06	625	Moderate. First movement West.
	New Delhi	N,E	eP PP PPP i LQ iS SS SSS LR M	02 35 19 35 29 35 37 35 58 38 06 38 11 38 29 38 42 38 52 40 11	1,710	Slight.
	Hyderabad	N	iP iS L M N	02 35 24 38 11 39 29 40 22 40 27	1,650	Per. = 10 secs. $\mu = 11$. Per. = 8 secs. $\mu = 17$.
	Poona	Z,E	iP PP iS LQ i SS SSS PcP LR M PcS iScS	02 36 05 35 25 39 34 39 40 39 44 40 02 40 16 40 21 40 33 40 00 43 45 47 15	2,110	Moderate.

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS.
				h. m. s.	km.	
Jan. 1952						
15 (Contd)	Bombay	N,E	iP PP PPP iS LQ SSS Mn Mn	02 36 17 36 37 36 51 39 53 40 07 40 38 44 23 45 07	2,180	Moderate. Per. = 5 secs. $\mu = 10$. Per. = 9 secs. $\mu = 8$.
	Kodaikanal	E	eP iS M	02 36 21 40 12 43 03	2,345	Slight; near. Per. = 6 secs. $\mu = 3$.
	Colombo	E	P S M	02 36 21 40 19 45 01		L not well defined. Strong microseisms in record. Amp = 0.4mm.
		Epc:		4°S., 81°W., Near Coast of Peru; H = 07h 00m 53s (U.S.C.G.S.); 4°2S., 81°0W.; H = 07h 00m 53s (B.C.I.S.).		
	Poona	Z	iPKP	07 20 49		Tremor.
	Bombay	N,E	e	08 25 -		Feeble; surface waves.
	Hyderabad	E	M	08 30 35		Per. = 18 secs. $\mu = 5$.
		Epc:		Probably in Assam. Felt at Gauhati and Tezpur.		
	Calcutta	N	e? e i i	12 44 22 44 35 45 23 45 33		Very slight.
	New Delhi	N,E E N,E E	eP PPP eS SS SSS	12 45 25 45 40 47 33 47 47 48 00	1,260	Slight.
	Poona	Z	eP e	12 46 21 49 25		Very slight. Phases indistinct.
	Poona	Z	i	20 29 40		
	Bombay	N,E	e	20 36 33		Feeble.
17	New Delhi	E	eP PP LQ eS SS M	13 57 59 58 14 59 48 59 59 14 00 12 01 12	1,170	Slight.
	Poona	Z	i i i	14 03 46 03 55 05 46		
18	Bombay	N E	e e	03 17 25 17 31		Feeble.
20	Bombay	N,E	e	00 53 -		Feeble. Microseisms throughout N and E records.

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

Jan.
1952
20
(Contd)

Epc: 17°N., 63½°E., Arabian Sea;
H = 14h 42m 38s (B.C.I.S.);
20°5N., 61°5E.; 0 = 14h 43m 10s (Poona).

STATION	COMPT.	PHASE	G. M. T.	REMARKS		
			h. m. s. km.			
✓ Bombay	N,E E	eP	14 45 44 1,165	Slight.		
		PP	45 51			
		P*	46 18			
		eS	47 44			
		LR	48 17			
Poona	Z E Z E Z E Z E Z E	iPY	14 45 59 1,270	Slight.		
		ePY				
		PP	46 08			
		PP	46 09			
		PPP	46 15			
		P*	46 29			
		Pg	47 01			
		LQ	48 00			
		LQ	48 01			
		eS	48 10			
New Delhi	N,E N	e?	14 47 03	Slight; near. Phases not clear.		
		i	47 12			
		e	50 33			
		i	50 45			
		i	51 01			
		i	52 03			
		✓ Hyderabad	E N	P	14 47 05 1,930	
				S	50 18	
				SS	50 44	
				L	51 50	
M	52 31			Per. = 15 secs. μ = 10.		
M	53 11			Per. = 12 secs. μ = 4.		
✓ Kodaikanal	E			eP?	14 47 25 2,310	Slight; near. Phases not very clear due to congestion of lines.
				eS?	51 13	
				LR	52 24	
				M	54 13	Per. = 14 secs. μ = 4.
		Colombo	E	P	14 48 13	Strong Microseisms.
M	55 23			Amp = 0.5mm.		
Calcutta	E	iP	14 48 48 2,855	Slight; first movement West.		
		eS	53 15			
		LR?	55 15			
		PcS	56 01			
Dehra Dun	N	eS?	14 51 18 2,367			
		e	55 39			
		M	56 54	Per. = 12 secs. Amp = 0.02".		
Poona	Z	i	18 37 04			
		i	37 12			
		i	37 25			
		i	37 41			
		i	41 22			

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

Jan.
1952
21

Epc: 53°N., 166½°W., Fox Islands, Aleutian Islands;
H = 03h 43m 04s; h = about 60 kms (U.S.C.G.S.);
Mag. 6½ (Pasadena); 6½ (Rome); 6.3 (Berkeley).

STATION	COMPT.	PHASE	G. M. T.	REMARKS
			h. m. s. km.	
Calcutta	E	eP	03 55 20? 8,820	Slight, distant. Microseisms in record.
		eS	04 05 21	
		i	05 32	
		Mn	37 35	
New Delhi	N,E N	iP	03 55 17 9,250	Moderate.
		PP	58 28	
		SKS	04 05 26	
		IS	05 37	
		PS	06 23	
		SS	11 13	
		M	29 28	
Hyderabad	N N,E N E	P	03 56 04 9,900	Δ from SKS-P.
		SKS	04 06 32	
		S	07 03	
		L	26 40	
		M	31 54	Per. = 16 secs. μ = 5.
		M	32 06	Per. = 15 secs. μ = 6.
		Poona	Z,N,E N E N E N E N E N E	iP
PKP	59 50			
PKP	59 57			
SKS ₁	04 06 34			
SKS ₁	06 39			
SKS ₂	07 15			
SKS ₂	07 17			
SS ₂	15 45			
SS	15 48			
SSS?	19 20			
SSS?	19 23			
LQ	28 03			
LR	30 03			
LR	31 00			
Bombay	N,E E	iP	03 56 10 10,090	Moderate. Δ from SKS-P.
		iSKSY	04 06 41	
		eSKSY		
		iSY	07 20	
		eSY		
Kodaikanal	N,E N E	LR	27 -	
		Mn	40 26	Per. = 16 secs. μ = 2.
		Mn	41 26	Per. = 17 secs. μ = 4.
Kodaikanal	E	e(SKS)	04 07 00	Slight. Distant. Phases not clear.
21 Poona	Z	i	20 11 52	
		i	34 18	
23				A severe rock burst at the Kolar Gold Fields. Buildings within a radius of one mile damaged (Press report).
Kodaikanal	E	i	01 35 09	Shock recorded by Seismograph due to rock burst at Kolar Gold fields, Oorgaum.
Bombay	E N	eP?	01 35 53 1,055?	Tremor.
		iSY	37 41	
		eSY		

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Jan. 23					
Epc: Northern Kansu Province, China; H = 03h 29m 30s (U.S.C.G.S.); 41 $\frac{1}{2}$ °N., 95 $\frac{1}{2}$ °E.; Gobi desert; H = 03h 29m 27s (B.C.I.S.); 41°N., 94°E., Sinkiang Province, China; O = 03h 29m 28s (Poona).					
Calcutta	E		eP	03 33 37	2,110 Moderate.
			iS	37 06	
			SSS	37 47	
			M	39 47	
			Mn	43 42	Per. = 7 secs. $\mu = 29$.
New Delhi	N,E		iP	03 33 41	2,080 Slight.
			PP	33 57	
			iS	37 07	
			SS	37 32	
			SSS	37 45	
			LR	38 00	
	N		M	39 26	
Hyderabad	N		iP	03 35 08	2,930
	N,E		S	39 40	
	N		L	43 09	
	E		M	45 10	Per. = 8 secs. $\mu = 6$.
	N		M	45 33	Per. = 8 secs. $\mu = 9$.
Poona	Z,E		iPY	03 35 19	3,000 Moderate.
	N		ePY		
	E		i	35 40	
	N,E		PcP	38 22	
			e	39 30	
			iS	40 03	
			LQ	41 12	
			SS	41 27	
			SSS	41 46	
			LR	42 38	
			M	44 57	
Bombay	N,E		iP	03 35 25	3,110 Moderate.
			PP	36 15	
	E		iS	40 09	
	N		eS		
	N,E		LQ	41 03	
	N		SS	41 23	
	E		SS	41 33	
	N		LR	42 20	
	E		LR	42 47	
	N		Mn	47 30	Per. = 9 secs. $\mu = 9$.
	E		Mn	47 47	Per. = 9 secs. $\mu = 6$.
Kodaikanal	E		e?	03 51 29	Slight. Phases not clear.
24					
Epc: 53°N., 166 $\frac{1}{2}$ °W., Fox Islands, Aleutian Islands; H = 09h 14m 08s (U.S.C.G.S.).					
Poona	Z		iP	09 27 17	Tremor.
			i	27 23	
			e	27 29	
Bombay	N,E		e(S)	09 38 -	Very feeble. Distant.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Jan. 1952					
24 (Contd)	New Delhi	E	eP	18 54 54	260 Slight.
			P*	54 46	
			PP	55 02	
			PPP	55 09	
			iS	55 23	
			i	55 28	
			Sg	55 30	
			SS	55 34	
			SSS	55 44	
	Poona	Z	e	18 57 33	
			e	59 14	
			i	59 43	
			e	19 00 50	
27					
Epc: North Central China; H = 09h 15m 48s (U.S.C.G.S.); 40°N., 109°E.; H = 09h 15m 57s (B.C.I.S.).					
	Bombay	N,E	e(S)	09 28 -	Feeble. Surface waves.
29					
Epc: Near Negros, Philippine Islands; H = 00h 55m 30s (U.S.C.G.S.); 9 $\frac{1}{2}$ °N., 122 $\frac{1}{2}$ °E.; H = 00h 55m 29s (B.C.I.S.).					
	Colombo	E	P(?)	01 03 57	Amp = 0.3mm.
			S	09 50	
			L	19 -	
			M	23 02	
	Hyderabad	E	eP	01 03 43	4,660
			PP	05 45	
			eS	10 03	
			L	16 14	
			M	20 46	Per. = 15 secs. $\mu = 3$.
	Poona	Z,E	iP	01 04 13	5,220 Slight.
		E	PP	06 05	
			iS	11 05	
			PS	11 17	
			PPS	11 23	
			SS	14 28	
			LR	18 19	
	Bombay	E	iPY	01 04 35	5.180 Slight.
		N	ePY		
		N,E	PP	06 28	
			iS	11 24	
		E	SS	14 39	
			LR	18 23	
		N	LR	18 -	
30	Bombay	N,E	e	22 40 -	Very feeble.
30	New Delhi	N,E	eP	23 36 42	1,250 Slight.
		E	PP	36 51	
			PPP	36 59	
			LQ	38 39	
			eS	38 50	
		N,E	SS	39 03	
		E	M	40 11	
31	Poona	Z	i	07 13 24	
			i	13 46	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Jan. 1952					
31 (Contd)					
	Poona	Z	iP	08 16 08	
	Poona	Z	e	20 23 37	
31	Poona	Epc:		23°N., 142½°E., Bonin Islands Region; h = 300 kms (CMO, Japan). 23°N., 144°E.; H = 08h 05.4m (B.C.I.S.).	
31		Epc:		15½°N., 93½°W., Near Coast of Chiapas, Mexico, Felt; H = 20h 16m 43s; h = about 60 kms (U.S.C.G.S.); 15°25'N., 93°48'W.; H = 20h 16m 47s (Tacubaya).	
	Poona	Z	iPKP	20 36 17	Tremor.
		Epc:		4°S., 30½°E., Ruanda-Urandi, Tanganyika Border; H = 20h 55m 12s (U. S. C. G. S.).	
	Poona	Z	iP	21 04 00	Moderate.
		E	eP	04 01	
			PP	05 50	
			PPP	06 51	
		N,E	iS	11 03	
		E	PPS	11 23	
		N	SS	14 25	
		E	SS	14 49	
		N	LR	17 32	
		E	LR	18 01	
			M	21 32	
	Bombay	E	iPY	21 04 05	5,255 Moderate.
		N	ePY		
		N,E	PP	06 06	
		E	iSY	10 59	
		N	eSY		
		E	SS	14 26	
		N	SS	14 34	
		E	LR	17 09	
		N	LR	17 23	
		E	Mn	22 45	Per. = 20 secs. μ = 12.
		N	Mn	23 13	Per. = 19 secs. μ = 7.
	Kodajkanal	E	iP	21 04 13	5,365 Slight. Distant. Initial movement of P and PP East.
			iPP	06 04	
			iS	11 13	
			LR	17 46	
			M	21 46	Per. = 15 secs. μ = 11.
	Colombo	E	P	21 04 18	Amp = 0.6mm.
			S	11 38	
			L	20 -	
			M	22 28	
	Hyderabad	E	P	21 04 33	4,330
			PP	06 32	
			S(?)	10 33	
			L	15 53	
		N	M	20 57	Per. = 16 secs. μ = 12.
		E	M	22 16	Per. = 16 secs. μ = 10.
	New Delhi	N,E	eP	21 04 53	6,190 Moderate.
		E	PcP	05 54	
		N	PP	06 59	
			iS	12 39	
			i	15 49	
			SS	16 28	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Jan. 1952					
31 (Contd)	Calcutta	E	iP	21 05 51	7,165 Moderate. First movement East.
			PPP	09 47	
			eS	14 30	
			SKS1	15 40	
			SS	18 42	
			LQ	22 04	
			LR(?)	25 07	
			PKKP1(?)	25 52	
			M	30 12	
			Mn1	31 03	Per. = 20 secs. μ = 35.
			Mn2	33 18	Per. = 18 secs. μ = 24.
	Dehra Dun	N	e(S)	21 14 45	

Earthquake Reports
(Non-Instrumental Reports).

- : Voluntary Observer's Reports : -

The following table contains a list of Earthquakes that were reported by Voluntary Observers from various stations.

Place at which felt	Date	G. M. T. of earthquake	'Duration' of quake	'Intensity' R.F. Scale	No. of 'shocks'	Remarks.
		h. m.	secs.			
Ghaziabad	5.1.52	06 25	1	-	-	-
Gauhati	15.1.52	02 28	15	VI	1	-
Tezpur	15.1.52	02 30	10	V	1	Slight intensity.
Gauhati (Aerodrome)	15.1.52	02 32	25	VI	1	-
Shillong	15.1.52	02 32	10.0	V	2	Two shocks at 30 secs interval.
Shillong	15.1.52	02 33	First = 15.0 Second = 25.0	VI	2	Two separate shocks at an interval of 30 se
Tezpur	15.1.52	12 41	20.0	VI	1	-
Gauhati (Aerodrome)	15.1.52	12 43	8.0	VI	1	-
Gauhati	15.1.52	12 50	10.0	VI	1	-

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S.M.
20.8.53

GOVERNMENT OF INDIA
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

February, 1952.

Published under the direction of
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Director General of Observatories.

Instruments and their Constants.

Station	Instrument	Compt.	Period in secs.	Static Mag- nification	Damping ratio	Paper Speed mm/min.
Bombay	Milne-Shaw	N	12	350	6:1	16
	Milne-Shaw	E	12	350	4:1	8
	Sprengnether	E	7	-	-	30
Calcutta	Milne-Shaw	E	12	250	20:1	8
	Wood-Anderson	N	2	870	Critical	30
	Omori-Ewing	N	18	32	-	25.4
	Omori-Ewing	E	19	30	-	25.4
Colombo	Milne-Shaw	E	12	250	15:1 20:1 from 18.2.52	8
Dehra Dun	Omori-Ewing	N	32	12	-	-
Hyderabad	Milne-Shaw	E	12	250	20:1	8
	Milne-Shaw	E	12	250	20:1	8
Kodaikanal	Milne-Shaw	E	10	250	20:1	8
New Delhi	Milne-Shaw	N	12	288	20:1	8
	Wood-Anderson	N	4	1000	20:1	16
	Wood-Anderson	E	2	2000	30:1	60
	Omori-Ewing	E	30	30	1	12
Poona	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
	Sprengnether	E	7.2	-	-	30
	Benioff	Vertical	To=1 sec. Tg=0.28 sec.	-	-	60

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.	
Feb. 1952	New Delhi	E	eP	07 16 11	1,270 Slight.	
			PP	16 19		
			LQ	18 11		
			iS	18 20		
			SS	18 34		
			SSS	18 44		
	Poona	Z	i	07 19 09	Feeble.	
			i	19 12		
			i	19 16		
	2	Epc: Lat. 51°5N., Long. 179°W.; H = 10h 20m 06s; h = 100 kms (U. S. C. G. S.).				
	✓ Hyderabad	N	M	11 12 14	Per. = 16 secs. $\mu = 3.$	
	Poona	Z,E	iP	10 32 36	Slight.	
			SKS	42 56		
			SKKS	43 28		
			SKKKS	43 36		
ePS			44 00			
Bombay	N,E	eP	10 32 37	9,465? Slight.		
		ePP	36 00			
		iS?	43 07			
		M	11 13 -			
2	Epc: Lat 11°S., Long 165°E.; H = 22h 59m 45s; h = 100 kms (U.S.C.G.S.).					
Poona	Z	i(P)	23 13 08			
Bombay	N,E	e	23 24 -	Very feeble.		
3	Epc: Lat 35°5N., Long 94°E.; H = 01h 16m 10s (B.C.I.S.); H = 01h 16m 05s (U.S.C.G.S.).					
New Delhi	N,E	eP	01 19 35	1,710 Slight.		
		eS	22 27			
		M	24 30			
✓ Hyderabad	N	eP	01 20 54	2,510		
iS	24 58					
M	28 29					
	E	M	28 29	Per. = 9 secs. $\mu = 2.$		
Poona	Z,E	iP	01 21 15	2,620 Moderate.		
		eS	25 27			
		LQ	26 03			
		SS	26 19			
		M	31 14			
Calcutta	E	i	01 21 16	Slight; near.		
		i	22 33			
		i	22 50			
✓ Bombay	N,E	eP	01 21 21	2,780 Slight.		
eS		25 43				
M		31 45				
	E	M	32 30	Per. = 7 secs. $\mu = 2.$ Per. = 7 secs. $\mu = 1.$		
3	Poona	Z	i	23 17 43	Tremor.	
	Bombay	N,E	e	23 25 32	Very feeble.	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Feb. 1952	Epc: Southern Gulf of California (U.S.C.G.S.); H = 19h 09m 30s.				
4	Calcutta	E	e	19 32 16	Slight; near.
	Bombay	N,E	e	19 36 -	Very feeble.
				0 = 22h 51.4m.	
4	New Delhi	N,E E N,E	eP P* Pg PP eS S* Sg i SSS	22 52 13 52 15 52 19 52 22 52 43 52 47 52 51 52 59 53 05	250 Slight.
	Poona	Z	iP PP PPP LQ iS SS SSS S* Sg	22 54 32 54 44 54 51 56 50 56 56 57 12 57 30 57 54 58 36	1,210 Slight.
5	Poona	Z	e	08 32 50	
5	Epc: Near North Coast of Mindanao, Philippine Island; H = 16h 50m 44s (U.S.C.G.S.); Lat 9°5N., Long 124°5E.; H = 16h 50m 44s (B.C.I.S.).				
	Calcutta	E	iP PP? PPP iS SSS	16 58 15 59 53 17 00 11 04 11 07 21	4,280 Slight. First movement East.
	Hyderabad	E	P PP eS SS L M	16 58 16 17 00 09 05 21 08 53 12 58 16 53	5,450 Per. = 16 secs. $\mu = 4$
	Colombo	E	e e	16 59 01 17 06 21	
	Bombay	N,E N E	iP eS LQ LQ	16 59 41 17 06 51 11 32 11 45	5,545? Feeble.
	New Delhi	N,E N	eP PP eS SS SSS M	16 59 41 17 01 40 06 41 10 49 12 30 19 04	5,360 Moderate.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Feb. 1952	Epc: Off the Coast of N. Island (New Zealand); H = 00h 50.1m (B.C.I.S.)				
5	Poona	Z	i	00 58 24	
5	Poona	Z,E	iP PcP PP PPP e PS PPS SS	16 59 52 17 00 43 01 46 02 58 07 14 07 28 07 41 11 28	Slight.
5	Bombay	N,E	e	18 29 -	Very feeble; surface waves.
5				0 = 23h 26.5m.	
	New Delhi	E	P PP PPP P* Pg LQ eS SS S*	23 28 29 28 36 28 42 28 49 29 09 29 52 30 02 30 15 30 25 30 31	890 Slight.
	Poona	Z	i e e e	23 30 24 33 45 34 45 35 48	Feeble.
6	Epc: Off the Coast of N. Island (New Zealand); H = 00h 50.1m (B.C.I.S.)				
	Poona	Z	i	00 58 24	
6	Epc: Kansu Province, China; H = 05h 27m 10s (U.S.C.G.S.); Lat 41°5N., Long 95°5E. (Gobi desert); H = 05h 27m 13s (B.C.I.S.); Lat 39°5N., Long 96°5E. (Poona).				
	New Delhi	N,E N	eP PP iS SS LR M	05 31 29 31 45 34 50 35 16 35 47 37 32	2,020 Slight.
	Calcutta	E	eP iS SSS PcP	05 31 30 34 52 35 33 36 12	2,035 Moderate.
	Poona	Z E	iP eP PP PPP iS SS SSS ScS M	05 33 03 34 05 34 22 38 04 39 54 40 18 43 18 43 52	3,380 Slight.
	Hyderabad	N E N	P e S M M	05 32 55 33 06 37 24 42 47 42 56	2,890 Per. = 7 secs. $\mu = 3$. Per. = 8 secs. $\mu = 6$.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Feb. 1952	Bombay	N,E	eP	05 33 13	3,335 Moderate.
6 (Contd)			eS	38 11	
			SS	39 49	
		N	SS	40 01	
		E	LR	40 43	
		N	LR	41 12	
		E	M	45 17	
		N	M	45 19	
	Dehra Dun	N	e	05 35 18	
	Colombo	E	e(S)	05 39 50	Tremor.
	Kodaikanal	E	e	05 41 14?	
6	New Delhi	N,E	eP	05 40 41	980 Slight.
			iS	42 22	
			SS	42 34	
6	Epc: Kermadec Island; H = 06h 54m 45s (U.S.C.G.S.); Lat 30°S., Long 179°W.; H = 06h 54.8m (B.C.I.S.).				
	Bombay	N,E	e	07 26 -	Very feeble.
6	Epc: 34°5N., 95°E.; H = 11h 25m 30s.				
	New Delhi	E	e(P)	11 29 12	Slight.
			e	29 30	
		N	e	31 57	
			e(S)	32 16	
			M	33 51	
	Calcutta	E	e	11 30 15	Slight; near.
			i	31 47	
	Hyderabad	E	eP	11 30 22	2,340
			eS	34 13	
			L	36 25	
			M	39 27	Per. = 8 secs. $\mu = 2.$
	Poona	Z	iP	11 30 41	2,665 Slight.
		E	eP	30 40	
			iS	34 55	
			LQ	35 14	
			SS	35 37	
			LR	36 33	
			ScP	38 -	
	Dehra Dun	N	e	11 31 06	
	Bombay	N,E	eP	11 35 08	1,735 Moderate.
		E	ePP	35 20	
		N,E	PPP	35 27	
			eS	38 02	
			SS	38 24	
			SSS	38 38	
			LR	38 53	
		E	M	40 46	Per. = 8 secs. $\mu = 3.$
		N	M	41 20	Per. = 8 secs. $\mu = 3.$
	Kodaikanal	E	e	11 35 59	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Feb. 1952	New Delhi	E	eP	22 47 04	990 Slight.
6			PPP	47 18	
			P*	47 26	
		N,E	eS	48 48	
			SS	48 58	
			S*	49 17	
	Poona	Z	iP	22 49 58	Phases not clear.
		E	e	52 46	
			e	52 57	
7	Epc: Provisional: 126°E., 05°S.; H = 14h 39.8m (Poona).				
	Bombay	N,E	e	14 44 -	Feeble.
			e	49 43	
	Colombo	E	e	14 47 01	L and M not well defined.
			e	55 26	
	Calcutta	E	e	14 48 08	Tremor.
			i	54 40	
	Poona	Z	iP	14 49 24	6,180 Feeble.
		E	eP		
			PcP	50 19	
			PP	51 29	
			ScP	54 13	
			eS	57 09	
			PPS	57 32	
			ScS	59 07	
	New Delhi	E	eP	14 49 25	6,190 Slight.
		N	eS	57 11	
	Hyderabad	E	e	14 56 06	
7	Calcutta	E	e	17 54 21	Tremor.
	Bombay	N,E	ce	17 55 -	Very feeble.
8	Epc: 1,000 km West of Macqarie Island; H = 18h 21.4m (B.C.I.S.).				
	Poona	Z	i(P)	18 34 57	Feeble.
		E	e	19 06 -	
	Colombo	E	e	18 43 51	L and M approximate due to small amplitude.
			L	57 -	
			Mn	19 01 -	
	Bombay	N,E	M?	19 00 -	Feeble.
	Hyderabad	N	M	19 05 19	Per. = 16 secs. $\mu = 5.$
9	Poona	Z	i	01 10 20	
			i	02 10 28	
			i	10 38	
11	Epc: Lat 6°S., Long 110°E.; H = 07h 01m 04s; h = 700 km (USGCS); Lat 5°5S. Long 109°8E.; H = 07h 01m 05s; h = 700 km (BCIS); Lat 7°S. Long 110°E.; H = 07h 01m 12s; h = 700 km (Poona); Mag. 7 (Pasadena).				
	Colombo	E	P	07 06 51	Wave of largest amplitude taken as M.
			S	11 19	Amp = 1.5mm.
			Mn	15 03	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Feb. 11 (Contd)	Calcutta	N	iP PP PcP iS SS LR	07 07 14 08 10 10 24 12 09 13 41 14 58	3,280 Moderate. First movement South.
	Kodaikanal	E	iP PP PPP iS LQ LR M	07 07 15 08 06 08 21 12 00 13 03 14 24 16 45	
	Hyderabad	N,E E N E N	iP e iS SS L M M	07 07 39 09 32 12 50 13 41 16 08 20 03 20 18	3,540 Per. = 11 secs. $\mu = 3.$ Per. = 13 secs. $\mu = 5.$
	Poona	Z,N,E N,E N N,E	iP PP PPP PcP iS ScP SS LQ SSS SSS ScS LR	07 08 15 09 39 09 58 10 38 13 57 14 13 16 21 16 36 16 53 16 58 18 02 18 13	4,045 Moderate.
	Bombay	E	iP i pP iS i sS	07 08 21 10 10 10 18 14 06 17 04 17 36	4,890 Moderate. Loss of record.
	New Delhi	N,E N	iP PPP ipP iS SS	07 08 36 10 29 10 35 14 32 17 14	4,270 Moderate.
11	Poona	Z	e e	14 05 21 05 30	
11	Epc: 120°5E., 03°S.; 0 = 16h 29m 02s; h = 100 km (poona).				
	Colombo	E	P S L	16 34 39 40 43 44 11	
	Calcutta	E	iP PP PPP iS PcS SS	16 34 51 36 01 36 16 40 07 41 26 42 06	3,635 Slight. First movement West.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Feb. 11 (Contd)	Kodaikanal	E	e	16 34 57	
	Hyderabad	E	iP PP iS SS L M	16 35 07 37 23 41 43 45 08 49 10 55 15	4,940 Per. = 15 secs. $\mu = 2.$
	Poona	Z,E E	iP PcP i ScP	16 35 44 36 59 37 07 40 52	5,290 Deep focus.
		Z,E E	iS PS ScS SS SSS	42 40 42 45 45 19 46 03 47 31	
	New Delhi	N,E N	eP i(pP) PP PPP iS i(sS) SS	16 35 47 36 13 38 13 39 03 42 51 43 25 46 55	5,450 Moderate.
	Bombay	E	iP ePP iS iPPS SS SSS LR	16 35 51 37 39 42 58 43 21 46 43 47 45 50 01	5,490 Slight. Loss of record.
11	Poona	Z	e e e	00 17 07 17 43 20 30	
12	Epc: Solomon Island. Lat 8°S. Long 156°5E.; H = 05h 38m 41s (U.S.C.G.S.).				
	Bombay	N,E	e	06 02 22	Very feeble.
12	Poona	Z	i i	09 06 33 06 05	Felt at Gauhati.
12	Epc: Solomon Island.; H = 10h 10m 50s (U.S.C.G.S.).				
	Bombay	N,E	e e	10 34 12 34 25	Very feeble.
12	Epc: Bismark Sea.; H = 20h 15m 30s; h = 100 km ca (U.S.C.G.S.). Lat 4°75S. Long 150°E.; H = 20h 15m 37s; h = 100 km ca (B.C.I.S.)				
	New Delhi	N,E N	eP i i	20 27 18 36 31 36 49	Moderate.
	Poona	Z,E E	iP PcP PP PPP e	20 27 26 27 40 30 07 31 49 36 45	Slight. Probably deep.

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DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Feb. 1953	Poona	E	PS	20 37 15	
12 (Contd)	(Contd)		PPS	37 31	
			SS	41 27	
	Bombay	N,E	eP	20 27 30	8,135 Feeble.
		E	iS	36 58	
14	Epc: Lat 8°S., Long 125°E.; H = 03h 38m 06s (U.S.C.G.S.); Lat 7.7°S., Long 126.5°E.; H = 03h 38m 15s (B.C.I.S.); 8°S., 126.5°E.; 0 = 03h 38m 15s (Poona); Mag. 7.25 (Pasadena; Strasbourg).				
	Calcutta	E	iP	03 46 53	5,310 Great; First movement East.
			PP	48 45	
			iS	53 50	
			SS	57 11	
	Colombo	E	P	03 47 -	P approximate due to loss of trace.
			S	53 57	
			L	04 05 07	Amp = 9.0.
			M	09 37	
	Dehra Dun	N	eP	03 47 30	6,537
			eS	55 30	Per. = 36 secs. $\mu = 0.2$
			M	04 06 30	
	Hyderabad	N,E	iP	03 47 33	5,990
		E	PP	49 37	
		N,E	iS	55 08	
		E	SS	58 38	
			L	04 04 42	Per. = 16 secs. $\mu = 44.$
			M	10 19	Per. = 18 secs. $\mu = 57.$
		N	M	13 07	
	Poona	Z,N,E	iP ₁	03 48 14	6,335 Probably a double shock
			iP ₂	51 53	
			PP ₁	50 08	
		N	PP ₂	54 03	
			S ₁	56 09	
			S ₂	59 32	
			PS ₁	56 26	
			PPS ₂	04 00 26	
			LQ ₁	02 17	
			LQ ₂	06 00	
			SSS ₁	02 32	
			LR ₁	05 20	
			SS ₂	03 40	
			SSS ₂	06 32	
	New Delhi	N,E	eP	03 48 16	6,450 Moderate.
			PP	50 34	
			PPP	51 52	
		N	i	54 38	
			iS	56 16	
			PS	56 34	
			PPS	56 47	
			ScS	57 53	
			SS	59 55	
			LQ	04 03 11	
			LR	05 51	
			M	10 58	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Feb. 1952	Bombay	N,E	iP	03 48 17	6,500 Moderate.
14 (Contd)			PPP	51 45	
			PPP	52 07	
			iS	56 20	
			iS	56 31	
			PS	56 31	
			PS	56 44	
			LR	04 05 22	
			LR	07 20	
			M	15 25	Per. = 11 secs. $\mu = 19.$
			M	16 32	Per. = 17 secs. $\mu = 34.$
14	Bombay	N,E	eP	12 31 31	6,635 Feeble.
			eS?	39 41	
	New Delhi	N,E	eP	12 31 34	6,560 Slight.
			eS	39 40	
14	Bombay	N,E	e	22 22 -	Feeble; surface waves.
16	Bombay	N,E	e	00 05 -	Very feeble; surface waves.
16	Bombay	E	iY	13 48 38	Very feeble.
		N	eY		
16	Epc: Probably SW of Australia (B.C.I.S.).				
	Poona	Z	iPY	21 14 45	6,555 Slight; other phases not clear.
		E	ePY		
			eS	22 52	
	New Delhi	N,E	eP	21 15 02	6,570 Slight.
		N	eS	23 09	
16	Epc: 30°N., 96°3E.; 0 = 21h 43m 53s (Poona).				
	New Delhi	N,E	eP	21 47 50	1,890 Slight.
		N	eS	50 55	
			M	53 04	
	Calcutta	E	e	21 48 09	Slight.
			i	49 21	
			i	50 00	
	Poona	Z	eP	21 49 07	2,665 Slight.
		E	PPP	49 53	
			eS	53 21	
			LQ	53 57	
			SSS	54 32	
			LR	55 07	
			ScP	56 11	
	Hyderabad	N	M	21 54 30	Per. = 11 secs. $\mu = 3.$
	Bombay	N	eP	21 49 13	2,680 Slight.
		N,E	eS	53 29	
		N	M	58 17	Per. = 9 secs. $\mu = 2.$
		E	M	58 18	Per. = 9 secs. $\mu = 3.$
18	Bombay	N,E	e	09 32 -	Very feeble.
20	Epc: Lat 16°S. Long 74°W.; H = 09h 10m 06s; h = 150 km ca (U.S.C.G.S.); Lat 16.2°S. Long 74.2°W.; H = 09h 10m 03s; h = 150 km ca (B.C.I.S.).				
	Poona	Z	i	09 29 39	Tremor.

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DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
Feb. 1952	Poona	Z	e	13	30	09	Tremor.
20	Poona	Z	e	18	24	34	Tremor.
21	Calcutta	E	e	12	36	54	Slight, near.
			i		37	19	
			i		38	38	
	Bombay	N,E	e	12	43	-	Feeble.
21	Poona	Z	i	18	15	24	Tremor.
			i	20	16	44	
22	Poona	Z	i	23	58	22	Felt at Shillong.
			i	00	00	27	
23	Poona	Z	i	12	22	01	Tremor.
24	Bombay	E	i	03	28	54	Feeble.
		N	e				
	Colombo	E	L	03	31	30	
			Mn		33	22	Amp. = 0.2.
	Kodaikanal	E	e	03	32	09	
24	Poona	Z	e	11	41	58	Tremor.
			e		42	16	
	Bombay	N,E	e	11	44	-	Tremor.
24	Felt strongly at Shillong and Cauhati. Duration at Shillong was about a minute.						
	Epc: Neighbourhood Tura Hills; $\theta = 13h 13.3m$.						
	Calcutta	N	eP	13	33	07	470 Slight.
			Pg		33	16	
			iSg		33	57	
	Poona	Z	iP	13	36	20	1,710
			PP		36	33	
			PPP		36	40	
			LQ		39	07	
			e		39	12	
			SS		39	31	
			SSS		39	43	
			LR		39	56	
			M		40	52	
	Bombay	N,E	e	13	41	-	Tremor.
24	Bombay	N,E	e	17	29	-	Feeble.
24	Epc: Lat $17^{\circ}5'N$. Long $144^{\circ}5'E$.; H = 22h 55m 52s; h = 200 km ca. (U.S.C.G.S.). Mariamus Island.						
	Poona	Z	i	23	06	39	Tremor.
			i		07	10	
25	Epc: Lat $17^{\circ}S$. Long $173^{\circ}5'W$.; H = 01h 17m 00s Tonga Island (U.S.C.G.S.). $18^{\circ}1'S$. $172^{\circ}8'W$.; H = 01h 17m 02s (B.C.I.S.). Mag. 7 (Wellington, Praha); 6.92 (Rome); 6.9 (Pasadena); 6.75 (Strasbourg).						
	Kodaikanal	E	e	01	35	04	

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DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
Feb. 1952	Calcutta	E	iPP?	01	35	33	Slight; First movement West.
(Contd)			(PPS)		45	27	
	Bombay	E	ePKP ₁	01	35	38	13,110 Moderate.
		N	ePKP ₁		35	48	
		E	iPP		37	01	
		N	ePP		37	07	
		E	SKS ₁		42	38	
		N	SKS ₁		42	44	
			PS ₁		46	37	
		E	i		46	57	
		N	eSS		53	03	
		N,E	eSS		53	15	
		N	LR	02	11	-	Per. = 19 secs. $\mu = 7$. Per. = 18 secs. $\mu = 6$.
		N	M		29	35	
		E	M		29	46	
	New Delhi	N,E	e	01	35	47	Moderate. Very distant.
		N	e		44	15	
			e		46	31	
			e		52	27	
			e		15	01	
	Poona	Z	i	01	35	49	Tremor.
		E	i		36	53	
			i		39	21	
			i		42	43	
		Z	i		46	22	
25	Bombay	N,E	e	03	22	-	Feeble.
25	Poona	Z	e	07	53	29	Tremor.
25	Calcutta	N	i	14	47	05	Slight, near.
			i		47	19	
	Poona	Z	e	14	52	08	
			i		53	35	
		E	i				
25	Epc: Lat $236^{\circ}2'N$. Long $141^{\circ}3'E$.; H = 18h 41m 23s; h = 40 km ca (CMO, Japan).						
	Poona	Z	iP	18	51	35	
			i		51	48	
26	Epc: Lat $15^{\circ}S$. Long $69^{\circ}W$.; H = 11h 30m 54s; h = 250 km ca. (U.S.C.G.S.); $14^{\circ}1'S$. $69^{\circ}9'W$.; H = 11h 31m 04s; h = 250 km ca. (B.C.I.S.). Mag. 7.5 (Pasadena); 7.25 (Berkeley).						
	Bombay	N,E	ePKP ₁	11	50	10	15,730 Moderate.
			pPKP ₁		51	15	
			PP ₁		53	29	
			pPP		54	29	
			i		55	24	
		N	PS	12	04	14	
		N,E	iSS		11	48	
			SSP		12	20	
			ipSS		13	36	
			LQ		31	23	
		E	LR		38	22	
		N	LR		38	41	

				12			
DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.	
				h. m. s.	km.		
Feb. 1952	Poona	Z	PKP ₁	11 50 14	15,770	Moderate.	
(Contd)		N	SKS ₁	56 57			
			PKP ₂	12 01 03			
			PS	01 15			
			SKKS	06 57			
			SKKS ₂	08 16			
			PcS	09 01			
			SS	11 40			
			LR	24 27			
			M	34 40			
	New Delhi	N,E	ePKP ₁	11 50 18	16,220	Very distant.	
		N	e	55 38			
			i	12 00 03			
			e	01 33			
			e	03 59			
			i	12 01			
			i	13 34			
			i	14 05			
			e	15 28			
			e	16 49			
	Kodaikanal	E	ePKP	11 50 20			
	Colombo	E	PKP	11 50 23			
			L	12 40 -			
			Mn	56 21		Amp. = 0.3.	
	Hyderabad	E	ePKP	11 50 32		Per. = 15 secs. $\mu = 3$.	
			M	12 48 02			
	Calcutta	E	ePKP	11 51 37		Slight; distant.	
			i	56 16			
			i	12 00 46			
			i	08 11			
			i	10 26			
26	Epc: Lat 11°5N. Long 86°5W.; H = 15h 39m 23s; h = 100 km ca. (U.S.C.G.S.).						
	Mag. 6.28 (Rome); 6.00 (Pasadena); 6.5 (Praha).						
	Calcutta	E	e	15 59 02		Slight; distant.	
	Bombay	N,E	e	16 58 -		Feeble surface waves.	
	Poona	Z	i	16 58 54		Tremor.	
			i	59 03			
	Kodaikanal	E	e	17 00 35			
	Hyderabad	E	M	17 05 43		Per. = 16 secs. $\mu = 4$.	
26	Epc: Santa Cruz Island. Lat 12°5S. Long 166°E.; H = 21h 06m 49s (U.S.C.G.S.).						
	Poona	Z	i	21 42 48			

				15			
DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.	
				h. m. s.	km.		
Feb. 1952	New Delhi	N,E	eP	04 08 50	1,160	Slight.	
			eS	10 50			
			SS	11 02			
			SSS	11 12			
	Poona	Z	i	04 10 29		Tremor.	
			i	10 52			
			i	15 27			
	Bombay	N,E	e	04 17 --		Very feeble.	
27	Bombay	N,E	e	04 58 25		Very feeble.	
	Poona	Z	i	05 00 35		Tremor.	
27	Poona	Z	i	06 38 15		Tremor.	
28	Epc: Indian Ocean. Lat 15°S. Long 69°E.; H = 00h 33m 46s (B.C.I.S.).						
	Colombo	E	P	00 39 21		S,L,M, probably lost while changing chart.	
	Poona	Z	iP	00 39 23	3,675	Slight.	
			PcP	41 53			
			eS	44 42			
			ScP	45 42			
			LQ	46 35			
			LR	48 02			
			ScS	49 55			
	Hyderabad	E	eP	00 40 32	3,630		
		N	S	45 48			
		E	eS	45 50			
		N	L	49 49			
			M	51 58		Per. = 14 secs. $\mu = 7$.	
	Bombay	E	eP	00 40 36	3,845	Moderate.	
			i	41 38			
			iPP	41 52			
			e	45 52			
			eS	46 05			
			SS	48 05			
			SSS	48 28			
			LR	49 40			
			M	53 37		Per. = 13 secs. $\mu = 3$.	
	Calcutta	E	e(P)	00 42 03		Slight; distant.	
			i	48 09			
			Mn	59 50			
28	Poona	Z	i	02 01 28			
			i	01 35			
			i	01 52			
			i	02 27			
28	New Delhi	N,E	ePg	02 27 05	100	Slight.	
			eSg	27 17			
28	Poona	Z	i	07 01 49			
			i	02 17			
			i	04 17			



METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

March, 1952.

Published under the direction of
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Director General of Observatories.

Instruments and their Constants.

Station	Instrument	Compt.	Period in secs.	Static Magnification	Damping ratio	Paper Speed mm/min.
Bombay	Milne-Shaw	N	12	350	5:1	16.0
	Milne-Shaw	E	12	350	4:1	8.0
	Sprengnether	E	7	-	-	30.0
Calcutta	Milne-Shaw	E	12	250	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
Colombo	Milne-Shaw	E	12	250	20:1	-
Dehra Dun	Omori	N	30	12	-	-
Hyderabad	Milne-Shaw	E	12	249	20:1	8.0
	Milne-Shaw	N	12	249	20:1	8.0
Kodaikanal	Milne-Shaw	E	10	250	20:1	8.0
New Delhi	Milne-Shaw	N	12	288	20:1	8.0
	Wood-Anderson	N	4	1000	20:1	16.0
	Wood-Anderson	E	2	2000	30:1	60.0
	Omori-Ewing	E	30	30	-	12.0
Poona	Milne-Shaw	N	12	250	20:1	8.0
	Wood-Anderson	E	4	1100	20:1	16.0
	Sprengnether	E	7.2	-	-	30.0
	Benioff	Z	To = 1.0	Tg = 0.28	-	60.0

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Feb. 1952					
28	Bombay	N,E	e	07 05 -	Very feeble.
(Contd) 28	Bombay	N,E	e	09 54 -	Very feeble.
28	Epc: SE Kamchatka.			H = 18h 46m 10s (U.S.C.G.S.);	
	Lat 54°N. Long 163°E.;			H = 18h 46m 22s (B.C.L.S.).	
	Poona	Z	i(P)	18 58 17	
			i	58 28	
29	Poona	Z	e	19 59 46	
			i	59 14	

- : Voluntary Observer's Reports : -

The following table contains a list of earthquakes that are reported by Voluntary Observers from various stations for the month of February, 1952.

Place at which felt	Date	G. M. T. of Earthquakes	Duration in secs.	Intensi- ty R.F.	No. of shocks.	Remarks.
Gauhati (Azara)	12.2.52	09 10	3	VIII	1	
Gauhati	12.2.52	09 12	8	VI	1	Mild Intensity
Shillong	22.2.52	23 53	First=5 Second=5	V	2	Two shocks at an interval of 10 secs
Gauhati	22.2.52	23 55	4	VI	1	Mild Intensity
Shillong	24.2.53	13 33	30.0	VI	1	
Gauhati	24.2.53	13 33	3	VI	1	Mild Intensity

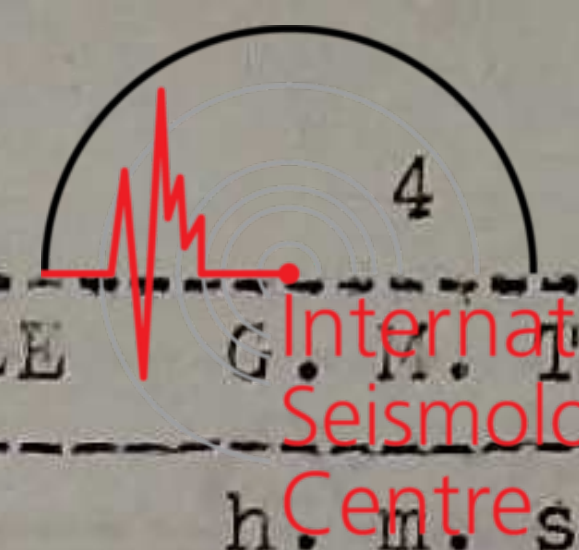
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S.M.
26-8-1953.

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DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Mar. 1952	Epc: Near North Coast of Celebes Island. H = 06h 04m 05s (U.S.C.G.S.).				
1	Poona	Z	iP	06 13 44	Tremor.
		E	eP	13 46	
1	New Delhi	N,E	eP	08 10 27	
		E	eS	10 54	
			i	11 12	
	Poona	Z	i	08 15 24	Tremor.
			i	16 16	
			i	16 54	
1	Epc: Near East Coast of Hokkaido, Japan. H = 15h 31m 02s (U.S.C.G.S.).				
	Poona	Z	iPY	15 41 27	Tremor.
		E	ePY		
	Bombay	N,E	e	16 10 -	Very feeble.
1	New Delhi	N,E	eP	19 00 12	2,890 Slight.
		E	PP	00 18	
			LQ	00 35	
			LR	00 40	
		N,E	iS	00 45	
			S*	00 49	
		N	SS	00 55	
	Poona	Z	i	19 02 23	
			i	04 54	
			e	05 58	
2	Bombay	E	e	20 10 -	Very feeble.
		N		Record defective.	
3	Epc: 21½°S., 174½°W. (Tonga Island). H = 07h 12m 39s (U.S.C.G.S.).				
	Bombay	N	ePKP ₁ ?	07 31 15	12,780 Feeble, distant.
		E	ePP	32 18	
			SKS	38 24	
			PS	42 36	
	Hyderabad	N	M	08 24 29	Per. = 18 secs. μ = 5.
3	Epc: 11°N., 86½°W. near the Coast of Nicaragua; H = 17h 42m 07s; h = 100 kms (U.S.C.G.S.).				
	Bombay	N,E	e	19 09 -	Very feeble.
4	Epc: 42½°N., 143½°E. near Coast of Hokkaido, Japan. Heavy casualties and extensive property damage. Seismic sea waves H = 01h 22m 41s (U.S.C.G.S.); Mag. 8¼ (Pasadena); 8 (Berkeley).				
	Calcutta	N	eP	01 32 03	5,545 Very great.
			iS	39 13	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Mar. 1952	Epc: Near North Coast of Celebes Island. H = 06h 04m 05s (U.S.C.G.S.).				
4 (Contd)	New Delhi	N,E	iP	01 32 12	6,260 Very great. Directions of first motions N. and E.
		N	PP	34 37	
			PPP	35 45	
			iS	40 02	
			SS	43 50	
			SSS	45 59	
			LR	49 40	
	Hyderabad	N,E	i	01 32 52	6,680
			iP	33 02	
		N	PcP	33 52	
			PP	35 31	
			iS	41 15	
			SS	45 18	
			L	53 12	
			M	55 46	Per. = 30 secs. μ = 1537.
	Poona	Z,E	iP	01 33 11	7,231 Very great. Other phases not identifiable due to over lapping of record.
			iS	41 54	Per. = 19 secs. Amp. = 87.0mm.
			M	02 03 -	
	Bombay	E	iP	01 33 15	7,055 Very great. Other phases not identifiable due to overlapping of lines.
			iPP?	35 36	
	Kodaikanal	E	iP	01 33 40	7,580 Great.
			PP	36 13	
			iS	42 40	
			SS	47 07	
			LQ	51 16	
			M	02 00 07	Per. = 21 secs. μ = 36.
	Dehra Dun	N	eP	01 34 00	6,200
			eS	41 42	
			eL	52 36	
			M	02 05 12	Per. = 24 secs. Amp. = 1.83".
4	Bombay	N	M	03 57 05	Moderate. Other phases not identifiable due to overlapping of lines.
					Per. = 17 secs. μ = 24.
		E	M	04 00 21	Per. = 17 secs. μ = 30.
4	Epc: Hokkaido, Japan, after shock. H = 04h 11m 09s (U.S.C.G.S.).				
	Poona	Z	iP	04 20 50	Tremor.
			i	27 15	
4	Poona	Z	i	05 15 03	Tremor.
4	O = 07h 03m 17s (Poona).				
	Kodaikanal	E	e	07 08 53	Slight shock. Phase not clear.
	Hyderabad	N	eP	07 10 20	3,820
			eS	15 48	
			L	21 00	
			M	25 04	Per. = 16 secs. μ = 6.



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DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Mar. 1952 4 (Contd)	Poona	Z,N,E N,E E N,E	iP PP PcP iS SS	07 10 51 12 29 12 51 16 54 19 34	4,390 Slight.
	Bombay	N E N,E	ePY iPY PP PPP iS iSS LQ	07 11 01 12 39 13 09 17 11 20 05 20 31	4,520 Slight.
4	Poona	Z	i	11 04 42	Tremor.
4	Epc: 42°N., 145½°E. Off East Coast of Hokkaido. H = 14h 19m 40s (U.S.C.G.S.).				
	Poona	Z	i	14 30 19	Tremor.
4	Epc: 43°N., 146°E. Off East Coast of Hokkaido. H = 16h 31m 00s (U.S.C.G.S.); O = 16h 30m 59s (Poona).				
	New Delhi	N,E N	eP iS PPS ScS M	16 40 37 48 23 48 43 50 03 17 01 22	6,190 Moderate.
	Hyderabad	E N E N	P iP PP iS SS M	16 41 14 41 18 43 32 49 38 53 47 17 05 58	6,800 Δ from SN-PN.
		E	M	08 04	Per. = 12 secs. $\mu = 4$. Per. = 15 secs. $\mu = 4$.
	Poona	Z,N,E E	iP PP PPP PcS eS SS SS SSS LQ LR	16 41 31 43 59 45 31 46 05 50 13 54 26 54 31 57 13 58 58 03 17 01 20	7,200 Slight.
	Bombay	N,E	eP eS PS ScS SS LR M M	16 41 39 50 21 50 39 51 31 54 53 17 01 - 13 56 14 49	7,220 Slight. Per. = 12 secs. $\mu = 3$. Per. = 12 secs. $\mu = 4$.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Mar. 1952 4	Epc: 42½°N., 144°E. near East Coast of Hokkaido. H = 17h 17m 57s (U.S.C.G.S.).				
	Poona	Z	i i	17 28 26 28 34	Slight. Phases not clear.
4	Poona	Z	i i	18 06 52 07 02	
4	Epc: 10°S., 161½°E., Solomon Island, H = 19h 30m 28s (U.S.C.G.S.); Mag. 6¼ (Pasadena).				
	Poona	Z	i i	19 43 37 43 44	
	Bombay	N,E E	eP SKS ₁ eS ₁	19 43 48 54 18 54 48	10,220 Feeble. Later phases mixed up with succeeding shock.
4	Epc: 42°N., 146°E. Off East Coast of Hokkaido. After shock of (March 5, 1952; H = 03h 49m 03s); H = 19h 56m 10s. O = 19h 56m 09s (Poona).				
	New Delhi	N,E N	iP i PcP iS PPS ScS SS LR M	20 05 53 06 21 06 47 13 39 14 05 15 41 17 35 22 47 27 53	6,190 Moderate.
	Hyderabad	N,E N	P PP iS SS L M M	20 06 33 09 07 14 57 18 40 27 55 31 19 31 23	6,880 Per. = 15 secs. $\mu = 23$. Per. = 14 secs. $\mu = 12$.
	Poona	Z,N,E N,E E N,E E N E N	iP eS PS PPS SS SSS LQ LR LR M	20 06 51 15 31 15 54 15 03 20 00 22 31 23 29 26 40 26 43 32 00	7,180 Slight. Aftershock. Per. = 20 secs. Amp. = 19.0mm(?)
4	Bombay	E N N,E	ePY iPY PcP PP PPP iS PPS iScS iSS LQ LR	20 06 55 07 27 09 25 11 08 15 37 16 10 16 48 20 15 24 00	7,220 Moderate.

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DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Mar. 1952	Bombay	N,E	LQ	20 24 05	
(Contd)	(Contd)		LR	27 08	
		E	M	36 28	Per. = 12 secs. $\mu = 11.$
		N	M	38 53	Per. = 15 secs. $\mu = 20.$
	Kodaikanal	E	eP	20 07 14	7,580 Slight.
			iS	16 14	
			M	34 05	
4	Epc: Hokkaido, Japan. Aftershock. H = 20h 49m 20s (U.S.C.G.S.).				
	Poona	Z	i	20 59 54	
			i	21 00 09	
4	Epc: 43°N., 145½°E. Off East Coast of Hokkaido. H = 22h 51m 57s (U.S.C.G.S.).				
	Poona	Z	i	23 02 30	Tremor.
			i	02 38	
			i	02 43	
5	Epc: 43°N., 145½°E. Off Hokkaido. H = 01h 20m 21s (U.S.C.G.S.).				
	Poona	Z	i	01 30 55	
5	New Delhi	N,E	eP	03 27 39	Slight.
			Pg	27 50	
		E	LQ	28 09	
		N,E	iS	28 19	
			S*	28 25	
		N	SS	28 29	
			Sg	28 33	
		N,E	SSS	28 39	
	Poona	Z	eP	03 30 03	Slight.
			i	30 23	
			i	30 34	
			i	33 36	
			i	33 47	
			i	34 00	
		E	i	34 47	
	Bombay	E	e	03 33 19	Tremor.
			iX	33 48	
		N	eX		
			O		
			O	03h 49m 07s (Poona).	
	Kodaikanal	E	e	03 57 50	Tremor.
	New Delhi	N,E	P(?)	03 58 48	6,130 Moderate. P time may be uncertain by 3 secs. due to time gap.
		N	iS	04 06 30	
			PPS	06 55	
			ScS	08 16	
			SS	10 24	
			M	21 58	
	Hyderabad	N,E	P	03 59 24	6,880 Δ from SN-PN.
		N	iS	04 07 48	
		E	S	07 54	
		N	SS	11 50	
			M	23 59	
		E	M	26 13	Per. = 15 secs. $\mu = 9.$ Per. = 15 secs. $\mu = 6.$

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Mar. 1952	Poona	Z,E	iP	03 59 45	7,110 Slight. After shock.
(Contd)		N	eP	59 45	
		N,E	iS	04 08 21	
		E	PPS	08 55	
			SS	12 25	
			LQ	16 00	
			LR	18 58	
	Bombay	N,E	iP	03 59 48	7,220 Moderate.
			PcP	04 00 18	
			PP	02 14	
			iS	08 30	
			PPS	09 07	
			iScS	09 40	
			SS	12 44	
			i	13 04	
			LQ	16 09	
		N	M	31 36	Per. = 13 secs. $\mu = 6.$
		E	M	32 06	Per. = 13 secs. $\mu = 4.$
	Dehra Dun	N	e	04 07 22	
5	Poona	Z	i	05 07 50	Tremor.
			i	48 11	
			i	48 21	
5	Poona	Z	i	07 42 28	
			i	42 37	
			i	42 42	
5	Epc: 43°N., 145½°E. Off East Coast of Hokkaido. H = 09h 17m 08s (U.S.C.G.S.); O = 09h 17m 01s (Poona).				
	New Delhi	N,E	eP	09 26 44	6,280 Moderate.
		N	iS	34 35	
			ScS	36 31	
	Hyderabad	E	eP	09 27 23	6,880
			iS	35 47	
		N	M	53 18	Per. = 15 secs. $\mu = 4.$
		E	M	54 45	Per. = 15 secs. $\mu = 4.$
	Poona	Z	iPX	09 27 42	7,165 Slight. After shock.
		E	ePX		
			PP	30 10	
			PcP	32 11	
		N,E	iS	36 20	
		E	PS	36 39	
			PPS	36 45	
			ScS	37 25	
			SS	40 27	
	Bombay	E	iP	09 27 46	7,190 Slight.
			PcP	28 14	
			iS	36 26	
			SS	40 36	
			LQ	44 27	
			LR	47 35	
			M	10 00 20	Per. = 13 secs. $\mu = 3.$
		N			Loss of record.

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Mar. 1952	Kodaikanal	E	e	09 28 05		Tremor.
5 (Contd)	Dehra Dun	N	e	09 48 00		
5	Epc: 43°N., 145°E. Off East Coast of Hokkaido. H = 10h 50m 52s (U.S.C.G.S.).					
	Poona	Z	i	11 01 25		Tremor.
			i	01 33		
	Bombay	E	eP	11 01 30		Very feeble.
			e	10 36		
		N		Loss of record.		
5	Poona	Z	i	11 29 39		
5	New Delhi	N,E	eP	14 44 35	1,200	Slight.
			eS	46 38		
		N	SS	46 51		
	Poona	Z	i	14 47 06		Slight.
			i	47 13		
			i	49 39		
			i	49 58		
		Z,E	i	50 34		
	Bombay	E	e	14 50 -		Very feeble.
		N		Loss of record.		
5	Epc: 43°N., 145½°E. Off East Coast of Hokkaido. H = 15h 54m 18s (U.S.C.G.S.); O = 15h 54m 17s (Poona).					
	Calcutta	E	iP	16 03 42	5,920	Moderate. After shock.
			PP	05 45		First movement East.
			iS	11 13		
			SS	14 41		
			SSS	16 24		
			LR	18 50		
			M	23 18		
			Mn	29 45		
	New Delhi	N,E	eP	16 03 56	6,160	Moderate.
		N	iS	11 40		
			PS	11 54		
			M	25 44		
✓	Hyderabad	E	P	16 04 36	6,850	
		N	iS	12 58		
			SS	17 13		
			M	29 31		Per. = 15 secs. $\mu = 7$.
		E	M	31 01		Per. = 12 secs. $\mu = 4$.
	Poona	Z,E	iP	16 04 54	7,110	Slight. After shock.
		E	PP	07 17		
			PcS	09 29		
		N,E	eS	13 43		
		E	SS	17 29		
			SSS	20 21		

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Mar. 1952	Bombay	E	iP	16 04 58	7,220	Moderate.
5 (Contd)			i	05 22		
			PP	07 19		
			PPP	09 09		
			eS	13 40		
			PPS	14 14		
			ScS	14 50		
			SS	17 50		
			LQ	21 22		
			LR	24 14		
			M	36 12		
		N	Loss or record.			Per. = 14 secs. $\mu = 6$.
	Kodaikanal	E	e	16 05 11		
	Dehra Dun	N	e	16 13 02		
5	Poona	Z	i	16 33 45		Tremor.
			i	34 29		
5	Poona	Z	i	17 26 19		
			i	26 24		
5	Poona	Z	i	18 08 18		Tremor.
			i	08 29		
	Bombay	E	e	18 37 -		Feeble. Surface waves.
5	Poona	Z	i	20 46 35		Tremor.
			i	47 02		
			i	54 20		
		E	i	54 45		
	Bombay	E	eP(?)	20 46 41	6,110(?)	Feeble.
			eS	54 22		
		N	Loss of record.			
	Kodaikanal	E	e	20 52 47		
	Hyderabad	N	SS	20 54 18		
		N	M	21 04 57		Per. = 15 secs. $\mu = 6$.
	Calcutta	E	i	20 56 54		Tremor.
5	Poona	E	e	21 02 49		
5	Calcutta	E	e	21 58 51		Tremor.
			i	59 33		
5	Poona	Z	i	23 50 39(?)		
6	Epc: 34°S., 88°E., Tibet. O = 03h 13.6m (Poona).					
	New Delhi	N,E	eP	03 16 39	1,270	Slight.
		E	PP	16 47		
			PPP	16 56		
		N,E	eS	18 49		
		N	SS	19 00		

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Mar. 1952 6 (Contd)	Calcutta	E	eS i M e	03 18 15 19 17 19 26 19 33		Slight.
	Poona	Z,E E	iP eS LQ PcP SS SSS LR M	03 18 15 21 59 22 06 22 18 22 24 22 40 23 04 24 16	2,265	Slight.
	Bombay	N,E N E	eP eS M M	03 18 24 22 13 26 26 26 28	2,320	Slight. Per. = 9 secs. $\mu = 2$. Per. = 9 secs. $\mu = 3$.
	Hyderabad	N	M	03 24 20		Per. = 11 secs. $\mu = 4$.
6	Bombay	E N,E	iP iSS(?)	04 55 25 59 44	2,310?	Feeble.
6	Bombay	E N,E	iP eS eSS	05 07 16 11 05 11 46	2,320	Slight.
		E N	M M	14 45 14 49		Per. = 7 secs. $\mu = 1$.
	Hyderabad	N	M	05 11 07		Per. = 9 secs. $\mu = 3$.
6	Poona	Z	i i	05 55 10 55 31		
6				O = 09h 11m 22s (Poona).		
	New Delhi	N,E	eP PP PPP eS SS SSS	09 14 21 14 31 14 39 16 29 16 40 16 51	1,250	Slight.
	Poona	Z,E E	iP PP PPP eS LQ SS SSS LR M	09 15 59 16 18 16 31 18 39 18 49 19 09 19 20 19 46 22 12	2,220	Slight.
✓	Bombay	N,E E N,E E N E N	eP PP eS SS LR LR M M	09 16 11 16 32 20 00 20 38 21 22 21 - 25 44 25 47	2,320	Slight. Per. = 7 secs. $\mu = 2$. Per. = 7 secs. $\mu = 2$.

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Mar. 1952 (Contd)	Hyderabad	N	M	09 20 53		Per. = 10 secs. $\mu = 4$.
6	Poona	Z	i i i	16 14 13 14 32 14 49		
6				Epc: $42\frac{1}{2}^{\circ}\text{N.}$, $145\frac{1}{2}^{\circ}\text{E.}$ Off Hokkaido. H = 17h 56m 59s (U.S.C.G.S.).		
	Poona	Z	i	18 07 36		
6	Poona	Z	i	19 21 43		
6	Poona	Z	i i	21 09 22 10 05		
6				Epc: Near 34°N. , 88°E. , Tibet. O = 21h 19.9m (Poona).		
	New Delhi	E N,E	eP eS	21 22 56 25 01	1,220	Slight.
	Poona	Z E	iP eP iS LQ SS SSS M	21 24 32 28 15 28 24 28 40 29 00 30 53	2,255	Slight.
	Bombay	E	iP eS LR M	21 24 41 28 30 29 - 33 25	2,320	Slight. Per. = 8 secs. $\mu = 4$.
		N		Loss of record.		
	Calcutta	E	i(S) i i i	21 24 43 25 01 25 08 25 21		Slight, near.
	Hyderabad	N	e	21 29 29		
6	New Delhi	N,E	eP eS SS	22 03 47 05 25 05 36	950	Slight.
6	Poona	Z	i	23 09 58		Tremor.
7				Epc: 36°N. , $136\frac{1}{2}^{\circ}\text{E.}$, Honshu, Japan. Felt Honshu, Japan; H = 07h 32m 38s (U.S.C.G.S.); $38\frac{1}{2}^{\circ}\text{N.}$, 136°E. ; Mag. $6\frac{1}{2}$ (Pasadena). O = 07h 32m 35s (Poona).		
	Calcutta	E	eP iS	07 40 49 47 19	4,845	Moderate.
	New Delhi	N,E N	eP iS ScS SS M	07 41 31 48 37 51 19 52 10 59 49	5,480	Moderate.

		11					
DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.		
				h. m. s.	km.		
Mar. 1952							
7 (Contd)	Kodaikanal	E	eP iS M	07 42 00(?) 50 06 08 04 15	6,555 Slight. Per. = 15 secs. $\mu = 11.$		
	Hyderabad	N,E N	iP iS ScS	07 42 04 49 38 51 51	5,970		
		E N	SS L M	53 26 59 11 08 02 07	Per. = 18 secs. $\mu = 43.$		
	Poona	N,E N E N,E	iP PP PP PPP	07 42 26 44 25 44 30 46 01	6,390 Moderate.		
		N,E	iS PS	50 23 50 36			
		E N	SS SS	54 03 54 10			
		N,E	SSS	57 01			
		N	LR M	59 43 08 04 01	Per. = 19 secs. $\mu = 20.$		
	Colombo	E	P S L M	07 42 31 50 48 08 03 51 11 21	Amp. = 0.7mm.		
	Bombay	N,E	iP PP PcS iS i iScS	07 42 32 44 43 47 27 50 33 51 06 52 07	6,465 Moderate.		
		E	SS	54 18			
		N	SSS	56 31			
		N	SSS	56 35			
		E	LR	59 29			
		N	LR	59 -			
		E	M	08 11 15	Per. = 13 secs. $\mu = 8.$		
		E	M	11 54	Per. = 14 secs. $\mu = 10.$		
	Dehra Dun	N	e eL M ₁ M ₂	07 49 44? 08 00 42 02 18 03 36	Per. = 18 secs. Amp = 0. Per. = 18 secs. Amp = 0.		
7	Epc: 43°N., 46°E. Off East Coast of Hokkaido. H = 18h 16m 02s.						
	Calcutta	E	e i	18 26 12 32 45			
	Bombay	N,E	eP PP eS M	18 26 42 29 09 35 24 57 -	7,220 Feeble.		
7	Epc: 43°N., 146°E. Off East Coast of Hokkaido. H = 19h 43m 58s.						
	New Delhi	N,E N	eP eS	19 53 35 20 01 21	6,190 Moderate.		

		12					
DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.		
				h. m. s.	km.		
Mar. 1952							
7 (Contd)	Bombay	N,E E	eP eS	19 54 38 20 03 20	7,220 Feeble.		
	Calcutta	E	e	20 00 24	Tremor.		
7	Calcutta	E	e i	22 07 32 08 01	Tremor.		
	Bombay	N,E	e	22 14 -	Very feeble.		
8	Epc: 3°N., 98°E., Sumatra. H = 18h 37m 34s (B.C.S.F.); O = 18h 37m 36s (Poona).						
	Colombo	E	iP S L M	18 42 00 45 33 47 23 48 03			Amp. = 0.2mm.
	Kodaikanal	E	e(PP)	18 42 53	Tremor.		
	Hyderabad	N,E N	iP iS L M	18 42 54 47 03 48 59 52 02	2,580		Per. = 16 secs. $\mu = 5.$
	Calcutta	E	e(PP) e i i	18 42 54 45 37 46 59 48 56			Slight, distant.
	Poona	Z N,E E N,E	iP eP PPP PcP	18 43 31 44 41 46 23 48 17	3,145 Slight.		
		N	eS	49 42			
		E	LQ	49 45			
		N	LQ	49 54			
		E	SS	50 00			
		N,E	LR	51 17			
		E	ScS	53 37			
	Bombay	N,E	eP PP PcP e(S)	18 43 43 44 22 47 08 48 28	3,120 Slight.		
		N	LR	50 37			
		E	LR	50 51			
	New Delhi	N,E N	eP eS SS LR M	18 44 03 49 12 51 11 52 42 55 37	3,510 Slight.		
9	Epc: 42°N., 143½°E. near South Coast of Hokkaido. Slight property damage. H = 17h 03m 43s (U.S.C.G.S.); 41°5N., 142°5E. O = 17h 03m 43s (Poona). Mag. 7 (Pasadena).						
	Calcutta	E	iP iS	17 12 34 19 38	5,445 Moderate. First movement West.		

13										
DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.				
				h. m. s.	km.					
Mar. 1952	New Delhi	N, E N	iP	17 13 12	5,990	Moderate. Direction of first movement North and East.				
(Contd)			PcP	14 22						
			PP	15 35						
			iS	20 46						
			i	21 11						
			ScS	23 16						
			SS	24 45						
			LR	28 26						
			M	32 01						
			Mn	33 10						
							Per. = 26 secs. $\mu = 223.$			
Hyderabad	N, E E N E N E N E	iP	17 13 51	6,580						
		PP	16 05							
		S	21 59							
		S	22 03							
		PS	22 11							
		SS	26 05							
		L	33 17							
		M	37 07							
		M	38 00							
										Per. = 20 secs. $\mu = 57.$ Per. = 18 secs. $\mu = 29.$
Poona	Z, N, E N N, E N N, E	iP	17 14 11	6,940	Moderate.					
		PcP	14 39							
		PP	16 29							
		PPP	18 01							
		PcS	18 29							
		iS	22 38							
		PS	23 05							
		PPS	23 15							
		SKS	23 53							
		SS	26 53							
		SSS	29 35							
		N	LQ			30 23				
			LR			33 20				
			M			38 31				
										Per. = 22 secs. $\mu = 70.$
Bombay	E	iP	17 14 14	7,000	Moderate.					
		PcP	14 44							
		PP	16 43							
		PcS	18 44							
		iS	22 44							
		iPS	23 05							
		iScS	23 42							
		iSS	26 58							
		LR	33 48							
		M	44 04							
		N								Loss of record.
										Per. = 13 secs. $\mu = 21.$
		Colombo	E			P	17 14 30			
						S	23 17			
						L	40 30			
M	44 40									
							Amp. = 0.9mm.			
Kodaikanal	E	iP	17 14 35	7.135	Moderate.					
		PPP	18 35							
		iS	23 12							
		SS	27 36							
		SSS	30 21							
		LQ	31 12							
		LR	34 18							
		M	39 45							
										Per. = 21 secs. $\mu = 18.$

14						
DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
Mar. 1952	Dehra Dun	N	eP	17 15 48	6,763	Probable time correction: - 2m 30s.
(Contd)			eS	23 43		
			eL?	33 44		
			M ₁	35 42		
			M ₂	39 42		
						Per. = 30 secs. Amp. = 0.10". Per. = 24 secs. Amp. = 0.11".
9	Bombay	E	e	19 09 39		Feeble.
			M	41 -		
						Loss of record.
9	Bombay	E	M	21 04 -		Feeble.
			N			
						Loss of record.
10	Poona	Z	e	16 03 04		Tremor.
10	Epc: 42½°N., 144½°E. Off Hokkaido. H = 18h 00m 55s (U.S.C.G.S.).					
	New Delhi	N, E N	eP	18 10 39	6,120	Slight.
			eS	18 21		
			PPS	18 39		
	Poona	Z	i	18 11 38		
Bombay	E	N	e	18 42 -		Very feeble.
						Loss of record.
11	Poona	Z	e	15 35 01		
			i	55 36		
11	Epc: 31°5N., 90°0E., Tibet. O = 20h 27m 25s (Poona).					
	New Delhi	E	eP	20 30 23	1,260	Slight.
			eS	32 32		
			M	34 01		
	Calcutta	E	e	20 30 30		Slight; near.
			i			
			i	31 52		
			i	32 21		
			i	32 41		
Poona	Z, E	E	iP	20 32 03	2,200	Moderate.
			PP	32 19		
			PPP	32 32		
			eS	35 38		
			LQ	35 50		
			PcP	36 07		
	Z, E	E	SS	36 16		
			SSS	36 25		
			LR	36 48		
			M	38 27		
			PcS	39 36		
			ScS	43 15		
Bombay	E	eP	20 32 14	2,400	Slight.	
		eS	36 00			
		M	40 36			
						Per. = 9 secs. $\mu = 5.$
						Loss of record.

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DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Mar. 11 1952	Epc: 42°N., 145°E. Off Hokkaido. H = 20h 37m 20s (U.S.C.G.S.).				
11	Poona	Z	i	20 47 51	Tremor.
11	Bombay	E N	e	21 15 -	Feeble, surface waves.
				Loss of record.	
12	Poona	Z	e	01 15 50	
12	New Delhi	N,E	ePg eSg	20 01 36 01 39	30 Slight.
13	Epc: 27°N., 66°E., Baluchistan. 0 = 06h 14.3m (Poona).				
	Bombay	E	eP PP LQ iS LR M	06 56 36 56 44 58 20 58 30 59 01 07 02 19	1,110 Slight. Per. = 8 secs. $\mu = 3$.
		N		Loss of record.	
	New Delhi	N,E	iP PP PPP P* iS SS SSS S* Sg	06 56 41 56 49 56 56 57 04 58 31 58 45 58 55 59 07 59 31	1,070 Slight. Direction of first movements North and East.
		N			
		N,E			
		N			
	Poona	Z,E E	iP LQ S SS LR M	06 56 50 58 16 58 51 59 04 59 10 59 49	1,180 Slight.
	Calcutta	E	iPP iSS e ?	06 59 02 07 03 18 04 18 05 22	Slight.
13	Epc: 28½°N., 127°E. East China Sea. Felt Ryukyu Island, Kyushu and Shikoka, Japan. H = 13h 57m 26s ; h = 200 km (approximate) (U.S.C.G.S.).				
	Calcutta	E	iP PP eS LR	14 04 09 05 13 09 19 12 43	3,520 Moderate. First movement West.
	New Delhi	N,E	eP pP iS SS i LR	14 05 16 06 16 11 21 13 09 14 40 15 04 16 10	4,540 Moderate. h = 280 kms.
		N			
		N,E			
		N			



DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
Mar. 13 1952	(Contd)				
13	Colombo	E	P ? L M	14 06 03 09 06 14 36 15 33	Amp. = 0.6mm.
	Poona	Z,E E	iP PcP PPP S PS PPS ScS LQ SSS LR M	14 06 04 07 04 08 37 12 49 12 54 13 03 15 23 17 37 17 47 19 55 24 13	5,110 Moderate. Probable Epc: South of Formosa.
	Bombay	E	iP i PP iS sS? i SS SSS LR	14 06 10 07 12 08 12 13 01 14 14 14 52 17 03 18 36 20 39	5,555 Moderate.
		N		Loss of record.	
	Kodaikanal	E	e	14 06 11	Slight. Phases not clear.
3	Poona	Z	e	19 00 58	
3	Epc: Probably near 34°N., 88°E., Tibet. 0 = 23h 11.5m (Poona).				
	Calcutta	E	e(S) i i(M)	23 15 58 17 16 17 41	Slight, near.
	Bombay	E	eP i M	23 16 15 17 25 21	Slight. Time mark absent in the Sprengnether record. Per. = 8 secs. $\mu = 2$.
		N		Loss of record.	
	Poona	Z,E E	iP S LQ LR M	23 16 48 21 01 21 32 21 45 24 31	2,630 Slight.
4	Bombay	N,E	e	07 23 -	Very feeble.
4	Epc: 34°N., 88°E., Tibet. 0 = 13h 25.2m (Poona).				
	New Delhi	E N	eP eS M	13 28 51(?) 31 04(?) 32 50	1300 Slight.
	Calcutta	E	e(S) i i	13 29 28 29 47 30 30	Slight, near.

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
Mar. 14 (Contd)	Poona	Z E	eP eS SSS LR ScP M	13	30	25	2,610 Slight.
	Hyderabad	N	e	13	35	19	
14	Poona	Z	i	14	37	52	
14	Poona	Z	e i	16	14	33 14 43	
14	Epc: 34°N., 90°E., Tibet. 0 = 18h 19.8m (Poona).						
	Calcutta	E	eP iS	18	22	14 24 08	1,110 Slight.
	New Delhi	E N	eP eS M	18	22	54 25 08 26 54	1,310 Slight.
✓	Hyderabad	N	eP eS L M	18	24	04 27 30 29 08 30 26	2,080 Per. = 8 secs. $\mu = 4.$
	Poona	Z,E E	eP PF S LQ SSS LR M	18	24	32 24 50 28 20 28 40 29 12 29 35 31 -	2,310 Slight.
✓	Bombay	E	eP eS SS LR M	18	24	38 28 28 29 09 30 - 34 03	2,335 Slight. Per. = 7 secs. $\mu = 2.$
		N	Loss of record.				
14	Epc: 43½°N., 145½°E., Off Hokkaido. H = 20h 55m 20s (U.S.C.G.S.).						
	New Delhi	N,E N	eP eS	21	04	55 12 39	6,150 Moderate.
	Poona	Z,E E	iP PcP eS PS PPS	21	05	56 06 12 14 36 14 52 15 19	7,180 Slight.
	Bombay	E	eP e M	21	05	59 15 04 36 35	Feeble.
		N	Loss of record.				



DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
Mar. 14 1952	Epc: 34°N., 77°E., Kashmir. Felt mildly at Srinagar. 0 = 23h 27.5m (Poona).						
	New Delhi	N,E	iP iPg	23	28	37 29 10	780 Slight.
	Poona	Z E	iP iS SS LR M	23	30	55 33 57 34 10 34 35 36 -	1,750 Slight.
	Bombay	E	eP eS SS SSS	23	30	58 33 49 34 05 34 17	1,700 Feeble.
		N	Loss of record.				
	Calcutta	E	i(S) i i	23	33	21 33 40 42 45	Tremor.
15	Poona	Z	i	01	21	29	
15	Poona	Z	i	05	16	55	
	Bombay	N,E	e	05	26	-	Very feeble.
15	Epc: 5½°S., 100½°E. Off South-West Coast of Sumatra. H = 11h 15m 46s (U.S.C.G.S.); 0 = 11h 15m 50s (Poona).						
	Colombo	E	P S(?) L M ₁ M ₂	11	21	14 25 46 30 04 31 06 35 29	Amp. = 2.5mm. Amp. = 2.6mm.
	Kodaikanal	E	iP PP eS(?) LQ LR M	11	21	49 22 22 26 01 26 43 27 52 29 52	2,620 Slight, phases not clear. Per. = 12 secs. $\mu = 12.1.$
	Hyderabad	N	iP PP iS SS L M	11	22	07 23 04 27 21 28 51 31 13 33 49	3,550 Per. = 18 secs. $\mu = 33.$
	Poona	Z,E E	iP PP iS ScP i SS LQ SSS LR M	11	22	48 24 05 28 19 28 39 29 25 30 41 30 47 31 14 32 34 34 -	3,880 Moderate.

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
Mar. 15 1952 (Contd)	Calcutta	E	ePP S SSS	11	22	53	3,165 Moderate.
	Bombay	N,E	iP PP PPP iS SS SSS LR M M	11	22	57	3,165 Moderate.
	New Delhi	N,E N	P PP PPP PcP iS LQ SSS LR M	11	23	21	4,340 Moderate. Time of P uncertain up to 3 secs. due to time-gap.
	Dehra Dun	N	e eL M ₁ M ₂	11	31	48	Per. = 30 secs. Amp = 0.0 Per. = 21 secs. Amp = 0.0
16	Poona	Z	i i i	07	00	56	Tremor.
16	Poona	Z	i e	11	13	26	
16	Poona	Z	i	19	10	50	Tremor.
16	Epc: 42 ¹ / ₂ °N., 144°E. Off Hokkaido. H = 22h 09m 23s (U.S.C.G.S.).						
	Bombay	N N,E	e M	22	20	-	Very feeble.
16	Poona	Z	iP i	23	19	49	
18	Epc: Off Hokkaido - Coast. H = 05h 01m 45s (U.S.C.G.S.).						
	Bombay	E N	e Loss of record.	05	31	-	Very feeble.
18	Epc: 12°S., 168°E., Santa Cruz Island. H = 10h 56m 27s.						
	Poona	Z	eP	11	09	58	
	Hyderabad	N,E	e	11	19	48	
19	Epc: 40°N., 29°E., North-West Turkey. H = 01h 27m 23s (U.S.C.G.S.).						
	Poona	Z	iP	01	35	32	
19	Poona	Z	eP	08	12	34	



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DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
Mar. 19 1952	Epc: 41°N., 125°E., near Korea-Manchuria Border. Felt - Seoul. H = 09h 04m 18s (U.S.C.G.S.); 39.5°N., 125.5°E.; O = 09h 04m 10s (Poona).						
	New Delhi	N,E N	e e i i e M	09	12	02	Slight.
	Hyderabad	N N,E E N E	eP S SS M M	09	12	41	5,030 Per. = 14 secs. μ = 5. Per. = 15 secs. μ = 5.
	Poona	Z E	iPX ePX PP PPP ScP iS PS PPS ScS SS LQ SSS LR M	09	12	59	5,490
	Bombay	N,E	eP PP eS e M M	09	13	05	5,455 Slight. Per. = 15 secs. μ = 4. Per. = 13 secs. μ = 3.
19	Epc: 9 ¹ / ₂ °N., 127°E., Off East Coast of Mindanas Island. H = 10h 57m 09s (U.S.C.G.S.); 9°N., 126.5°E.; O = 10h 57m 13s (Poona); Mag. 7 ¹ / ₂ - 7 ³ / ₄ (Pasadena).						
	Calcutta	E	iP iS	11	04	46	4,845 Very great. First movement East.
	Hyderabad	N,E N E N,E E N	iP PP PP S PS SS L M M	11	05	57	5,030 Per. = 20 secs. μ = 316. Per. = 16 secs. μ = 167.
	Kodaikanal	E	iP PP iS LR M	11	06	07	5,220 Great. Per. = 18 secs. μ = 53.3.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Mar. 1952 (19 (Contd)	Colombo	E	P S L M	11 06 - 12 31 24 51 28 51	Trace overlapping at P. Amp. = 24.5mm.
	New Delhi	N,E	eP PcP PP PPP PcS iS PPS ScS SS SSS LR M Mn ₁ Mn ₂	11 06 11 5,520 07 26 08 16 09 18 11 28 13 20 13 37 16 03 16 41 18 08 20 17 24 29 30 25 34 35	Great. Per. = 17 secs. $\mu = 132$. Per. = 14 secs. $\mu = 178$.
	Poona	Z,E N	iP iPcP PP PPP iS PS PPS ScS SS SSS LQ LR M	11 06 25 5,750 07 11 08 29 09 43 13 47 14 01 14 10 15 43 17 32 19 44 19 50 22 32 27 02	Great. Per. = 18 secs. Amp. = 49mm.
	Bombay	N,E	iP PcP PP PPP iPcS iS iS SS SS LQ LQ i LR M M	11 06 35 5,910 07 43 08 37 09 53 12 35 14 00 14 05 17 25 17 48 19 08 19 51 20 40 22 30 30 43 34 21	Great. Times off SS, LQ and M in North Component uncertain due to over- lapping of record. Per. = 13 secs. $\mu = 70$. Per. = 15 secs. $\mu = 148$.
	Dehra Dun	N	eP eS L M	11 08 45 5,749 16 00 26 00 34 57	Absolute times uncertain Per. = 24 secs. Amp. = 0.34".
19	Poona	Z	iP	13 33 36	
	Bombay	N,E	e	13 41 -	Surface waves.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
Mar. 1952 19	Poona	Z	iP e	14 48 22 48 31	
20	Hyderabad	N	M	19 36 31	Per. = 9 secs. $\mu = 2$.
20	Calcutta	E	e e i i	20 19 24 20 15 20 49 21 14	Slight, near.
	Poona	Z E	e e	20 20 07 24 51	Tremor.
	Bombay	N,E	ee	20 24 -	Feeble.
20	Poona	Z E	iP PcP PP ePPP eS PS PPS SSS	21 05 36 06 41 07 41 08 47 13 01 13 09 13 14 18 11	Slight.
20	Epc: 11°S., 165°E., Santa Cruz Island. H = 23h 39m 08s; h = 60 km (U.S.C.G.S.).				
	Poona	Z	e	23 52 28	Feeble, distant.
21	Bombay	N,E E	e M	00 03 10 38 -	Feeble.
21	Poona	Z	i	00 58 31	Tremor.
21	Poona	Z	iP i	08 53 00 53 06	Tremor.
	Bombay	N,E	e	09 02 -	Very feeble.
21	Poona	Z	i i	09 52 50 53 00	
21	Epc: 11°S., 165°E., Santa Cruz Island. H = 16h 10m 38s; h = 60 km (U.S.C.G.S.).				
	Calcutta	E	e(P) i	16 23 11 33 24	Tremor.
	Poona	Z E	eP S? i	16 24 00 29 46 34 32	
	Bombay	N,E E	e(PP) i M	16 28 - 34 40 17 10 -	Feeble, distant.
	Hyderabad	N	e	16 34 29	
21	Calcutta	E	e i	17 37 48 39 19	Slight, near.

DATE	STATION	COMPT.	PHASE	G. M. T. h. m. s.	km.	REMARKS.
Mar. 1952						
21 (Contd)	Poona	Z E	eP M	17 38 29 46 06		Tremor.
	Bombay	N,E	eP? eS M	17 42 25 45 36 48 -	1,910?	Feeble.
	Hyderabad	N	M	17 45 31		Per. = 6 secs. $\mu = 2.$
21	New Delhi	N,E N	eP iS(?) i	21 00 48 03 07 03 25	1,360	Slight.
	Poona	Z E	e i e e i	21 02 32 05 29 07 04 07 14 07 49		Feeble.
22	Probable Epc: 31°N., 90°E. (Tibet). 0 = 04h 36.7m (Poona).					
	New Delhi	N,E E N,E	eP P* Pg LQ eS SS Sg	04 39 50 40 14 40 35 41 23 41 35 41 47 42 35	1,020	Slight.
	Calcutta	E	i(S) i	04 40 18 40 31		Slight, near.
	Poona	E Z E	eP iP eS LQ SS SSS LR M	04 41 10 44 38 44 44 45 06 45 20 45 35 47 07	2,090	Slight.
	Bombay	E N,E E N,E	e e e M	04 44 09 45 59 46 09 46 21 48 -	1,165	Feeble.
22	Bombay	N,E	e	05 13 -		Feeble, surface waves
22	Calcutta	E	e e	14 32 28 40 35		Tremor.
	Poona	E Z E	i i i	14 32 53 32 57 34 55		Tremor.
	Bombay	N,E	e e? M	14 33 03 40 33 15 01 -		Feeble.

DATE	STATION	COMPT.	PHASE	G. M. T. h. m. s.	km.	REMARKS.
Mar. 1952						
22	Epc: 52°N., 173°W., Andrean of Island (Aleutian Island); H = 18h 15m 43s (U.S.C.G.S.); Mag. 6 $\frac{1}{4}$ - 6 $\frac{1}{2}$ (Pasadena).					
	Calcutta	E	e i	18 27 50 37 37		Tremor.
	Poona	Z,E	i i i	18 28 41 39 06 39 29		Tremor.
	Bombay	N,E	eP eSKS iS	18 28 46 39 15 39 37	9,980	Feeble.
22	Poona	Z	i	19 07 19		
23	Poona	Z	iP e	00 03 54 04 02		Slight, very near.
23	Poona	Z	iP	08 05 00		
23	Epc: Andrean of Island, Aleutian Island. H = 09h 01m 26s (U.S.C.G.S.).					
	Poona	Z	iP i	09 14 22 14 34		
23	Epc: Near Sama, Philippine Island. H = 15h 21m 50s (U.S.C.G.S.); 4°N., 126.8E. near Talaur and Saugi Island in Pacific. 0 = 15h 21.4m (Poona).					
	Calcutta	E	e(P) i i	15 29 11 34 27 38 02		Slight, distant.
	Colombo	E	P S L M ₁ M ₂	15 29 51 36 31 43 21 47 51 51 51		Amp. = 0.2mm. Amp. = 0.3mm.
	Kodaikanal	E	e	15 30 01		Tremor.
	Hyderabad	N	e(P) eS	15 30 22 37 08		
	New Delhi	N,E N	eP eS PPS ScS	15 30 36 37 57 38 15 40 21	5,740	Moderate.
	Poona	Z Z E Z E	iP iP i PcP PP PPP S PS PPS	15 30 41 30 49 31 43 32 48 33 53 38 09 38 15 38 29	5,870	Slight.

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS.
				h. m. s.	km.	
Mar. 1952						
23 (Contd)	Bombay	N,E	eP eS SS	15 30 45 38 23 42 08	6,055	Slight.
24	Poona	Z	i i i i	19 57 48 20 10 31 10 35 21 43 49		Tremor.
25	Epc: 16½°S., 176°W. Tonga Island Region. Felt Apia. H = 04h 08m 26s; h = 250 km (U.S.C.G.S.).					
	Bombay	N,E	e	04 31 -		Very feeble.
25	Epc: 5½°S., 150°E., New Britain. H = 09h 29m 42s (U.S.C.G.S.).					
	Poona	Z	i i	09 41 39 42 17		Tremor.
	Bombay	N,E	eP eS?	09 42 01 52 25	9,335(?)	Feeble.
26	Poona	Z	i	11 00 39		Tremor.
26	Poona	Z	i	18 06 44		
26	Poona	Z	i	18 41 36		
27	Poona	Z	i i	22 12 53 13 14		Tremor.
	Bombay	N,E	e	22 23 10		Feeble, surface waves.
	Hyderabad	N	M	22 23 13		Per. = 9 secs. $\mu = 2.$
28	Poona	Z	i i i	05 52 17 52 25 53 27		
29	Poona	Z	i i	09 39 28 39 46		
30	Probable Epc: Near Quetta. O = 07h 30.1m (Poona).					
	New Delhi	N,E	eP eS SS S* i	01 31 59 33 30 33 41 33 56 34 13	880	Slight.
	Poona	E Z Z,E	eP iP eS	01 32 51 35 15	1,410	Slight.
	Bombay	N,E	e	01 35 51		Feeble.
	Calcutta	E	e i	01 28 20 40 56		Slight, near
	Hyderabad	N	e M	01 38 42 40 30		Per. = 8 secs. $\mu = 3.$

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS.
				h. m. s.	km.	
Mar. 1952						
30	New Delhi	N,E N E N,E	eP PP PPP eS SS i Sg	04 10 36 10 43 10 49 12 18 12 30 12 57 13 16	990	Slight.
	Poona	Z E	iY eY	04 12 22 15 38		Feeble.
	Poona	Z	i i i	19 13 08 13 19 21 56 33		
31	Epc: 2°4N., 93°4E., West of North Sumatra. O = 06h 16m 48s (Poona).					
	Colombo	E	P	06 20 37		Times approximate due to over lapping of trace.
	Hyderabad	N,E N E N	iP S iS L M	06 21 34 25 28 25 31 27 40 29 37	2,380	Δ from SN-PN. Per. = 18 secs. $\mu = 4.$
	Poona	Z,E E	iP iS i i LQ SS SSS ScP LR M	06 22 21 26 44 26 52 27 02 27 45 28 00 28 16 28 55 29 01 50 15	2,790	Moderate.
	Bombay	E N N,E	iP eP PP iS SS LR LR M	06 22 31 23 09 26 59 28 05 28 47 29 - 33 -	2,880	Slight.
	New Delhi	N,E N	eP eS(?)	06 23 02 28 01	3,350	Slight.
	Calcutta	E	i i	06 24 44 30 54		Slight, distant.
31	Poona	Z	i	16 06 45		
	Bombay	N,E	e	16 27 -		Very feeble.

- : Voluntary Observers Reports : -

The following table contains a list of earthquakes reported by Voluntary Observers, from various stations for the month of March, 1952.

Place at which felt	Date	G. M. T. of earthquakes h. m.	Duration in secs.	Intensity on R.F. Scale	No. of shocks	Remarks.
Srinagar	14.3.52	23 30	3	VI	2	Two shocks at an interval of one second.

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13/05/1954.

** Hyderabad	N	e(PP)	19 21 38	Per. = 15 sec. $\mu = 6$ Per. = 15 sec. $\mu = 6$
		e	31 13	
		M	55 29	
	E	M	55 34	
Calcutta	E	e(PP)	19 22 59	Slight, distant.
		e(PS)	32 49	
		Mn	20 08 19	

APRIL, 1952.

Published under the direction of

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Director General of Observatories.Instruments and their Constants.

Station	Instrument	Compt.	Period in sec	Static Magnification	Damping ratio	Paper Speed mm/min
Bombay	Milne-Shaw	N	12	350	5:1	16
	Milne-Shaw	E	12	350	4:1	8
	Sprengnether	E	7	-	-	30
Calcutta	Milne-Shaw	E	12	250	20:1	8
	Wood-Anderson	N	2	870	Critical	30
	Omori-Ewing	N	18	32	-	25.4
	Omori-Ewing	E	19	30	-	25.4
Colombo	Milne-Shaw	E	12	250	15:1 20:1 from 24.4.52	8
Hyderabad	Milne-Shaw	E	12	250	20:1	8
	Milne-Shaw	E	12	250	20:1	8
Kodaikanal	Milne-Shaw	E	10	250	20:1	8
New Delhi	Milne-Shaw	N	12	283	20:1	8
	Wood-Anderson	N	4	1000	20:1	16
	Wood-Anderson	E	2	2000	30:1	60
	Omori-Ewing	E	30	30	1	12
Poona	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
	Sprengnether	E	Tg = 6.6	-	-	30
	Benioff	Z	Tg = 1.0	-	-	60

GOVERNMENT OF INDIA
METEOROLOGICAL DEPARTMENT
SEISMOLOGICAL BULLETIN
April, 1952.

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Director General of Observatories.

Instruments and their Constants.

Station	Instrument	Compt.	Period in sec	Static Magni- ficat- ion	Damping ratio	Paper Speed mm/min
Bombay	Milne-Shaw	N	12	350	5:1	16
	Milne-Shaw	E	12	350	4:1	8
	Sprengnether	E	7	-	-	30
Calcutta	Milne-Shaw	E	12	250	20:1	8
	Wood-Anderson	N	2	870	Critical	30
	Omori-Ewing	N	18	32	-	25.4
	Omori-Ewing	E	19	30	-	25.4
Colombo	Milne-Shaw	E	12	250	15:1 20:1 from 24.4.52	8
Hyderabad	Milne-Shaw	E	12	250	20:1	8
	Milne-Shaw	E	12	250	20:1	8
Kodaikanal	Milne-Shaw	E	10	250	20:1	8
New Delhi	Milne-Shaw	N	12	283	20:1	8
	Wood-Anderson	N	4	1000	20:1	16
	Wood-Anderson	E	2	2000	30:1	60
	Omori-Ewing	E	30	30	1	12
Poona	Milne-Shaw	N	12	250	20:1	8
	Wood-Anderson	E	4	1100	20:1	16
	Sprengnether	E	Tg = 6.6	-	-	30
	Benioff	Z	Tg = 1.0	-	-	60

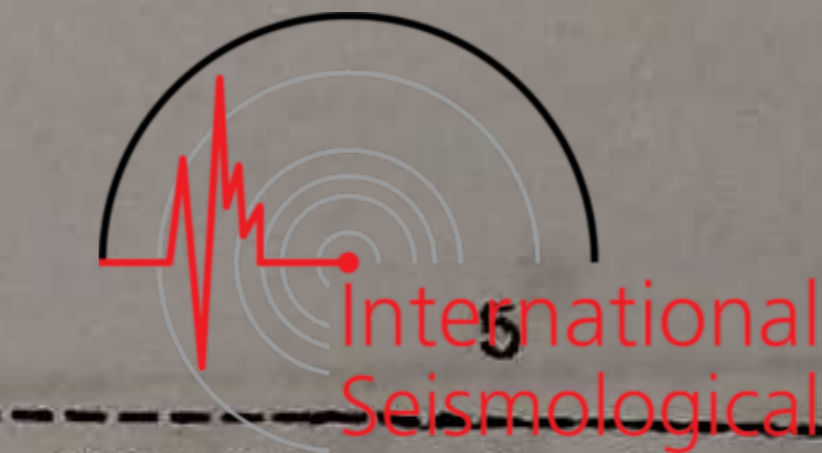
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DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
April 1952		Epc:		Andreanof Islands, Aleutian Islands.	
1				H = 03h. 44m. 36s. (U.S.C.G.S.); 51° $\frac{1}{2}$ N., 127°W. H = 03h. 44m. 25s. (B.C.I.S.).	
	Poona	Z	i	03 57 07	Tremor.
			i	57 32	
1	Poona	Z	i	05 12 07	Tremor.
1		Epc:		Off the Western Coast of Sumatra;	
				H = 18h. 21m. 03s. (B.C.I.S.).	
	Colombo	E	P	18 25 36	Amp = 0.2mm.
			S	29 21	
			L	33 16	
			M	34 48	
	Kodaikanal	E	eP	18 26 10	Short distance feeble shock.
			eS?	30 22	
			M	34 07	
	Poona	Z	i(P)	18 27 24	Tremor.
	Bombay	N,E	e	18 31 --	Very feeble.
1		Epc:		80°E., 36° $\frac{1}{2}$ N.; O = 20h. 36m. 00s. (Poona).	
				78° E., 37° N.; H = 20h. 36m. 00s. (B.C.I.S.).	
	New Delhi	N,E	eP	20 38 00	840 Slight.
			PP	38 08	
		N	P*	38 17	
		N,E	Pg	38 36	
			eS	39 27	
			SS	39 38	
		E	SSS	39 49	
		N	S*	39 55	
		N,E	Sg	40 16	
	Calcutta	E	eP	20 39 34	1,665 Slight.
			iS	42 22	
			SSS	42 50	
	Hyderabad	N	eP	20 40 06	2,110
			eS	43 35	
			L	44 41	
			M	45 50	Per. = 8 sec. μ = 5.
	Bombay	N,E	eP	20 40 07	2,035 Moderate.
			PP	40 22	
			eS	43 29	
			SS	43 50	
			LR	44 14	
		E	M	47 26	Per. = 8 sec. μ = 10.
		N	M	48 26	Per. = 7 sec. μ = 4.
	Poona	Z	iP	20 40 11	1,890 Moderate.
		E	PP	40 24	
			iS	43 20	
			LQ	43 26	
			SS	43 43	
			SSS	43 58	
			LR	44 16	
			PcP	44 24	
			M	45 43	
			ScP	47 49	
			SoS	51 20	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
April 1952					
1	Kodaikanal	E	e	20 43 14	Short distance earthquake of slight intensity; phases not clear.
(Contd)					
	Colombo	E	S	20 47 23	
			L	51 03	
			e	54 31	
			M	56 04	Amp = 0.4.
2	Poona	Z	i	08 27 06	Tremor.
2	Colombo	E	P	10 38 34	
			S	44 02	
			L	49 22	
			M	55 02	
	Poona	Z,E	iP	10 40 54	4,455 Slight. O = 10h.33m.15s.
		E	PP	42 23	
			iS	47 01	
			M	55 25	
	Bombay	N,E	eP?	10 41 03	4,365? Feeble.
			PP	42 41	
			eS	47 10	
	Hyderabad	E	e	10 41 38	
		N	M	55 50	Per. = 15 sec. μ = 4.
2		Epc:		16 $\frac{1}{2}$ ° N., 99 $\frac{1}{2}$ ° W. Near Coast of Guerrero, Mexico. Felt.	
				H = 18h. 34m. 50s.	
				Mag. 6 $\frac{1}{4}$ - 6 $\frac{1}{2}$ (Pasadena), (U.S.C.G.S.)	
				16°33' N., 100°09' W., H = 18h. 34m. 51s. (Tacubaya).	
				Mag. 6 $\frac{1}{4}$ (Tabubaya).	
	Poona	Z	i(PK?)	18 54 30	
2	Poona	Z	i	20 57 21	
			i	57 42	
3		Epc:		25° S., 77° E., O = 15h. 43m. 34s.	
	Colombo	E	P	15 50 09	
			S	56 -	
			L	16 01 19	S. Approximate.
	Kodaikanal	E	e?	15 50 30	Feeble shock at long distance. Phase not clear.
	Poona	Z	iP	15 51 43	4,860 Slight.
		E	i	53 44	
			eS	58 14	
			PS	58 19	
			PPS	58 23	
			LQ	16 01 55	
			SSS	02 35	
			M	08 50	
	Bombay	E	eP	15 52 07	4,620 Feeble, loss of record.
			PP	53 43	
			eS	58 24	
		Epc:		52° N., 159 $\frac{1}{2}$ ° E., Near East Coast of Kamchatka.	
				H = 02h. 52m. 55s. (U.S.C.G.S.)	
				Mag. - 6 $\frac{1}{4}$ (Pasadena).	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
April 1952					
4	Calcutta	E	i	03 03 36	Slight; Distance
			i	11 42	
			i	13 20	
	Hyderabad	N,E	iP	03 04 13	7,720
		N	eS	13 21	
			PS	14 06	
			M	30 55	Per. = 18 sec. $\mu = 6.$
	Poona	Z,E	iP	03 04 25	8,770 Moderate.
		E	iPdP	04 44	
			S	14 23	
			PS	14 31	
			ScS/PPS	14 40	
			LQ	28 11	
			LR	31 43	
			M	38 48	
	Bombay	E	iP	03 04 27	8,080 Moderate, loss of record.
			PcP	04 45	
			PP	07 10	
			eS	13 52	
			PPS	14 31	
			M	40 13	Per. = 16 sec. $\mu = 3.$
	Kodaikanal	E	eP?	03 04 40	Feeble shock at long distance; phase not clear.
	Colombo	E	P	03 04 54	
			S	15 21	
			L	39 -	
			M	44 09	Amp = 0.2.
4	Epc: $23\frac{1}{2}^{\circ}$ N., 121° E., Near East coast of Formosa. H = 07h. 49m. 25s. (U.S.C.G.S.).				
	Poona	Z,E	iP	07 57 43	Feeble. Phase not clear.
	Bombay	N,E	eP	07 57 50	5,035 Feeble.
			eS	08 04 31	
4	Poona	Z	i	17 00 58	Tremor.
			i	01 11	
4	Poona	Z	i	18 26 20	Tremor.
4	Bombay	E	e	20 17 -	Very feeble.
			eS?	24 59	
4	Poona	Z	i	20 37 10	
5	Epc: 23° S., 1° E. H = 00h. 27.2m. (B.C.I.S.).				
	Poona	Z	i	00 39 39	Tremor.
5	Probable Epc: 34° N., 64° E. (Afghanistan). H = 15h. 13.3m.				
	New Delhi	N,E	eP	15 20 55	1,000 Slight.
			eS	22 38	
			SS	22 49	
	Poona	Z	eP	15 21 52	Slight. P doubtful.
		E	eS	24 56	H = 15h. 17m. 57s. (Poona)
			SS	25 28	
			LR	26 08	



DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
April 1952					
5	Bombay	N,E	eP	15 24 45	833 Slight.
			LQ	25 55	
			eS	26 11	
		N	M	30 22	Per. = 7 sec. $\mu = 2.$
		E	M	30 56	Per. = 7 sec. $\mu = 1.$
	Calcutta	E	i	15 27 31	Slight. Near.
			i	30 16	
	Hyderabad	E	e	15 27 58	
	Kodaikanal	E	e?	16 28 16	Tremor.
5	New Delhi	N,E	eP	23 17 31	750 Slight.
			eS	18 49	
	Poona	Z	i	23 22 55	
6	Bombay	N,E	e	05 12 -	Very feeble.
6	New Delhi	N,E	eP	05 46 25	350 Slight.
			Pg	46 35	
		E	eS	47 04	
		N,E	Sg	47 19	
			SSS	47 25	
7	New Delhi	N,E	eP	04 29 41	210 Slight.
			iS	30 06	
			Sg	30 11	
			SS	30 16	
	Poona	Z	i	04 33 34	Feeble. Phases not clear.
			i	33 43	
7	Poona	Z	i	09 19 10	Tremor.
			i	19 18	
7	Bombay	N,E	e	13 12 -	Very feeble.
8	Epc: $53\frac{1}{2}^{\circ}$ N., 161° E., Near East Coast of Kamchatka. h = about 60km. H = 03h. 07.4.30s. (U.S.C.G.S.).				
	Poona	Z	i	03 18 58	Tremor.
8	Epc: Sulu Sea. H = 10h. 00m. 06s. (U.S.C.G.S.) $89^{\circ}1'N.$, $123^{\circ}2'E.$ H = 10h. 00m. 39s. h = 260 km ca (U.S.C.G.S.).				
	Calcutta	E	eP	10 07 15	4,010 Moderate.
			PP	08 42	
			iS	12 55	
			SS	15 15	
			SSS	15 45	
			LR	17 10	
			M	20 01	
			Mn	27 14	Per. = 16 sec. $\mu = 32.$
	Colombo	E	P	10 08 10	
			S	14 35	
			L	25 20	
			M	29 20	Amp. = 0.5mm.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
April 1952	Hyderabad	E	iP	10 08 21	4,870
			iS	14 53	
			L	22 06	
			M	26 56	
			M	27 09	
					Per. = 15 sec. $\mu = 6$.
					Per. = 18 sec. $\mu = 8$.
	Kodaikanal	E	eP	10 08 27	4,950
			iS	15 03	
			SS	18 30	
			M		
			M	24 56	
					Fairly long distant earthquake of slight intensity; initial movement of S and SS towards W.
					Per. = 16 sec. $\mu = 6.7$.
	New Delhi	N,E	eP	10 08 45	5,150
		N	PPP	11 09	
			eS	15 32	
			SS	18 43	
			M	27 08	
					Moderate.
	Poona	Z,E	iP	10 08 58	5,320
		E	PcP	10 11	
			PP	10 49	
			PPP	11 41	
			iS	15 55	
			PPS	16 11	
		N	ScS	18 26	
		E	ScS	18 27	
		N	SS	19 16	
		E	SS	19 19	
			SSS	20 27	
		N	LR	22 38	
		E	LR	22 43	
			M	27 04	
	Bombay	N,E	eP	10 09 07	5,480
			PP	11 03	
		E	iS	16 13	
		N	eS		
		N,E	SS	19 50	
			LR	23 -	
		N	M	31 37	
		E	M	33 19	
					Per. = 15 sec. $\mu = 3$.
					Per. = 15 sec. $\mu = 4$.
10	Poona		Z	04 51 32	
			E		
					Other phases not clear
			e	52 18	
			e	54 14	
			e	59 20	
10					Epc: 25° N., 126° E. Ryuku Islands. H = 05h. 57m. 20s. (U.S.C.G.S.).
					24° N., 124° 5 E. (C.M.O.).
	New Delhi	N,E	iP	06 05 20	4,680
		N	1(S)	11 41	
					Moderate. Direction of first motion east
	Colombo	E	P	06 05 48	5,190
			S	12 33	
			L	24 20	
			M	28 20	
					Amp. = 0.3.
	Kodaikanal	E	iP	06 05 54	5,240
			iPP	07 22	
			eS	12 47	
			M	23 32	
					Long distance earthquake of slight intensity.
					Per. = 18 sec. $\mu = 8.3$.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
April, 1952	Poona	Z,E	iP	06 05 59	5,275
		N	eP		
		E	PcP	06 15	
			PP	06 51	
			PPP	08 46	
			ScP	11 10	
		N,E	iS	12 54	
			PPS	13 16	
		N	ScS	15 15	
		E	ScS	15 18	
			SS	16 28	
			LQ	17 39	
			i	20 50	
			i	20 57	
	Bombay	N,E	eP	06 06 05	5,330
			PP	08 01	
			eS	13 03	
			PPS	13 19	
			e	16 09	
					Slight.
	New Delhi	E	eP	22 35 27	980
			eS	37 08	
			SS	37 20	
					Slight.
	Poona	Z	i	22 41 19	
			i	41 32	
			i	41 50	
			i	42 45	
					Feeble, phase not clear
11	Bombay	N,E	e	11 42 -	
					Very feeble.
12					Epc: Indian Ocean. 14 ¹ ° S., 66 ³⁰ ° E. H = 01h. 27m. 09s. (B.C.I.S.).
	Colombo	E	P	01 32 32	3,130
			S	37 18	
			L	42 30	
			M	43 25	
	Kodaikanal	E	eP	01 33 10	2,660
			eS	37 25	
			LQ	38 04	
			M	41 12	
					Per. = 9 sec. $\mu = 16$.
	Bombay	E	eP	01 33 40	3,920
			PP	35 07	
			PPP	35 30	
		N,E	eS	39 14	
		E	SS	41 44	
			SSS	42 26	
			LR	43 24	
			M	48 10	
			M	49 36	
					Per. = 9 sec. $\mu = 4$.
					Per. = 8 sec. $\mu = 2$.
	Poona	Z	iP	01 33 47	3,680
		E	eP		
			PP	34 01	
			PPP	35 24	
			PcP	36 00	
			iS	39 06	
			ScP	39 29	
			LQ	41 35	
			SSS	41 59	
			LR	43 19	
			M	46 11	
					Slight.

April 1952				h. m. s.	km.	
12 (Contd)	New Delhi	N,E N	eP S M	01 35 15 41 44 50 59	4,820	Moderate. S may be earlier upto 3 secs due to time marks.
	New Delhi	N,E	P eS i	09 36 41 36 56 37 02	110	Slight. P may begin earlier upto 3 secs due to time mark.
14	Bombay	N,E	e	08 02 -		Very feeble surface waves.
14	Epc: $3\frac{1}{2}^{\circ}$ N., $126\frac{1}{2}^{\circ}$ E., Molucca Passage. H = 23h. 49m. 45s. (U.S.C.G.S.).					
	New Delhi	N,E	e	23 67 06		
14-15	Epc: 5° N., 126° E., in the Pacific Ocean. H = 23h. 49m. 52s. (Poona). $3\frac{1}{2}^{\circ}$ N., $126\frac{1}{2}^{\circ}$ E., Molucca Passage. H = 23h. 49m. 45s. (U.S.C.G.S.P.).					
	Poona	Z,E	iP ₁ iP ₂ E PPF ₂ iS ₁ ScP ₂ iS ₂ PPS ₂ ScS ₂ SS LR ₂ M ₂	23 56 54 09 12 00 02 46 02 55 04 16 06 40 07 06 08 51 10 28 13 52 17 35	5,870	Moderate. Probably a double shock.
✓	Kodaikanal	E	eP iS M	23 57 18 00 05 57 21 25	7,165	Slight. Distant. Per. = 16 sec. $\mu = 7.$
	Colombo	E	P S L	23 57 28 00 05 15 20 -		L and M not certain due to light spot drift.
	Calcutta	E	iP PP PPP PcS iS PS PPS SS SSS ScS	23 57 40 59 18 59 52 00 03 28 03 55 04 07 04 17 06 52 07 30 07 40	4,590	Moderate. First movement West.
✓	Hyderabad	N,E E N,E N E N	iP PP iS ScS SS L M M	23 58 39 00 00 37 05 41 08 28 09 39 12 10 16 52 18 54	5,400	
	New Delhi	N,E N N,E N	eP iS i SSS M	23 59 06 06 29 08 54 11 25 19 00	5,780	Moderate. Per. = 20 sec. $\mu = 10.$ Per. = 20 sec. $\mu = 11.$

April 1952				h. m. s.	km.	
14-15 (Contd)	Bombay	E	eP PP i3 PPS ScS e M	23 59 19 00 01 22 06 53 07 19 09 07 11 45 28 18	6,080	Slight, Record lost. Per. = 16 sec. $\mu = 3.$
15	Epc: 43° N., $143\frac{1}{2}^{\circ}$ E., Hokkaido, Japan. H = 05h. 59m. 53s. (U.S.C.G.S.) To the South of Urakawa (Hokkaido). 42° N., 142° E. h = 30 km (C.M.O.). 42.01° N., 142.4° E. H = 05h. 59m. 50s.					
	New Delhi	N,E N	i i e(S) i i	06 09 14 09 28 16 45 17 11 19 23		Moderate.
	Poona	Z,E E	iP PcP iS PS PPS	06 10 13 10 32 18 34 19 00 19 09	6,836	Slight.
	Bombay	N,E	eP PP	06 10 16 12 36	7,000	Slight.
	Epc: 56° S., 24° W., Sandwich Islands Region. H = 19h. 02m. 12s. (U.S.C.G.S.). 58° S., 25° W. H = 19h. 02m. 11s. (B.C.I.S.).					
	Kodaikanal	E	e	19 21 13		Per. 16 sec. $\mu = 8.1.$ Slight. Very distant. Phasea not clear.
✓	Bombay	N,E E N	e e M M	19 21 22 30 51 20 00 43 00 45		Slight, Distant. Per. = 18 sec. $\mu = 3.$ Per. = 19 sec. $\mu = 5.$
**	Poona	E	ePPP M M	19 23 56 52 26 55 38		Moderate. Distant. Phasea not clear.
	Colombo	E	L	19 45 -		A series of maxima of Amp = 0.5mm present.
16	Epc: 47° N., 154° E., Kurile Islands Region. H = 03h. 40m. 19s. (U.S.C.G.S.).					
	Poona	Z	iP i i	03 51 34 51 43 52 00		Tremor.
	Bombay	N N E	eP eS iS	03 51 35 04 00 49	7,850	Feeble.
✓	Hyderabad	N	M	04 21 09		Per. = 15 sec. $\mu = 3.$
	Kodaikanal	E	e(?)	15 10 57		Tremor.
	Poona	E	M	15 17 29		Feeble. Tremor.
✓	Hyderabad	N	M	15 17 40		Per. = 21 sec. $\mu = 6.$

Epc: Bismarck Sea 1 1/2° S., 150° E. H = 11h. 11m. 45s. (U.S.C.G.S.). E.H = 11h. 11m. 45s. (B.C.I.S.).



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

April 1952 16 Sandwich Island. H = 16h. 45m. 41s. (B.C.I.S.).

Poona E M 17 46 27 Feeble. Tremor.
Poona Z i 19 14 33
i 15 27

17 Region near Marianne Island. H = 03h. 55m. 50s. (B.C.I.S.).

Poona Z I 04 06 25
i 06 55
New Delhi N eP 08 39 24 960 Slight.
E LQ 40 53
N,E eS 41 04
E SS 41 16
SSS 41 25
Poona Z i 08 25 00
i 45 36
Poona Z i 09 29 36

18 Epc: 12° N., 140° E., Mariana Islands Region. H = 15h. 59m. 10s. (U.S.C.G.S.).

Calcutta E eP 16 08 43 Slight. Distant.
i 16 15
Bombay N,E e 16 09 - Feeble.
e 19 01
Kodaikanal E e(P) 16 09 10 Tremor.

19 Epc: 7° N., 71 1/2° W., Colombia - Venezuela border. Minor property damage. H = 09h. 58m. 53s. h = 60 km ca (U.S.C.G.S.). Mag. 6 3/4 - 7 (Pasadena); 6 1/2 (Praha); 6,3 (Roma).

Bombay N,E ePKP1 10 18 20 15,160 Slight.
ePP 21 01
i 21 58
Hyderabad N ePKP 10 18 23
PKS 21 56
M 11 15 46
E M 18 11 Per. = 15 sec. mu = 5.
Per. = 16 sec. mu = 6.
Poona E iPKP 10 18 28 Phases not clear.
i 21 04
i 21 56
i 26 00
i 27 44
Kodaikanal E ePKP 10 18 32 Slight. Very distant.
Phases not clear.
Calcutta E iPKP 10 18 33
iPP 21 58
Colombo E e 10 20 - Trace not distant and
time approximate. End
merged into following
shock.

Calcutta E e 11 22 50 Slight. Distant.
iS 31 20

Bombay N,E P 11 23 --
Coimbo E PcP 11 23 30 Times approximate
M 35 - Amp = 1.0mm.

Poona E iPcP 11 23 48 Distant. Phases not
i 26 20 clear.
i 24 44

Poona E e 20 34 05 Phases not clear.
i 44 10
i 45 03
i 45 14

19 New Delhi E eP 23 13 29 840 Slight.
N eS 14 57

Poona E e 23 18 12 Phases not clear.
i 18 24

20 Bombay N,E e 10 29 - Very feeble surface
waves.

20 Poona E i 17 09 01
i 09 13

21 Poona Z i 01 29 14
i 29 28

Poona Z i 03 49 31
i 49 40
i 49 51

23 Bombay N,E e 16 23 - Very feeble.

26 Bombay N,E e 12 44 - Very feeble.

26 New Delhi N,E ePg 22 01 12 55 Slight.
iSg 01 13

28 Bombay N,E e 04 20 - Very feeble.

28 Epc: 42 1/2° N., 143° E., Hokkaido, Japan. H = 10h. 54m. 18s. (U.S.C.G.S.). Off the Coast of Urukawa (Hokkaido); 42° N., 142° 08 E. (C.M.O.). Mag. 6 1/2 (Pasadena), 6 1/4 - 6 1/2 (Wellington).

New Delhi N,E eP 11 03 41 6,000 Moderate.
N eS 11 16
PPS 11 35
ScS 13 48
SS 14 59
M 23 37

Poona E iP 11 04 41(?) 7,290 Modetate.
PcP 04 52
PP 07 09
ScP 08 27
iS 12 26
PS 13 52
ScS 14 13

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
April 1952						
28 (Contd)	Calcutta	E	e	11 04 42		Slight. Distant.
			i	10 11		
			i	10 43		
	Bombay	N,E	eP	11 04 43	7,190	Slight.
			PP	07 13		
			eS	13 23		
			iPS	13 40		
			SS	17 18		
			LR	25 -		
	Kodaikanal	E	P(?)	11 05 00	7,035	Feeble. Distant.
			S	13 32		
			M	29 54		
29	Epc: 26° N., 122½° E. Off North Coast of Formosa. H = 02h. 35m. 00s. (U.S.C.G.S.).					
	Calcutta	E	iP	02 41 29	3,220	Moderate. First movement West.
			iS	46 20		
			SS	47 47		
	New Delhi	N,E	iP	02 42 45	4,110	Moderate, deep focus.
		N	iS	48 31		
			i	50 08		
			iSS	51 39		
			i	52 16		
			i	52 55		
	Hyderabad	N,E	iP	02 42 44	4,320	
		E	PP	44 39		
		N,E	iS	48 53		
		N	ScS	52 29		
			M	58 37		Per. = 12 sec. $\mu = 3.$
	Kodaikanal	E	iP	02 43 24	4,700	Slight. Initial movements of P, PcP and S towards West. Other phases not clear.
			iPcP	45 21		
			iS	49 46		
	Poona	E	iP	02 43 27	5,400	Moderate.
			PP	45 02		
			i	45 21		
			PPP	45 37		
			ScP	48 51		
			iS	49 45		
			PS	49 51		
			PPS	49 59		
			SS	52 51		
			LQ	53 31		
			SSS	53 51		
			LR	54 58		
			M	57 48		
	Bombay	N,E	iP	02 43 43	5,120?	Slight.
			iPP	45 27		
			iS	50 03		
			iSS	52 58		
	Colombo	E	P	02 43 48		Times approximate.
			S	50 13		End merged into following shock.

April 1952
29
(Contd)

STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.	
			h. m. s.	km.		
Epc: 15° S., 44½° E., Mosambique Channel. h = About 200km. H = 03h. 07m. 35s. (U.S.C.G.S.).						
Bombay	N,E	eP	03 15 45	4,660	Feeble.	
	E	iS	22 05			
	N	eS				
Poona	E	iP	03 15 49		Slight.	
		iS	22 07			
		PS	22 14			
		SSS	26 09			
Colombo	E	P	03 15 53			
		S	22 03			
		L	28 18			
✓ Kodaikanal	E	i(S)	03 21 25		Slight.	
		e	24 44			
		M	27 08		Per. = 21 sec. $\mu = 13.4$	
✓ Hyderabad	N	iP	03 16 00	5,020		
	N,E	iS	22 44			
	E	M	32 15		Per. = 15 sec. $\mu = 4.$	
Calcutta	E	i	03 25 10		Slight. Distant.	
		e	35 05			
Hyderabad	N,E	iP	11 04 23	7,100		
	N	iS	12 59			
		L	26 42			
		M	31 43		Per. = 13 sec. $\mu = 3.$	
Kodaikanal	E	e(?)	23 09 15		Tremor.	
30	Epc: Region near Altyn-Tagh; H = 00h. 54.5m. (B.C.I.S.).					
Calcutta	E	i	00 57 30		Slight; near.	
		i	58 12			
		i	58 28			
Poona	E	iP	00 58 21	2,080	Slight.	
		PP	58 37			
		eS	01 01 47			
		LQ	01 55			
		SS	02 12			
		SSS	02 31			
		LR	02 46			
		M	04 21			
✓ Bombay	E	eP	00 58 29	2,360	Slight.	
		eS	01 02 22			
		SS	03 02			
		M	06 40		Per. = 10 sec. $\mu = 2.$	
Kodaikanal	E	e(?)	01 02 37		Tremor.	
✓ Hyderabad	N	M	01 04 39		Per. = 9 sec. $\mu = 2.$	
30	Epc: Region near Altyn-Tagh. H = 01h. 50.4m. (B.C.I.S.).					
Calcutta	E	i	01 53 41	1,000	Slight. First movement East.	
		i	55 24			
		M(?)	56 33			

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
April 1952							
30 (Contd)	Poona	E	eP	01	54	13	2,360 Slight.
			iS		58	13	
			SSS		59	55?	
			LR		59	43	
			i	02	00	32	
			M		01	35	
	Bombay	E	eP	01	58	24	1,510 Slight.
			LQ	02	00	50	
			iS		00	57	
			M		02	50	Per. = 7 sec. $\mu = 2.$
	Hyderabad	N	M	02	01	59	Per. = 8 sec. $\mu = 2.$
30	Bombay	N,E	e	07	44	-	Very feeble.
30	Poona	Z	iP	11	23	09	
			S*		26	47	
			Sg		27	35	
	Bombay	N,E	e	11	27	-	

- : Voluntary Observers' Reports.: -

The following table contains a list of earthquakes that have been reported by Voluntary Observers from various stations.

Place	Date	G. M. T. of earthquake		Duration secs	Intensity R.F. Scale	No. of shocks	Remarks.
		h.	m.				
Shillong	April 7th	00	34	10	V	1	
Gauhati	18th	08	48	3.4	V	1	Mild Intensity
Gauhati Aerodrome	18th	08	53	1	V	1	
Shillong	18th	08	54	10	V	1	
Srinagar	22nd	12	30	3	VIII	2	Two shocks at an interval of one second.

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S.M.
11/1/1954

GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

May, 1952.

Published under the direction of

S. C. Roy, D. Sc. (Lond), F.N.I.

Director General of Observatories.

Instruments and their Constants.

Station	Instrument	Compt.	Period in sec	Static Magnification	Damping ratio	Paper Speed mm/min
Bombay	Milne-Shaw	N	12	350	7:1	16 mm Except, 8 mm between 13th 18th
	Milne-Shaw Sprengnether	E	12 7	350	4:1	8.0 30.0
Calcutta	Milne-Shaw	E	12	250	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
Colombo	Milne-Shaw		12	250	20:1	35.9
Dehra Dun	Omori-Ewing	N	30	12	-	-
Hyderabad	Milne-Shaw	E	12	250	20:1	8.0
	Milne-Shaw	N	12	250	20:1	8.0
Kodaikanal	Milne-Shaw	E	10	250	20:1	8.0
New Delhi	Milne-Shaw	N	12	288	20:1	8.0
	Wood-Anderson	N	4	1000	20:1	16.0
	Wood-Anderson	E	2	2000	30:1	60.0
	Omori-Ewing	E	30	30	1	12
Poona	Milne-Shaw	N	12	250	20:1	8.0
	Wood-Anderson	E	4	1100	20:1	16.0
	Sprengnether	E	To = Tg = 6.6	-	-	30.0
	Benioff	Z	To = 1.0	-	Critical	60.0

h. m. s. km.

May 1952

DATE	STATION	COMPT.	PHASE	h. m. s. km.	REMARKS.
1	Poona	Z	i	07 18 16 18 20	
1					Epc: Aleutian Islands. 0 = 15h. 04m. 07s. (U.S.C.G.S.). 53° N., 175° E. 0 = 15h. 04m. 19s. h = Slightly higher than normal (B.C.I.S.).
	Poona	Z	iP	15 16 45	
			i	16 49	
			i	16 52	
1	Poona	Z	i	17 20 07	
			i	20 12	
			i	20 17	
			i	20 41	
2	Poona	Z	i	17 49 44	
			i	49 48	
2	Poona	Z	i	18 26 20	
			i	26 23	
			i	26 26	
3					Epc: 15° S., 76° W. H = 12h. 14m. 09s. (U.S.C.G.S.) and (B.C.I.S.).
	Poona	Z	iPKP	12 34 01	
			i	34 07	
			i	34 14	
			i	34 24	
			i	34 41	
3	Poona	Z	i	20 59 15	
4					Epc: 24° S., 177° W. H = 14h. 15m. 16s. (U.S.C.G.S.) in region of Tonga Island. Mag. 6.5 (Wellington).
	Kodaikanal	E	e	14 33 30	
	Colombo	E	PP	14 33 35	
			PPS	44 -	
			M ₁	12 33	
	Poona	E	PKP?	14 34 10	Distant.
			PKS	37 18	
			1SKS	40 52	
			e	44 26	
			e	45 52	
	Hyderabad	N	M	15 18 05	Per. = 18 sec. μ = 5.
5					Epc: 20° N., 103° E. 0 = 09h. 34m. 07s. (B.C.I.S.) in Laos, (Indochina).
	Calcutta	N	i	09 39 03	Slight; near.
			i	39 30	
	New Delhi	N,E	eP	09 39 26	Slight.
			i	42 17	
			i	42 30	
	Poona	Z,E	iP	09 40 07	Slight.
		Z	i	40 26	
		Z,E	i	40 35	
		E	i	43 38	
		Z	S	44 39	

DATE	STATION	COMPT.	PHASE	h. m. s. km.	REMARKS.
May 1952					
5	Hyderabad	N	e	09 42 32	
(Contd)					
7	New Delhi	N,E	eP	13 43 41	1,000 Slight.
			iS	45 24	
			i	45 30	
		N,E	SS	45 36	
		N	i	46 04	
		E	i	46 19	
	Poona	Z	iP	13 45 25	Feeble.
			i	45 38	
			i	45 27	
			i	45 37	
8					Epc: 35° N., 140° E. H = 00h. 58m. 40s. (U.S.C.G.S.) in Honshu, Japan. h = 60 ± km. 35° N. 140.2 E. h = ± 50 (C.M.O., Japan). Felt severely in Tokyo (Press Report). Mag. 6½ - 6½ (Pasadena).
	New Delhi	N,E	eP	01 07 54	5,810 Moderate.
		N	iS	15 19	
			SSS	18 32	
			M	26 30	
	Poona	Z,E	iP	01 08 46	6,610 Slight.
		E	PcP	09 13	
			iS	16 55	
			PS	17 11	
			PPS	17 26	
8					Epc: 2° N., 127° E. H = 21h. 10m. 40s. (U.S.C.G.S.) and B.C.I.S.) in Strait of Moluccas. Mag. 6.5 to 6.75 (Pasadena).
	Calcutta	E	iP	21 18 40	4,635 Moderate; first movement East.
			PcP	20 39	
			PPP	20 51	
			?	21 18	
			iS	24 58	
			LQ	28 16	
			SSS	28 37	
			LR	30 16	
	Colombo	E	P	21 19 18	
			S	25 58	
			L	39 21	
			M	41 48	Amp = 0.4.
	Kodaikanal	E	eP	21 19 39	5,090 Slight.
			iS	26 36	
			M	37 30	Per. = 21 sec. μ = 17.85.
	Hyderabad	N,E	iP	21 19 39	5,330
		E	iS	26 37	
		N,E	SS	30 10	
		E	L	33 47	
		N	M	40 34	Per. = 15 sec. μ = 7.
	New Delhi	N,E	eP	21 20 05	5,850 Moderate.
		N	PP	22 05	
			iS	27 32	
			SS	31 04	
			i	32 33	
			M	33 49	

May 1952
8 (Contd)

DATE	STATION	COMPT.	PHASE	G.M. T.	REMARKS.
May 1952	Poona	Z, E	IP	18 00 11	6,890 Moderate.
9 (Contd)		E	SKS	10 20	
			S	10 35	
10	Poona	E	eP	17 13 32	6,155 Feeble.
			PcP	14 29	
			PP	15 41	
			S	21 16	
11	New Delhi	N, E	eP	03 29 19	840
		E	PP	29 28	
			PPP	29 35	
		N, E	P*	29 38	
			LQ	30 37	
		E	iS	30 46	
			SS	30 58	
		N, E	SSS	31 06	
			Sg	31 33	
	Poona	Z, E	iP	03 31 23	1,620
		E	eS	34 07	
			SS	34 25	
			SSS	34 36	
			LR	34 51	
			M	35 57	
			PcP	36 23	
13	Hyderabad	E	M	20 55 55	Per. = 18 sec. $\mu = 8$
	Colombo	E	P	19 51 01	
			L	20 56 -	
			Mn	21 08 34	
	Poona	E	e	19 51 06	
			e	20 01 38	
	Kodaikanal	E	e?	19 31 29	
14	Epc: 43° N., 145° 5 E. H = 00h. 36m. 59s. (U.S.C.G.S.) near Coast of Hokkaido, Japan. 41° 9 N., 145° 4 E. h = ± 2 km (C.M.O.). Mag. 6.5 (Pasadena).				
	42° 1 N., 145° 2 E. H = 00h. 36m. 55s. (B.C.I.S.).				
	Shillong	E	P	00 45 21	Slight.
			PP	47 12	
	New Delhi	N, E	eP	00 46 34	6,130
		N	iS	54 16	
			PPS	54 48	
			M	01 07 32	
	Hyderabad	E	iP	00 47 16	6,770
			PP	49 22	
			iS	55 34	
			SS	59 31	
		N	M	01 12 02	Per. = 15 sec. $\mu = 4$.
		E	M	12 04	Per. = 14 sec. $\mu = 4$.
	Poona	N, E	iP	00 47 31	7,140 Moderate.
			PcP	47 59	
			PP	49 51	
		E	eS	56 09	
			PS	56 27	

International Seismological Centre

h. m. s. km.

O = 17h. 04m. 08s. in Strait of Moluccas (B.C.I.S.)

9 Epc: Kermadec Island Region. H = 03h. 29m. 00s.
h = about 400 km (U.S.C.G.S.)
27° S., 178½° W. O = 03h. 29m. 01s.
h = 400 km (B.C.I.S.)
Mag. 6½ (Wellington).

Colombo	E	FP	03 47 -		
		L	04 23 -		
		M	26 08	Amp = 0.2.	
Kodaikanal	E	e	04 23 23	Tremor.	
9 Kodaikanal	E	e	15 06 05	Tremor.	
9 Epc: 6° 5 S. 155° E. in Salomon Islands					
			H = 17h. 47m. 40s. h = 60km (USCGS).		
			6 ¾° S., 155° E. O = 17h. 47m. 43s.		
			h = ± 60 km (B.C.I.S.).		
			Mag. 7 (Pasadena).		
Shillong	E	iP	17 58 48	Slight; distant.	
		PcP	59 08		
		S	18 07 02		
Calcutta	E	iP	17 58 59	7,780 Moderate. First move- ment West.	
		iS	18 08 09		
		ScS	09 01		
		SS	12 44		
		LQ	17 11		
		?	24 03		
		M?	25 37		
		Mn	29 32	Per. = 24 sec. $\mu = 89$.	
Kodaikanal	E	iP	17 59 44	8,735 Slight; First move- ment West.	
		iS	18 09 41		
		PS	10 23		
		PPS	10 41		
		SS	14 50		
		M	30 44	Per. = 18 sec. $\mu = 11$.	
Hyderabad	N	eP	17 59 46	8,890	
		SKS	18 09 40		
		e	15 03		
		L	22 46		
		M	32 55	Per. = 18 sec. $\mu = 11$.	
New Delhi	N, E	eP	18 00 02	9,070 Moderate.	
	N	PP	03 10		
	N, E	iS	10 14		
	N	ScS	10 36		
		PS	10 55		
		i	15 54		
		LQ	21 51		
		LR	25 33		
		M	31 57		

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
h. m. s.	km.				
May 1952	Poona	E	PPS	00 56 37	
			i	57 12	
			i	01 00 26	
			SSS	02 57	
	Kodaikanal	E	iP	00 47 47	7,465 Slight.
			iS	56 41	
	Colombo	E	P	00 47 49	
			PPP	52 01	
			Mn	57 19	Amp = 0.3.
14	New Delhi	N,E	eP	10 18 49	Slight; near.
			e	19 59	
			e	20 39	
15	Epc: Off North Coast of Luzon, Philippines Islands. H = 10h. 25m. 25s. (U.S.C.G.S.).				
	Poona	Z	iPY	10 33 40	
		E	ePY		
		Z	i	34 09	
		E	PP	35 20	
		Z	i	11 20 33	
	Calcutta	E	i	10 34 00	Slight; distant.
			i	37 16	
			i	43 50	
			Mn	48 33	
	Hyderabad	E	M	10 34 17	Per. = 12 sec. $\mu = 2$.
15	Poona	Z	i	19 03 22	
15	Epc: Northern Chile. H = 21h. 06m. 50s. h = 100 km. (U.S.C.G.S.).				
	Poona	Z	P	21 26 07	
			i	49 39	
16	Kodaikanal	E	e?	03 05 21	Tremor.
16	Poona	Z	PKP	06 01 45	
			i	01 50	
16	Calcutta	E	i	10 14 56	Slight; distant.
			i	24 14	
			Mn	30 14	
16	Epc: 6.5° N., 79° W. H = 20h. 45m. 40s. (U.S.C.G.S.). Mag. 6.9 (Pasadena), 6.5 (Berkeley). Felt at Balbon Heights.				
	Kodaikanal	E	e?	21 05 12	Tremor.
	Poona	Z	iP	21 05 14	
		E	eP	05 16	
		Z	e	08 58	
		E	e	18 57	
	Hyderabad	N	i	21 05 30	
		E	M	22 07 36	Per. = 18 sec. $\mu = 5$.
		N	M	07 55	Per. = 18 sec. $\mu = 5$.
17	New Delhi	N,E	eP	06 06 55	1,010 Slight.
			iS	08 39	
		E	SS	08 51	
		N,E	Sg	09 35	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
h. m. s.	km.				
May 1952	Poona	Z	iP	06 08 39	2,180 Slight.
		E	PP	08 53	
		Z	PP	08 55	
		Z,E	PPP	09 05	
			S	12 15	
		E	LQ	12 20	
		Z	LQ	12 22	
		E	SS	12 41	
		Z	SS	12 42	
			SSS	12 55	
		E	SSS	12 56	
		Z	LR	13 16	
		E	LR	13 18	
		Z	M	14 55	
		E	M	14 50	
	Hyderabad	N	i	06 18 03	
17	Epc: 42.5° N., 144.5° E. H = 09h. 48m. 16s. (U.S.C.G.S.) near Coast of Hokkaido, Japan. 41.8° N., 144.2° E. h = 60 km. \pm (C.M.O., Japan). 42.1° N., 143.1° E. H = 09h. 48m. 14s. (B.C.I.S.). Mag. 6.2 - 6.3 (Pasadena).				
	Calcutta	E	e	09 56 12	6,810 Moderate.
			iS	10 04 32	
			i	05 58	
			i	11 10	
			LR	14 35	
			M	19 31	
			Mn	22 40	Per. = 12 sec. $\mu = 19$.
	New Delhi	N,E	P	09 57 45	6,080 Moderate. (P may begin earlier upto 3 secs due to time mark).
		N	PP	59 49	
			iS	10 05 24	
			ScS	07 26	
			SS	09 08	
			M	20 05	
	Hyderabad	E	iP	09 58 23	6,740
		N	iS	10 06 39	
			SS	10 56	
		E	M	22 45	Per. = 15 sec. $\mu = 6$.
		N	M	23 07	Per. = 15 sec. $\mu = 8$.
	Poona	Z,E	iP	09 58 44	7,010 Moderate.
		N	PcP	59 16	
		E	PcP	59 18	
		N,E	PP	10 01 05	
		E	PPP	02 37	
		N,E	S	07 15	
			PS	07 29	
		N	PPS	07 46	
		E	PPS	07 47	
			ScS	08 21	
		N	SS	11 20	
		E	SS	14 09	
			LR	17 53	
17	Poona	Z	i	21 40 44	
			i	40 41	
18	Shillong	E	i	07 08 54	Slight; near.
			i	09 00	
			i	09 44	
18	Shillong	E	i	15 05 15	Slight.
			i	05 20	

DATE	STATION	COMPT.	PHASE	G. M. T.	h. m. s.	km.	REMARKS.
May 13	Shillong	E	i		15 18 08		Slight.
			i		18 12		
19		Epc:			43° N., 144° 5' E.	H = 18h. 32m. 24s. (U.S.C.G.S.)	
						Near Coast of Hokkaido, Japan.	
		Mag.			42.1° N., 143.1° E.	0 = 18h. 32m. 21s. (B.C.I.S.)	
					6 3/4 (Pasadena), 6 3/4 - 7 (Wellington, Strasbourg).		
	Shillong	E	iP		18 40 43	5,110	Moderate.
			PP		42 28		
			eS		47 28		
			PPS		47 36		
			i		47 46		
			SS		50 38		
			LQ		52 00		
			M		58 26		
							Per. = 15 sec.
	Calcutta	E	iP		18 41 18		Moderate. First movement West.
			PcP		42 29		
			PP		43 17		
			i		48 41		
			PS		48 49		
			PPS		48 57		
			LR		56 33		
			M		19 00 27		
			Mn		06 47		
							Per. = 15 sec. $\mu = 111.$
	Hyderabad	N,E	iP		18 42 32	6,740	
		N	iS		50 48		
		E	i		55 04		
			L		19 01 53		
		N	M		05 22		Per. = 15 sec. $\mu = 22.$
		E	M		06 44		Per. = 16 sec. $\mu = 19.$
	Poona	Z,E	iP		18 42 50	7,055	Moderate.
			PP		45 12		
		E	iS		51 23		
			PS		51 43		
			PPS		51 52		
			i		52 12		
			SS		55 30		
			i?		59 16		
			LR		19 02 36		
	Kodaikanal	E	P		18 43 09	7,580	Slight.
			PP		45 36		
			S		52 09		
			PS		52 15		
			M		19 10 12		
							Per. = 15 sec. $\mu = 15.6$
	Colombo	E	i		18 52 14		Very strong microseisms
			L		19 10 49		
			Mn		19 04		Amp = 1.0.
20	Poona	Z	i		02 19 45		
			i		22 36		
			i		23 14		
20	Poona	Z	e		08 43 20		
			i		44 35		
20	Shillong	E	e(P?)		18 36 30	856	Slight, near.
			i(P*)		36 49		
			i(Pg)		37 09		
			i(S)		37 59		
			e(PcP)		42 45		

DATE	STATION	COMPT.	PHASE	G. M. T.	h. m. s.	km.	REMARKS.
May 1952	Hyderabad	N	eP		18 37 27		
			e		42 46		
			e		45 19		
(Contd)	New Delhi	N,E	eP		18 37 40		Slight.
		N	e		40 56		
			e		41 27		
			M		42 56		
	Poona	Z	i		18 38 05		
			i		39 42		
			e		47 06		
		E	i		47 22		
			i		47 46		
			i		48 50		
			i		49 48		
20	Poona	Z	i		19 02 04		
	New Delhi	E	eP		19 26 35	1,190	Slight.
			i		27 55		
		N,E	LQ		28 26		
			iS		28 37		
			SS		28 48		
			LR		28 53		
21	New Delhi	N,E	iP		02 33 19	740	Slight.
		E	P*		33 34		
			Pg		33 54		
		N,E	iS		34 36		
		E	S*		35 00		
		N,E	Sg		35 17		
	Poona	Z	e		02 34 47		
			e		35 14		
			i		35 24		
			i		37 37		
			i		38 14		
	Hyderabad	E	i		02 40 02		
	Shillong	E	i(Pg)		08 10 03		Slight; near.
			i		10 17		
			i(Sg)		10 19		
	Shillong	E	i		20 08 32		Slight; near.
			i		08 47		
							Epc: 29° 5' N., 131° 5' E. H = 23h. 08m. 21s. h = ± 60 km. (U.S.C.G.S.). in Riou-Kiou Island.
	Shillong	E	iP		23 15 09		Slight; distant.
			PP		16 42		
			PcP		17 44		
			i(M)		30 00		Amp = 15.
	New Delhi	E	eP		23 16 47	5,460	Slight. Probabl. sur waves of another prec shock.
		N	eS(?)		23 52		
			SS		26 38		
			SSS		27 52		
			eM		35 02		
	Calcutta	E	i		23 17 23		Slight; distant.
			i		25 22		

1952

22 Poona (Contd)

Z i 23 17 36
P 17 47
i 17 57

Hyderabad E M 23 40 37 Per. = 15 sec. $\mu = 6.$

23 Epc: 33° N., 136° E. H = 04h. 20m. 52s.
h = ± 60 km (U.S.C.G.S.)
Near the South Coast of Honshu and felt also at Shikoko.
33°0 N., 135°9 E. h = ± 40 km.
Mag. 6 (Pasadena).

Shillong E e(P) 04 28 22 Slight; distant.
PP 29 55
S(?) 34 14
e(M) 42 46 Amp = 14.

Calcutta E i 04 32 48 Slight; distant.
i 45 04

24 Poona Z,E i 02 18 52
Z i 18 58
E e 19 00
i 22 14

24 Epc: Off West Coast of Sumatra. H = 16h. 05m. 53s. (USCSS).
0°0 N., 99°5 E. O = 16h. 05m. 59s. (Poona).
1°0 S., 98°8 E. O = 16h. 05m. 53s. (BCIS).
Mag. 6.5 - 6.75 (Pasadena).

Colombo E P 16 10 46
i 14 39
L 17 31
Mn 18 04 Amp = 4.0.

Calcutta E iP 16 11 17 2,855 Moderate. First movement West.
iS 15 44

Kodaikanal E iP 16 11 21 2,620 Moderate.
PP? 11 48
eS 15 33
LQ? 16 03
SSS? 16 36
M? 19 00 Per. = 18 sec. $\mu = 109.6.$

Shillong E iP 16 11 40
PP 12 25
i 14 49
i 16 13
LQ 17 17
LR 18 31
ScS 22 29

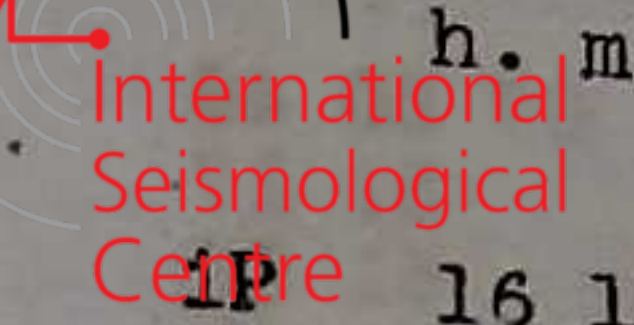
Hyderabad N iP 16 11 40 3,100
PP 12 31
S 16 23
L 18 56
M 21 52 Per. = 16 sec. $\mu = 17.$

Poona Z,E iP 16 12 17 3,415 Moderate.
E PP 13 17
iS 17 20
i 18 34
ScP 19 14
LR 20 24

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

May 1952

24 New Delhi N,E (Contd) N



iP 16 12 53
PP 14 23
i 15 18
iS 18 23
PcS 19 21
i 21 28
LR 23 18
M 26 20

3,850 Moderate. First movement South.

Dehra Dun N e 16 19 42?
e 27 52?
M₁ 33 42

26

Epc: Assam H = 02h. 46m. 25s. (U.S.C.G.S.)
28°5 N., 95° E. O = 02h. 46m. 31s. (B.C.I.S.)
near Assam-Tibet Frontier.
Felt moderately at Dibrugarh, Tinsukia, Digboi, Margherita and Ledo.

Shillong E iP 02 47 31 545 Moderate.
P* 47 41
Pg 47 51
LQ 48 14
i 48 18
iS 48 29
LR 48 31
SS 48 37
S* 48 41

Calcutta E iP 02 48 47 1,055 Moderate. First movement West.
iS 50 36
SS 50 46

New Delhi E eP 02 50 05 1,580 Slight.
N PPP 50 25
i 50 40
iS 52 44
SS 53 02
SSS 53 13
M 54 37

Hyderabad N iP 02 50 48 2,110
iS 54 17

Poona Z,E iP 02 51 24 2,445 Moderate.
E iS 55 23
SSS 56 15
LR 56 45
M 58 07 Per. = 8 sec. $\mu = 4.0.$

Kodaikanal E iP 02 51 57 2,710 Slight.
S 56 15

Dehra Dun N e(S)? 02 52 12?
e 53 12
e 54 18
M 54 52 Per. = 9 sec. $\mu = 0.02.$

28

Epc: 36°5 N., 70°5 E. O = 07h. 47m. 40s. (B.C.I.S.).
Hindu-Kouch. h = 22 km ± .
Felt at Srinagar.

New Delhi N,E P 07 49 56 780 Slight. (P may begin 3 sec earlier due to time mark).
E PP 50 02
PPP 50 09
i 50 11
i 50 29



May
1952

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
28	New Delhi	N, E	i	07 50 48	
	(Contd)	(Contd)	iS	51 17	
			i	51 36	
			i	51 41	
	N	SSS		52 01	
	Poona	Z	iP	07 51 38	Slight.
			i	56 00	
			L	56 30	
			i	56 49	
			LR	57 34	
			PcS	59 42	
	Hyderabad	N	iP	07 51 58	2,150
		N, E	iS	55 31	
		N	M	58 04	Per. = 9 sec. $\mu = 4.$
	Shillong	E	iP	07 52 08	2,210 Slight.
			FP	52 21	
			iS	55 47	
			LQ	55 59	
			i	56 11	
			i	56 20	
			PcP	56 33	
			LR	56 56	
	Kodaikanal	E	eP	07 53 29	Slight; near.

28 Epc: 35°5 N. 136° E. H = 07h. 59m. 09s.
 h = 400 km ± (U.S.C.G.S.).
 in Central Honshu, Japan.
 Mag. 6 $\frac{3}{4}$ - 7 (Pasadena).

	Shillong	E	LQ	08 11 16	
			iS	11 21	
			SS	11 42	
			SSS	11 53	
			LR	12 21	
			PcS	15 25	
	Poona	Z	iP	08 08 14	5,730
		N	PcP	09 30	
			PP	10 04	
			iS	15 35	
			PPS	15 50	
			LQ	13 07	
			SS	19 42	
			i	20 38	
	Hyderabad	E	P	08 09 10	4,560
		N, E	i	14 57	
		E	iS	16 59	
		N	L	20 43	
			M	24 33	Per. = 14 sec. $\mu = 3.$

28	New Delhi	N, E	eP	13 07 22	4,950 Moderate; deep focus.
			iS	13 58	
		N	iS	16 09	
			SS	17 30	
			LR	19 45	
			M	24 00	

31	Hyderabad	N	M	05 42 04	Per. = 15 sec. $\mu = 4.$
31	New Delhi	N, E	eP	08 00 40	6,450 Moderate.
		N	FP	02 52	
			PPP	04 12	
			eS	08 40	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s.	km.
May 1952	New Delhi	N	i	08 09 21	
(Contd)	(Contd)		i	10 25	
			SS	12 25	

- : Voluntary Observer's Report : -

The following table contains a list of Earthquakes reported by Voluntary Observer's from various stations for the month of May, 1952.

Place at which felt	Date	G.M.T. of earthquakes	Duration in secs	Intensity R.F.Scale	No. of shocks	Remarks.
		h. m.				
Srinagar	28.5.52	07 48	3	VI	2	Two shocks at an interval of one second.

S.M./13.1.54 *@@*@@*@@*@@*@@*



International
Seismological
Centre

GOVERNMENT OF INDIA
METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

JUNE 1952

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

Instruments and their constants

Station	Instrument	Compt.	Period in sec.	Static Magnification	Damping ratio	Paper speed mm/min.
Bombay	Milne-Shaw	N	12.0	350	6:1	16.0
	Milne-Shaw	E	12.0	350	3:1	8.0
	Sprengnether	E	7.0	-	-	30.0
Calcutta	Milne-Shaw	E	12.0	250	20:1	8.0
	Wood-Anderson	N	2.0	870	critical	30.0
	Omori-Ewing	N	18	32	-	25.4
	Omori-Ewing	E	19	30	-	25.4
Colombo	Milne-Shaw	N	12	250	20:1	8.0
Dehra Dun	Omori-Ewing	N	30	12.0	-	-
Hyderabad	Milne-Shaw	E	12.0	249	20:1	8.0
	Milne-Shaw	N	12	249	20:1	8.0
Kodaikanal	Milne-Shaw	E	10.0	250	20:1	8.0
New Delhi	Milne-Shaw	N	12.0	288	20:1	8.0
	Wood-Anderson	N	4.0	1000	20:1	16.0
	-do-	E	2.0	2000	30:1	60.0
	Omori-Ewing	E	30	30	1	12
Poona	Milne-Shaw	N	12.0	250	20:1	8.0
	Wood-Anderson	E	4.0	1100	20:1	16.0
	Sprengnether	E	$T_0=T_g=6.0$	-	-	30.0
	Benioff	Z	$T_0=1.0$	-	-	60.0
Shillong	Wood-Anderson	E	3.0	1070	20:1	30.0
	-do-	E	1.5	1500	10:1	60.0

SEISMOLOGICAL BULLETIN

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS.
June 1952				h. m. s.	Km	
1	Shillong	E	P	14 43 14	890	Slight
			PPP	43 29		
			LQ	44 34		
			S	44 46		
			SS	44 58		
			M(?)	45 34		
	New Delhi	N,E	eP	14 45 51	2170	Slight
			PP	46 08		
		E	i	46 21		
		N	eS	49 26		
			M	52 30		
	Bombay	N,E	eS	14 50 00		Very feeble

DATE	STATION	COMPT.	PHASE	G. M. T.	Δ	REMARKS
June 1952				h. m. s.	Km.	
2	Hyderabad	N	M	00 22 18		Per. 12Sec. $\mu = 3.0$
2						0= 02h. 54m. 22s. Near China (U. S. C. G. S) 0= 02h. 54m. 23s. Epc: Lat. 29° 3' N., Long. 95° 1' E., in Tibet (B.C.I.S.) 0= 02h. 54m. 27s. Epc: Lat. 29° 0' N., Long. 95° 0' E. (Shillong)
	Shillong	E	iP	02 55 39	550	Slight
			P*	55 48		
			PPP	55 53		
			Pg	56 04		
			LQ	56 26		
			iS	56 37		
			SS	56 48		
			S*	56 50		
			SSS	56 58		
			Sg	57 03		
	Calcutta	N	eP	02 56 46	970	Slight
			iS	58 25		
			S*	58 59		
			Sg	59 27		
	New Delhi	N,E	eP	02 58 09	1720	Slight
		E	PP	58 20		
			PPP	59 26		
		N,E	iS	03 01 02		
		E	SS	01 20		
		N,E	SSS	01 30		
		N	M	03 16		
	Hyderabad	E	eP	02 58 52	2310	
			S	03 02 40		
	Poona	Z	iP	02 59 26	2460	
		Z,E	PP	59 56		
			eS	03 03 26		
		Z	SS	04 20		
			LR	04 51		
		E	LR	04 53		
		N	M	06 13		
	Bombay	E	iP)	02 59 37	2590	Slight
		N	eP)			
		N,E	eS	03 03 46		
			LQ	04 12		
			M	06 00		
2	Shillong	E	iPg(?)	08 16 44		Slight, felt locally
			iSg(?)	16 47		
			i	17 10		
2						0= 10h. 08m. 03s. in Tibet (B.C.I.S.) 0= 10h. 08m. 32s. Epc: Lat. 31.5° N., 90° 0' E. (Shillong)
	Shillong	E	eP	10 09 50	560	Slight
			PP	09 58		
			P*	10 02		
			PPP	10 05		
			LQ	10 38		
			S	10 49		
			LR	10 53		
			SS	11 11 02		
			S*	11 05		
			SSS	11 12		



DATE	STATION	COMPT.	PHASE	G. M. T. h. m. s.	△ Km.	REMARKS
June 1952 2 (Contd.)	Calcutta	N	iP iS e?	10 10 40 12 28 13 00	1060	Slight; first movement south
	New Delhi	N,E N	iP PP LQ iS SS SSS M	10 11 26 11 34 13 26 13 39 13 53 14 05 15 16	1300	Slight
	Poona	Z E	iP PP PPP	10 13 05 13 23 13 35	2230	Slight
		N,E,Z N E Z E Z N E	S SS SS LQ SSS PcP M M	16 46 17 22 17 26 16 56 17 06 17 16 19 31 19 37		
✓	Bombay	N,E	eP eS LQ M M	10 13 09 16 51 17 03 19 54 19 59	2250	Slight Per.=7sec. $\mu=10$ Per.=7sec. $\mu=4$
✓	Hyderabad	E	eS L M	10 16 03 17 57 19 39		Per.=9sec. $\mu=4$
	Kodaikanal	E	e(SS)	10 19 06		Tremor
2	Epc. in Tibet O= 10h. 33m. 13sec. (B.C.I.S.)					
	Shillong	E	eP PP P* LQ iS SS S* SSS	10 35 06 35 13 35 15 35 48 36 00 36 11 36 15 36 22	500	Slight
	Calcutta	N	eP iS SS SSS	10 35 51 37 28 37 40 37 51	950	Slight
	New Delhi	N,E N N,E E N	eP PPP LQ iS SS SSS M	10 36 36 36 52 38 36 38 49 39 02 39 13 40 24	1300	Slight

DATE	STATION	COMPT.	PHASE	G. M. T. h. m. s.	△ Km.	REMARKS
June 1952 2 (Contd.)	Hyderabad	N E	eP eS L M M	10 27 41 41 21 43 10 44 40 44 47	2220	Per.=10sec. $\mu=5$ Per.=9sec. $\mu=3$
	Poona	Z Z,E Z E Z E	iP PP S LQ LQ SS SSS SSS LR M M	10 38 15 38 43 41 53 42 02 42 06 42 19 42 41 42 42 43 01 44 38 44 40	2200	Slight
	✓ Bombay	N,E N E N	iP eS LR LR M M	10 38 22 42 03 43 02 43 10 45 09 45 09	2250	Slight Per.=7sec. $\mu=4$ Per.=8sec. $\mu=9$
	Kodaikanal	E	e?	10 44 21		
2	Poona	Z	iP i i	18 01 03 04 13 04 35		Tremor
2	O=18h.06m.43s. off the coast of Mindanao, Philippines (USCGS) O=18h.06m.44s. Epc: Lat.7°0' N., Long. 126°0'E (BGIS)					
	Bombay	N,E	eP eS	18 16 11 23 37	5840	Feeble
2	New Delhi	N,E E N,F N E N	eP PP iS i i i	19 03 26 03 34 05 09 05 17 05 26 05 36	1000	Slight
	Poona	Z	iP i i i	19 05 22 06 38 06 51 10 04		Tremor
2	Poona	Z	i	22 48 08 48 11		
3	Poona	Z	i i	00 24 08 24 12		
3	New Delhi	N,E	eP PP i e LQ iS i i i i i i i	11 23 36 23 49 23 53 24 48 25 03 25 16 25 23 25 28 25 37 25 49 25 49 26 09	970	Slight

DATE	STATION	COMPT.	PHASE	G. M. T.		△	REMARKS
				h.	m. s.		
June 1952	Poona	Z	iP	11	25 25	2040	Slight
(Contd.)			PP		25 31		
			PPP		25 38		
		Z	iS)				
		E	eS)		28 47		
		Z,E	SS		29 11		
		Z	SSS		29 25		
		E	SSS		29 27		
			LR		29 45		
		Z	LR		29 45		
			M		31 06		
		E	M		31 08		
3	Shillong	E	iP	12	51 43	170	Slight
			PP		51 50		
			PPP		51 56		
			iS		52 04		
			SS		52 13		
			SSS		52 24		
3	Poona	Z	1	12	59 36		
3	O=13h. 21m. 12s. Epc.off the coast of Mindanao , Hokkaido Japan (U.S.C.G.S)						
	Poona	Z	iP	13	31 33		
3	O=18h.49m.10s. Epc:- Lat.5°05', Long.153°0E Solomon Is. h= 100Km.c.a.(U.S.C.G.S)						
	Poona	Z	iP	19	01 31		
	Bombay	N,E	eS	19	11 52		Very feeble
			ePS		12 33		
3	New Delhi	N,E	eP	23	26 44	980	Slight
		E	LQ		28 13		
		N,E	iS		28 25		
		N	SS		28 37		
			Sg		29 16		
	Poona	Z	i	23	28 32		
			i		28 36		
			i		28 59		
			i		29 10		
			i		29 15		
4	O=06h. 19m. 45s. Region frontier of Kashmir(U.S.C.G.S) O=06h. 19m. 49s. Epc:- Lat.37 $\frac{1}{2}$ °N., Long.79°0E (B.C.I.S)						
	New Delhi	N,E	P	06	22 03	930	Slight
		N	PP		22 11		
		E	i		22 15		
		N	i		22 22		
			iS		23 39		
			SS		23 49		
			S*		24 08		
			Sg		24 37		
	✓Bombay	N,E	eP	06	24 17	2280	Slight
			eS		28 02		
			LR		29 16		
		E	M		31 32		
		N	M		31 37		

Per.=8sec. $\mu=2$
Per.=9sec. $\mu=4$

DATE	STATION	COMPT.	PHASE	G. M. T.		△	REMARKS
				h.	m. s.		
June 1952	Poona	Z	iP	06	24 21	2050	Slight
(Contd.)		E	PP		24 36		
		Z	PP		24 38		
		E	PPP		24 42		
		Z	PPP		24 46		
		Z,E	S		27 44		
		E	SS		27 07		
			SSS		27 19		
		Z	SSS		27 20		
			LR		27 36		
		E	LR		27 40		
			M		30 20		
		Z	M		30 22		
	✓Hyderabad	N	P	06	24 25	2310	
			S		28 13		Per.=12sec. $\mu=12$
			M		31 43		
	Kodaikanal	E	eS	06	29 55		Tremor
5	Poona	Z	i	09	22 51		Tremor
			i		22 54		
			i		22 59		
5	New Delhi	E	ePg	21	35 58	18	Slight
			iSg		36 01		
7	Shillong	E	iP	01	04 05	450	Slight
			PP		04 12		
			S		04 53		
			SSS		05 12		
7	O=16h.01m.22s. Epc:- Near Hindukush h=220 Km.(B.C.I.S)						
	New Delhi	N,E	iP	16	03 26	620	Slight
		E	PP		03 44		
		N	LQ		04 33		
		N,E	eS		04 42		
			SS		04 53		
		N	S*		05 00		
		N,E	Sg		05 15		
8	New Delhi	N	eP	00	51 30		Moderate
	Shillong	E	iPg	01	50 19	60	Slight
			iSg		50 26		
8	O=09h. 19m. 58s. Epc:- Lat. 8.0S., Long.66.0E in the Indian Ocean (B. C. I. S.) Short distance						
	Kodaikanal	E	iP	09	28 52	1170	
			iS		30 52		
	Poona	N	e	09	30 21		Tremor
			e		33 06		
	Bombay	N,E	e	09	30 42		Feeble
		E	e		36 22		
8	New Delhi	N,E	eP	12	44 51	1440	Slight
		N	LQ		47 09		
		N,E	eS		47 18		
			SS		47 34		
			SSS		47 46		
		N	M		48 57		
10	Hyderabad	N	M	09	59 20		Per.=22sec. $\mu=11$

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

June 1952
 10 O = 09h. 58m. 27s. Epc: 154° S., 178½° E. near Fiji Island (U.S.C.G.S.).
 Mag. 6½ - 6½ (Pasadena, Praha), 6-7 (Roma), 6½ (Wellington), 6½ (Berkeley).

Bombay	N,E	e	10 16 00	12,340	Slight.
		PP	17 43		
		PS?	27 16		
Kodaikanal	E	e?	10 16 24		Long distant.
Colombo	E	PP	10 16 30		
		e	29 20		
		L	52 00		
		M	58 00		Amp = 0.3.
10 Poona	N	1	16 13 52		Tremor.
		i	21 00		
10 Hyderabad	N	e	23 51 21		
11					O = 00h. 31m. 36s. G.M.T. Epc: 32°1 S. 67°9 W. in the Province of San Juan, Arge
					O = 00h. 31m. 32s. (B.C.I.S.). Epc: 32° S., 67°5 W. (U.S.C.G.S.).
					Mag. 7 (Pasadena), 6½ (Wellington), 6½ (Roma).
Bombay	N,E	ePKP1	00 51 14		Moderate.
	E	PP	54 29		
	N,E	e	55 00		
		SKKS1	01 01 22		
		e	04 45		
		e	07 06		
		eSS	13 13		
	E	M	56 36		Per. = 18 sec. μ = 5.
	N	M	56 37		Per. = 18 sec. μ = 6.
Poona	E	1PKP	00 51 19		Tremor.
		M	01 46 00		
Colombo	E	PKP	00 51 44		
Colombo	E	L	01 41 19		
		M1	49 04		Amp = 0.5.
		M2	53 31		Amp = 0.5.
11 Bombay	N,E	e	17 23 00		Very feeble.
13 New Delhi	N,E	eP	21 55 11	1,370	Slight.
	N	eS	57 31		
15 Shillong	E	1Pg	06 14 39	60	Slight.
		P*	14 40		
		iSg	14 46		
		S*	14 47		
15 New Delhi	N,E	1Pg	07 43 49	20	Slight. Felt locally
		iSg	43 51		
15					O = 15h. 15m. 57s. Epc: 31°7 N., 92°0 E. (B.C.I.S.)
					O = 15h. 15m. 48s. South Eastern Tibet. (U.S.C.G.S.).
Shillong	E	eP	15 17 33	610	Slight.
		PP	17 40		
		P*	17 43		
		Pg	17 55		

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

June 1952
 15 Shillong (Contd) (Contd)

		E	LQ	15 18 27	
			iS	18 38	
			LR	18 43	
			SS	18 49	
			SSS	19 00	
			Sg	19 11	
Calcutta	N	iP	15 18 17	990	Slight.
		PP	18 26		
		iS	19 58		
		LR	20 17		
New Delhi	N,E	eP	15 18 54	1,340	Slight.
		iS	21 11		
		SSS	21 36		
	N	M	22 35		
Hyderabad	N,E	P	15 20 09	2,150	
	N	iS	23 42		
		L	25 30		
	E	L	25 39		
	N	M	26 48		Per. = 6 sec. μ = 6.
	E	M	27 06		Per. = 9 sec. μ = 11.
Poona	Z	iPY	15 20 38	2,360	
	E	ePY			
		PPP	21 10		
	N,Z	iSY	24 30		
	E	eSY			
		LQ	24 48		
		SS	25 05		
		SSS	25 24		
	N	LR	25 40		
		M	27 11		
Dehra Dun	N	eP	15 20 42	1,010	
		eS	22 32		
		eL	23 32		
		M	24 18		Per. = 10 sec. μ = 0.05.
Bombay	N,E	eP	15 20 43	2,380	Moderate.
		PP	21 11		
	E	iSY	24 37		
	N	eSY			
	N,E	LQ	24 52		
		SS	25 17		
		SSS	25 30		
	E	M	29 07		Per. = 8 sec. μ = 10.
	N	M	29 23		Per. = 8 sec. μ = 9.
Kodaikanal	E	eP?	15 21 30	3,040	Slight.
		iS	26 09		
		LR	28 18		
		M	30 30		Per. = 9 sec. μ = 6.4.
16 New Delhi	N,E	1Pg	14 33 28	20	Slight. Felt locally.
		iSg	33 30		
17					O = 12h. 02m. 33s. Epc: 132° E., 3° S. (Shillong).
Calcutta	E	iP	12 11 42	5,450	Slight.
		PPP	14 32		
		iS	18 46		
		?	23 02		
		SSS	23 44		
		M	29 52		

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
June 1952							
17	Hyderabad	E	eP	12	12	18	6,180
(Contd)		N	PP		14	14	
			S		20	04	
		E	L		30	29	
		N	M		34	55	Per. = 13 sec. $\mu = 5$.
	Poona	N	e	12	12	34	
			i		21	09	
	New Delhi	E	eP	12	13	27	6,300 Moderate.
		N	iS		21	19	
			ScS		23	15	
			SS		24	45	
	Bombay	N,E	eS	12	21	00	Feeble.
19	Calcutta	E	e	08	19	36	Slight.
			i		26	12	
			Mn		28	52	
	Shillong	E	i(S)	08	24	37	Feeble.
	Bombay	N,E	e	08	32	38	Feeble. Tremor.
19	O = 12h. 12m. 56s. G.M.T., Epc: 23° N., 100° E. in Southern Yunan Province, China. Mag. 6½ (Pasadena) (U.S.C.G.S.).						
	O = 12h. 12m. 56s. Epc: 22°6' N., 100°0' E. (B.C.I.S.).						
	Mag. 6½ (Pasadena), 6,5 (Roma), 7 (Praha).						
	O = 12h. 12m. 53s. Epc: 28°6' N., 100° E. (Shillong).						
	Shillong	E	iP	12	14	50	1050 Slight.
			PP		15	04	
			P*		15	11	
			Pg		15	22	
			LQ		16	29	
			S		16	37	
			SS		16	49	
			SSS		17	03	
			Sg/M		17	35	Amp = 5.
	Calcutta	E	iP	12	15	28	1,170 Great.
			PP		15	36	
			iS		17	28	
			LR		17	50	
	New Delhi	N,E	iP	12	17	42	2,370 Moderate.
			PP		18	04	
		N	iS		21	35	
			LQ		21	43	
			SSS		22	35	
			LR		23	06	
			M		24	32	
			Mn		25	35	Per. = 13 sec. $\mu = 87$
	Dehra Dun	N	eP	12	17	42	2,480
			iS		21	30	
			eL		24	30	
			M		25	42	Per. = 14 sec. $\mu = 0$.
	Kodaikanal	E	iP	12	18	19	2,860 Moderate.
			PP		18	53	
			iS		22	46	
			LR		24	55	
			M?		27	11	Per. = 12 sec. $\mu = 15$

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
June 1952							
19	Colombo	E	P	12	18	20	
(Contd)			S		22	50	
			L		28	05	
			M		31	07	Amp = 12.8.
	Poona	Z,N,E	iP	12	18	21	2,790 Moderate.
			PP		18	51	
			E		18	53	
			PPP		19	07	
		N,E	iS		22	44	
			LQ		23	30	
			LQ		23	36	
		N,E	SS		23	52	
			SSS		24	07	
		N,E	LR		24	45	
			M		27	00	Per. = 36 sec. $\mu = 15.0$.
	Bombay	N,E	eP	12	18	31	2,820 Moderate.
			PP		19	08	
			iS		22	56	
			LQ		23	00	
			SS		24	00	
			SS		24	44	
			LR		24	52	
			LR		24	54	
			M		31	13	Per. = 11 sec. $\mu = 67$.
			M		31	30	Per. = 13 sec. $\mu = 34$.
19	New Delhi	N	e	21	27	57	Moderate.
			i		45	31	
			e		22	09	37
	Bombay	N,E	e	22	06	00	Feeble surface waves.
20	O = 05h. 46m. 20s. G.M.T., Epc: 25°5' N., 122° E. in Taipei near North Coast of Formosa. (U.S.C.G.S.).						
	O = 05h. 46m. 17s. Epc: 24°3' N., 121°8' E. (B.C.I.S.).						
	O = 05h. 46m. 21s. Epc: 27°0' N., 121°5' E. to the North of Formosa in the Sea (Shillong).						
	Mag. 6½ (Pasadena, Berkeley, Praha), 6, 75 (Roma).						
	Shillong	E	iP	05	52	01	3,050 Slight. Probably a double shock.
			PP		52	23	
			iS		53	41	
			LQ		57	35	
			LR		59	10	
			M	06	01	29	Per. = 6 sec.
			ScS		02	49	
	Shillong	E	iP	05	52	10	3,090 Slight.
			PPP		53	05	
			iS		56	53	
	Calcutta	E	iP	05	52	34	3,460 Moderate.
			PP		53	41	
			PcP		55	27	
			iS		57	40	
			LQ		59	15	
			SSS		59	43	
			LR	06	00	22	
			M		03	22	
			Mn		06	17	Per. = 15 sec. $\mu = 164$.

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
June 1952	New Delhi	N,E	iP	05 53 51	4,350	Moderate.
20 (Contd)		E	PP	55 23		
		N,E	PPP	55 47		
		N	iS	59 52		
			i	06 00 34		
			SS	02 37		
			SSS	04 06		
			LR	04 41		
			M	07 39		
			Mn	12 40		Per. = 14 sec. $\mu = 49$
	Hyderabad	N	P	05 53 59	4,540	
			S	06 00 11		
			SS	03 28		
			L	06 05		
			M	09 47		Per. = 15 sec. $\mu = 32$
	Poona	E	iPY	05 54 34	4,910	
		N	ePY			
		E	PP	56 24		
		N	PP	56 27		
		N,E	PPP	56 58		
			PcS	06 00 03		
			iS	01 13		
		N	PPS	01 37		
			SS	04 27		
			LQ	05 04		
		N,E	SSS	05 35		
		N	LR	07 52		
			M	10 27		Per. = 15 sec. $\mu = 35$
	Bombay	N,E	iP	05 54 40	5,060	Moderate.
			PP	56 33		
		E	iSX	06 01 22		
		N	eSX			
		N,E	iPS	01 30		
			PPS	01 38		
		N	SS	04 37		
		E	SS	04 45		
		N	LQ	05 22		
		E	LQ	05 30		
		N	M	14 04		Per. = 12 sec. $\mu = 11$
		E	M	17 45		Per. = 10 sec. $\mu = 7$.
	Kodaikanal	E	iP?	05 54 41		
			iS?	06 01 11		
	Dehra Dun	N	eP	05 54 42	4,880	
			eS	06 00 18		
			eL	08 00		
			M	08 42		Per. = 24 sec. $\mu = 0$.
20	New Delhi	N	iP	18 47 57	660	Slight.
			Pg	48 23		
			eS	49 06		
			LR	49 12		
			Sg	49 45		
21	O = 06h. 28m. 57s. (Kuriles) Epc: 45° N., 154° E. (U.S.C.G.S.) Mag. 6½ (Pasadena).					
	New Delhi	N	iP	06 39 12	5,720	Moderate.
			PcP	40 00		
			PP	41 09		
			eS	46 32		
			PEL	46 53		
			SS	49 53		

DATE	STATION	COMPT.	PHASE	G. M. T.	△	REMARKS.
				h. m. s.	km.	
June 1952	Bombay	N,E	iP	06 40 16	7,760	Feeble.
21 (Contd)			eP	49 26		
	Hyderabad	N	M	07 10 45		Per. = 14 sec. $\mu = 5$.
21	New Delhi	N	iP	08 49 03	1,220	Slight.
		E	PPP	49 18		
		N,E	es	51 08		
		E	SSS	51 36		
		N,E	M	52 16		
22	O = 10h. 08m. 14s. (Kuriles) Epc: 46° N., 153° E. (U.S.C.G.S.) Mag. 6½ (Pasadena), 6-6½ (Praha).					
	New Delhi	N,E	P	10 18 29	6,670	Moderate.
		N	eS	26 41		
	Bombay	N,E	eP	10 19 40	7,810	Feeble.
		N	eS	28 52		
		E	e?	29 39		
	Hyderabad	N	M	10 46 57		Per. = 16 sec. $\mu = 8$.
22	O = 21h. 41m. 57s. Epc: 46°5 N., 155° E. (Shillong) O = 21h. 41m. 53s. G.M.T. Epc: 46° N., 155°5 E. in Kurile Island. (U.S.C.G.S.).					
	O = 21h. 41m. 54s. Epc: 46°8 N., 153°5 E. (B.C.I.S.). Mag. 7,3 (Praha), 7½ (Wellington), 7 (Pasadena, Roma), 6½ (Strasbourg) 6½ (Berkeley).					
	Dehra Dun	N	eP	21 50 12	6,200	
			eS	58 30		
			e	22 04 24		
			e	12 12		
			M ₁	15 12		Per. = 30 sec. $\mu = 0.10$.
			M ₂	18 02		Per. = 30 sec. $\mu = 0.18$.
	Shillong	E	iP	21 51 12		Moderate.
			PP(?)	53 17		
			PPP(?)	54 27		
			i	58 19		
			i	58 51		
			e	22 02 30		
			e	09 30		
			e	10 37		Per. = 16 sec.
	Calcutta	E	iP	21 51 48	6,260	Moderate.
			iS	59 38		
			ScS	22 01 36		
			LQ	05 43		
			LR	08 25		
			M	13 05		
			Mn	17 50		Per. = 15 sec. $\mu = 86$.
	New Delhi	N,E	iP	21 52 06	6,520	Moderate.
		N	PP	54 00		
			PPP	55 45		
			PcS	56 52		
			iS	22 00 10		
			PS	00 22		
			ScS	02 01		
			SS	04 09		
			i	04 44		
			SSS	06 21		
			i	07 10		
			M	14 10		
			Mn	20 24		Per. = 16 sec. $\mu = 110$.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
June 1952					
22	Hyderabad	N	P	21 52 53	7,510
			PP	55 30	
			S	22 01 50	
			SS	06 26	
			L	13 43	
			M	18 31	Per. = 19 sec. μ = 47.
	Poona	N,E	iP	21 53 10	7,690 Moderate.
			PP	55 40	
		N	PcS	57 25	
		N,E	iS	22 02 16	
			PS	02 38	
		E	PPS	02 50	
			SS	06 50	
		N	SS	06 52	
			LR	14 17	
			M	20 02	Per. = 17 sec. μ = 7.0.
		E	M	20 05	Per. = 28 sec. μ = 6.0.
	Bombay	N,E	iP	21 53 11	7,870 Moderate.
		N	PP	55 54	
		E	?	55 37	
		N,E	iS	22 02 26	
			PS	02 56	
			SS	07 00	
			LQ	11 12	
		N	LR	15 00	
		E	M	26 12	Per. = 15 sec. μ = 15.
		N	M	26 50	Per. = 15 sec. μ = 33.
	Kodaikanal	E	iP	21 53 28	8,250 Moderate, Lond distance.
			PP	56 13	
			PPP	57 58	
			iS	22 03 01	
			PS	03 37	
			SS	07 46	
			LQ	12 58	
			LR	16 25	
			M	22 43	Per. = 2.1 sec. μ = 35.
	Colombo	E	P	21 54 00	
			S	22 03 28	
			L	27 13	
			M	35 50	Amp = 1.3.
23	O = 12h. 03m. 09s. G.M.T. Epc: 24°5 N., 122° E. near Formosa. Mag. 5 $\frac{3}{4}$ (Pasadena) (U.S.C.G.S.).				
	O = 12h. 03m. 10s. Epc: 24°3 N., 121°8 E. (B.C.I.S.).				
	Shillong	E	iP	12 08 57	Slight.
			i	09 21	
			PP	09 46	
			e	10 42	
			iS	13 37	
			LQ	14 46	
			M	18 10	
			ScS	19 32	
	Calcutta	E	iP	12 09 17	Moderate.
			i	14 38	
			e	16 37	
			e	18 17	
			e	19 38	
			M	20 58	

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
June 1952					
23	New Delhi	N	eP	12 10 47	4,350 Moderate.
			PPP	12 38	
			iS	16 48	
			e	19 44	
			M	25 02	
	Bombay	E	eP	12 11 26	5,060 Slight.
		N	eP	11 30	
		N,E	eb	18 12	
		N	SS	21 24	
			SSS	22 25	
		N,E	M	30 00	
	Poona	N,E	eP	12 11 29	4,910 Moderate.
		N	PP	12 01	
		N,E	iS	18 04	
		N	PPS	18 26	
			SS	21 10	
			LQ	21 40	
			SSS	22 30	
			LR	23 40	
			M	27 55	
	Hyderabad	N	ePP	12 12 41	4,460
			S	17 12	
			SS	20 27	
			L	22 50	
			M	26 56	Per. = 13 sec. μ = 9.
24	O = 16h. 29m. 02s. Epc: 46 $\frac{1}{2}$ ° N., 154° E. (Kurile Island) (USCGS). Epc: 46°5 N., 152°5 E. (CMO, Japan). O = 16h. 29m. 03s. Epc: 46°8 N., 153°5 E. (B.C.I.S.).				
	Bombay	N,E	eP	16 40 27	
			eS(?)	49 23	
25	O = 23h. 19m. 58s. Epc: 31°5 N., 101°5 E. (Shillong) O = 23h. 19m. 58s. Epc: 31° N., 101° E. in China. O = 23h. 19m. 56s. Epc: 31°0 N., 101°5 E. (B.C.I.S.). Mag. 6 (Hana -).				
	Shillong	E	iP	23 22 16	Slight.
			PP	22 33	
			PPP	22 41	
			i	24 16	
			i	25 15	
			i(?)	25 27	
			i	25 30	
			SS	25 45	
			LR	26 15	
			PcP	26 46	
			M	27 53	
			ScP	31 00	
	Dehra Dun	N	eP	23 22 42	
			e	24 48	
			eL	27 30	
			M	28 42	Per. = 12 sec. μ = 0.06"
	Calcutta	E	iP	23 23 22	1,760 Moderate.
			iS	26 18	
			SSS	26 48	
			LR	26 57	
			M	28 07	
			Mn	29 51	Per. = 8 sec. μ = 116.

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	
June 1952							
25 (Contd)	New Delhi	N, E	eP	23	24	43	2,500 Moderate.
		N	PP		25	10	
			PPP		25	22	
			iS		28	38	
			LQ		28	55	
			SS		29	11	
			SSS		29	27	
			M		31	44	
	Hyderabad	N	1P	23	25	17	2,890
			iS		29	46	
			L		33	05	
			M		36	19	Per. = 12 sec. $\mu = 19.$
	Poona	N	eP	23	25	50	3,300
		N, E	PP		26	57	
		E	PPP		27	12	
		N, E	iS		30	46	
			LQ		32	12	
			SS		32	37	
			SSS		32	57	
		N	LR		33	38	
		N, E	M		36	26	
	Bombay	N, E	1P	23	25	54	3,120 Moderate.
			iS		30	39	
			LQ		31	54	
		N	SS		32	05	
			SS		32	09	
			SSS		32	27	
		N, E	LR		33	15	
		N	M		35	30	Per. = 7 sec. $\mu = 10.$
		E	M		40	36	Per. = 7 sec. $\mu = 6.$
	Kodaikanal	E	e?	23	31	19	Slight.
	Colombo	E	S	23	31	28	
			e		37	20	
			L		43	18	
26	Shillong	E	i	00	29	26	Slight.
			i		29	35	
			i		30	01	
			i		30	09	
			i		31	59	
			i		33	37	
	Calcutta	E	i	00	29	51	Slight.
			i		32	14	
26	Bombay	N, E	e?	13	19	27	
27	C = 13h. 09m. 14s. Epc: 40°8 N., 23°7 E. (B.C.I.S.).						
	Bombay	N	eP	13	18	16	
			e?		26	52	
29	Shillong	E	eP	14	19	02	Feeble.
			iPg		19	21	
			iLQ		19	48	
			iS		14	59	
			iSg		20	25	
29	Shillong	E	i	15	45	43	Feeble.
			i		45	46	



17

DATE	STATION	COMPT.	PHASE	G. M. T.			REMARKS.
				h.	m.	s.	km.
June 30	Shillong	E	e	16	02	42	
			i		03	24	Feeble.
			i		03	43	
			i		03	45	
			i		03	51	

- : Voluntary Observer's Reports : -

The following table contains a list of earthquakes reported by Voluntary Observer's from various stations for the month of June, 1952.

Place at which felt	Date	G.M.T. of earthquakes		Duration in secs	Intensity R.F. Scale	No. of shocks	Remarks.
		h.	m.				
Mandla (M.P.)	29.6.52	14	12	5	VIII	1	Mild.

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S.M.22.1.54



GOVERNMENT OF INDIA

METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

July, 1952.

Published under the direction of

S. C. Roy, D. Sc. (Lond), F.N.I.

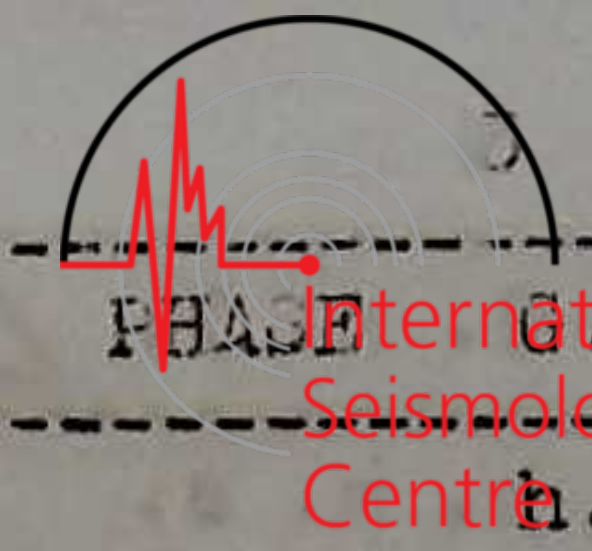
Director General of Observatories.

Instruments and their Constants.

Station	Instrument	Compt.	Period in sec.	Static Magnification	Damping ratio	Paper Speed mm/min
Bombay	Milne-Shaw	N	12	350	7:1	16.0
	Milne-Shaw	E	12	350	3:1	8.0
	Sprengnether	E	7	-	-	30.0
Calcutta	Milne-Shaw	E	12	250	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
Colombo	Milne-Shaw	E	12	250	20:1	8.0
Dehra Dun	Omori-Ewing	N	30	12	-	-
Hyderabad	Milne-Shaw	E	12	250	20:1	8.0
	Milne-Shaw	N	12	250	20:1	8.0
Kodaikanal	Milne-Shaw	E	10	250	20:1	8.0
Madras	Sprengnether	E	7.5	-	-	35.0
New Delhi	Milne-Shaw	N	12	288	20:1	8.0
	Wood-Anderson	N	4	1000	20:1	16.0
	Wood-Anderson	E	2	2000	30:1	60
	Omori-Ewing	E	30	30	-	12.0
Poona	Milne-Shaw	N	12	250	20:1	8.0
	Wood-Anderson	E	4	1100	20:1	16.0
	Sprengnether Benioff	E Z	To = Tg=6.6 To =1.0	- Tg = .28	- Critical	30.0 60.0
Shillong	Wood-Anderson from 16.7.53	E	1.5 upto 16.7.53	1300(?)	10:1	60.0
	-	-	1.5	1500(?)	6:1	30.0
	Wood-Anderson from 16.7.53	E	3.0 upto 16.7.53	1070	20:1	30.0
	-	-	3.0	1070	20:1	60.0

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
July 1952					
1	Bombay	E	e	01 11 05	Not clear in N comp. record.
1	New Delhi	N,E E N	eP i i	18 01 58 03 34 03 38	Slight, near.
3	New Delhi	N,E E N,E	eP PP iS SS	06 03 36 03 44 04 25 04 35	450 Slight.
3	New Delhi	E N,E	eP iS SS SSS S* Sg	23 00 57 02 21 02 31 02 39 02 45 03 09	810 Slight.
5	Epc: 36½° N., 71° E., Hindukush. O = 17h. 19m. 39s. (Poona). Felt at Srinagar, Gulmerg, Peshwar, Lahore, Nathiaga Probable clock correction + 2 min. and Rawalpindi (P) Rep				
	Dehra Dun	N	eP e eS? M	17 19 42 20 39 21 12 21 32	960? Per. = 5 sec. $\mu = 0.04$.
	New Delhi	N,E N	P PP i iP* i iPg iQ iS Sg	17 22 00 22 07 22 20 22 24 22 48 22 51 23 35 23 46 24 53	1,020 Moderate.
	Bombay	N E N N,E N E N	iP eP iS PP PPP SS SSS M? M?	17 23 45 23 40 27 02 23 57 24 04 27 20 27 34 28 54 29 19	1,980 Slight.
	Poona	E	iP PP PPP iS SS SSS LR PcP M	17 23 48 24 03 24 11 27 02 27 23 27 36 27 55 28 17 29 13	1950 Moderate.
	Hyderabad	N,E N N,E E N	iP i iS L M	17 24 10 27 42 27 49 30 02 32 00	2,210 Per. = 6 sec. $\mu = 7$.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
July 1952					
5 (Contd)	Shillong	E	iP PP PPP iS LQ SS SSS LR M ScP ScS	17 24 16 24 35 24 44 27 57 28 07 28 18 28 32 28 56 30 36 31 49 35 27	2,230 Slight.
	Calcutta	N	iP PP iS LQ? ? SS	17 24 16 24 34 27 56 28 05 28 12 28 26	2,220 Moderate.
	Madras	E	iP PP PPP ? iS LQ SS SSS LR M	17 24 51 25 11 25 34 25 53 28 57 29 26 29 43 29 56 30 33 32 17	3,570 Moderate. Per. = 5 sec.
	Kodaikanal	E	e? e M	17 26 25 30 21 33 36	Slight.
6	Shillong	E	e e e	20 26 56 27 07 27 16	Slight. Tremor.
7	New Delhi	N N,E	eP LQ eS SSS M	01 44 44 42 49 42 59 43 25 44 21	1,320 Slight.
9	New Delhi	N N,E E	eP iS SS SSS	11 44 45 46 24 46 34 46 45	960
12	Shillong	E	P* Pg P PP S* Sg S SS	22 16 00 16 01 16 02 16 08 16 14 16 15 16 16 16 26	120 Slight.
13	Epc: 18½° S., 169½° E., New Hebrides Islands; H = 11h. 58m. 34s. L = about 300 kms (U.S.C.G.S.). Mag. 7 (Pasadena).				
	Kodaikanal	E	iS? i i	12 21 43 22 27 23 17	Slight.



DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
July 1952					
13 (Contd)	Shillong	E	eP PP(?) iSKS S(?) i i	12 10 55 9,260 12 01 20 58 21 16 22 39 23 02	Moderate.
	Hyderabad	E N,E N E	eP i i L M	12 11 22 9,300 21 45 22 33 39 22 45 16	Per. = 12 sec. $\mu = 3$
	New Delhi	N,E N	e iSKS ₁ iSKS ₂ iSKK3 iPS PPS	12 11 56 11,920 22 04 22 37 22 56 25 12 26 07	Moderate.
	Calcutta	E	e? PPP iSKS iS i PPS i e	12 12 15 9,380 16 18 21 11 21 34 22 16 23 08 27 23 38 53	Moderate. Microseisms in the record.
	Poona	E	PP iSKS iS i	12 16 05 22 09 23 14 25 15	Slight.
	Bombay	E N N, E E N,E N N,E	e e e PPP iSKS ₁ e iS i e e e	12 16 19 11,110 16 25 17 43 18 28 22 13 22 54 23 23 24 13 24 53 25 25 26 10	Moderate.
	Colombo	E	SKS(?) e e	12 21 22 27 44 39 32	Amp = 0.4.
	Madras	E	iSKS iS	12 21 35 22 13	Moderate.
13	Epc:			3° S., 128° E. Ceram Sea. H = 17h. 34m. 26s. (USO)	
				3° S., 127° E. O = 17h. 34m. 36s. (Pool)	
	Mag. 6 $\frac{1}{4}$ - 7 (Pasadena).				
	Shillong	E	iP i i PP i PPP e S PS	17 42 44 4,840 42 53 43 13 44 23 44 47 45 01 45 39 49 14 49 20	Moderate.

DATE	STATION	COMPT.	PHASE	G. M. T.	REMARKS.
				h. m. s. km.	
July 1952					
13 (Contd)	Shillong	E	PPS i e SS	17 49 27 50 24 52 08 52 21	
	Calcutta	N	iP iS SS	17 43 03 5,020 49 43 52 54	Moderate.
	Colombo	E	P S L M	17 43 15 5,220 50 07 59 47 18 03 45	Amp = 0.7mm.
	Madras	E	iP PP PPP ScP iS PPS ScS SS LR M	17 43 26 45 19 46 27 48 27 50 46 51 06 53 10 54 42 59 23 18 04 12	Moderate.
	Kodaikanal	E	eP PcS eS ScS LR M	17 43 34 5,580 48 48 50 46 53 30 57 54 18 02 02	Slight.
	Hyderabad	E N E N	iP PP iS ScS SS L M M	17 43 45 5,690 45 53 51 04 53 30 55 05 58 36 18 04 05 05 20	Per. = 24 sec. $\mu = 24$. Per. = 20 sec. $\mu = 17$.
	Poona	N,E N E	iP PcP PP PPP iS iS PS PS PPS ScS SS SSS LR	17 44 17 6,070 45 21 46 24 47 48 52 01 52 02 52 02 52 10 52 16 53 59 55 54 57 32 58 36	Slight.
	New Delhi	N,E N	eP PP PPP iS PPS ScS SS SSS LQ LR M	17 44 18 6,260 46 39 48 00 52 08 52 26 54 05 55 45 58 15 58 49 18 01 23 06 58	Moderate.



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1952
13
(Contd)

Bombay

N,E	eP	17 44 25	6,310	Moderate.
	PP	46 29		
	PPP	47 45		
N	PP	47 32		
E	iS	52 18		
N,E	iPS	52 32		
N	PPS	52 43		
	PPS	52 47		
E	i?	53 32		
	iScS	54 17		
	iScS	54 08		
N	i?	55 34		
E	SS	55 51		
N	SS	56 13		
E	SS	56 13		
N,E	LQ	58 00		
	LR	18 01 00		

14	New Delhi	E	eP	18 25 29	310	Slight.
			LR	26 00		
			eS	26 04		
	N,E		S*	26 10		
			Sg	26 16		
			SSS	26 25		

17 Epc: $34\frac{1}{2}^{\circ}$ N., 136° E., Southern Honshu, Japan. Many casualties and moderate property damage.
H = 16h. 09m. 52s. h = about 100 km (U.S.C.G.S.).
Mag. 7 (Pasadena). 35° N., 135° E* 0 = 16h.09m.50s
* Japan.

Shillong	E	iP	16 17 11	4,120	Moderate.
		i	17 27		
		i	18 22		
		PP	18 39		
		S	22 58		

Calcutta	N	iP	16 17 55	4,670	Moderate.
		PP	19 33		
		iS	24 09		
		ScS	28 01		

Dehra Dun	N	e	16 17 42?		
		eS	25 12		
		eL	35 30		
		M	35 57		Per. = 22 sec. $\mu =$

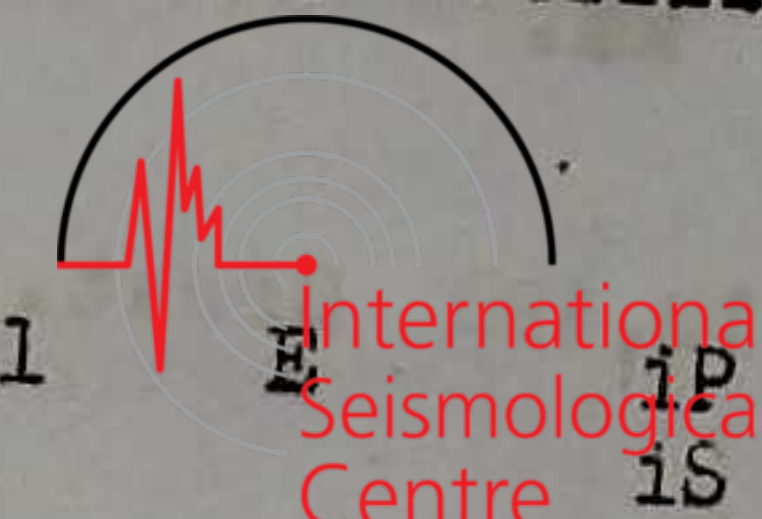
New Delhi	N,E	iP	16 18 37	5,410	Moderate.
	N	PP	20 33		
		iS	25 39		
		i	26 07		
		iSS	29 15		
		i	29 51		
		SSS	30 21		
		LR	32 20		
		M	35 19		
		Mn	36 48		Per. = 28 sec. $\mu =$

Hyderabad	N	iP	16 19 04	5,920	
		iS	26 35		
		L	35 02		
		M	39 02		Per. = 23 sec. $\mu =$

Madras	E	iP	16 19 10	6,040	Moderate.
		PcP	20 00		
		PP	21 22		
		PPP	22 28		
		iS	26 48		
		PS	27 01		
		LQ	32 43		
		M	40 08		Per. = 9 sec.

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1952
17
(Contd)

Kodaikanal



h. m. s. km.

Bombay	N,E	iP	16 19 36	6,340	Moderate.
		PP	21 45		
		PPP	23 09		
	E	i?	24 30		
	N,E	iS	27 30		
		PS	27 48		
		PPS	27 59		
		SS	31 20		
		SSS	33 31		
		LQ	34 00		
	E	LR	36 00		
	N	LR	37 00		

Colombo	E	P	16 19 42		
		S	27 44		
		L	38 47		
		M	42 29		Amp \pm 0.5 mm.

Poona	Z	iPY	16 39 31	6,150	Moderate.
	N,E	ePY			
	E	PcP	19 53		
		PP	21 26		
	N	PP	21 30		
		PPP	21 43		
	E	PcP	23 04		
		eSX	27 16		
	N	iSX			
	E	PS	27 36		
		PPS	27 45		
	N	PPS	27 46		
	E	ScS	29 09		
		SSS	33 59		
		LR	37 31		

18	Poona	Z	e	09 01 40		
			i	01 55		

18	Hyderabad	N	M	20 04 32		Per. = 16 sec. $\mu = 5.$
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21 Epc: $35^{\circ}1$ N., $118^{\circ}9$ W., Tulare Valley, Southern California. Several killed and extensive property damage.
H = 11h. 52m. 11.5s. (U.S.C.G.S.).
Mag. $7\frac{1}{2}$ (Pasadena).

New Delhi	N	ePKP	12 10 24	13,290	Great.
		iPP	11 51		
		PPP	14 23		
		i	16 27		
		SKS	17 36		
		SKKS	18 55		
		iPS	21 26		
		iPPS	22 53		
		i	25 39		
		SSP	28 27		
		SSS	32 34		
	PKP/SKS		37 29		
		LR	47 51		
		M	55 51		
		Mn	13 07 57		Per. = 17 sec. $\mu = 79.$

DATE STATION h. m. s. km.

July 1952
21 Shillong (Contd) E ePKP 12 10 30 12,490 Great.
PP 11 12
e 13 02
PPP 13 36
PKS 14 14
SKS 17 16
e 19 31
PS 21 15
PPS 22 24
SS 27 09
SSS 31 17
LQ 38 47
e 43 10
e 46 22

Poona Z N iPKP 12 11 17 14,220 Great.
PP 13 07
PKS 14 34
PPP 15 55
SKS 18 38
SKKS 20 04
SKKS 21 48
PS 23 07
PPS 24 41
i 26 34
SS 30 21
SSP 31 00
SSS 35 20
LR 50 21
M 13 01 00

Colombo E PKP 12 11 30
e(PPS) 26 30
e 57 50
M₁ 13 03 10 Amp₁ = 2.2mm.
M₂ 06 32 Amp₂ = 2.1mm.

Dehra Dun N e 12 11 30
e 19 54
e 35 12
eL 50 32
M₁ 13 01 42 Per. = 24 sec. Amp₁ = 0
M₂ 07 06 Per. = 24 sec. Amp₂ = 0

Bombay N,E ePKP 12 11 37 13,980 Moderate. Strong microseisms in records.
PP 13 26
E PPP 15 53
N PPP 16 00
N,E SKS 18 30
N i? 19 52
E PS 23 17
N PS 23 21
E PPS 25 14
N,E ISS 30 24
N M 13 15 00 Per. = 18 sec. $\mu = 4$
E M 09 10 Per. = 24 sec. $\mu = 3$

Calcutta E i 12 12 18 13,340 Great. Strong microseism in the record.
PPP 16 18
SKS₁ 19 15
SKS₂ 19 28
SKKS₁ 20 42
PKKP₂? 22 17
PKKP₁ 22 42
e? 28 30
SKKKS? 32 43
LQ 43 20
LR 49 48

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

July 1952
21 Hyderabad (Contd) N PP 12 13 07
e 14 31
e 19 45
E e 30 28
e 44 19
e 56 58

Madras E PP 12 13 34
1 14 44
1 26 40 Per. = 18 sec. $\mu = 67$.
Great. Strong microseism in the record.

Kodaikanal E 1(PKS) 12 14 56 13,110 Moderate.
PPP 16 28
e 19 04
e 37 36
e 46 53
LR 52 37
M 13 02 38 Per. = 25 sec. $\mu = 64$.

22 New Delhi N,E eP 03 33 43 980 Slight.
E i 33 47
PP 33 51
eS 35 24
SSS 35 44
S* 35 57

23 Hyderabad N M 00 02 39 Per. = 22 sec. $\mu = 10$.
23 Epc: Aftershock of earthquake shock of 21d. 11h. 52m.
H = 00h. 38m. 33s. (U.S.C.G.S.).
Mag. 6 (Pasadena).

Hyderabad N,E e? 00 56 10
Poona Z ePKP 00 57 33
1 57 49
i 57 59

24 Epc: 42° N., 145° E., Off East Coast of Hokkaido, Japan.
Felt: Hokkaido and Northern Honshu.
H = 22h. 09m. 20s. h = about 60km (U.S.C.G.S.).

New Delhi N,E eP 22 18 52 6,050 Moderate.
N PP 20 57
PcS 23 56
iS 26 30
ScS 28 43
SS 30 20

Poona Z 1P 22 19 53 Very feeble.
e 20 11

Hyderabad N M 22 51 06 Per. = 18 sec. $\mu = 9$.

Hyderabad N M 15 03 14 Per. = 18 sec. $\mu = 8$.

25 Epc: 19° N., 95° E., Lower Burma. 0 = 14h. 26m. 45s. (Poona),
Felt at Rangoon (Press Report).

Shillong E 1P 14 28 33 800 Slight.
PP 28 41
PPP 28 47
P* 28 50
Pg 29 07
LQ 29 43
iS 29 56
SS 30 09
SSS 30 19
Sg 30 39

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS.
				h. m. s.	km.	
July 1952						
26 (Contd)	Calcutta	N	iP iS SS	14 28 38 29 56 30 07	760	Slight.
	New Delhi	N,E	P PP PPP	14 31 03 31 19 31 27	2,080	Slight.
		N	iS SS LR	34 29 34 48 35 16		
	Poona	N,E E	iP PPP eS LQ LR	14 31 16 31 40 34 53 35 04 35 56	2,190	Slight.
	Bombay	N N,E	i(S) i	14 35 08 35 57		Feeble.

27 Epc: 20½° S., 179° W., Fiji Islands;
H = 08h. 23m. 22s. (U.S.C.G.S.)
h = about 500 kms.

	Hyderabad	E	e iS i e	08 40 43 47 44 51 20 59 53		Per. = 15 sec. $\mu = 6$. Per. = 12 sec. $\mu = 3$.
		N	e	09 00 10		
	Colombo	E	e e	08 41 02 50 10		
	Bombay	N,E E N,E N E N,E E	ePKP e e i SKS(?) e e e e e e	08 41 39 42 17 44 43 47 13 48 25 49 14 49 19 52 01 53 22 57 40 09 02 02 16 00	12,190	Slight.
	New Delhi	N	e e i i i i i	08 43 10 45 47 47 01 48 07 48 33 48 55 51 33		Moderate.
	Kodaikanal	E	i?	08 46 44		Slight.
	Poona	E Z E	i i i e	08 47 07 47 52 51 02 51 43		Feeble.
27	Hyderabad	N	M	19 36 49		Per. = 18 sec. $\mu = 6$.
27	Poona	Z	iP i i	20 07 15 07 18 07 30		

DATE	STATION	COMPT.	PHASE	G. M. T.		REMARKS.
				h. m. s.	km.	
July 1952						
7	Shillong	E	Pg Sg PP/S PPP SS	20 59 23 59 27 59 35 59 41 59 45	40	Slight. Felt locally.
31	Shillong	E	Pg P*	17 30 04 30 06	55	Moderate. Felt locally.
	Shillong	E	P Sg PP S SS	17 30 08 30 10 30 14 30 16 30 20		

- : Voluntary Observer's Reports : -

The following table contains a list of Earthquakes reported by Voluntary Observers from various Stations for the month of July, 1952.

Place at which felt:	Date	G. M. T. of Earth- quakes	Duration	Intensity R. F. Scale	No. of shocks	Remarks.
		h. m.				
SriNagar	5.7.52	17 30	5	VII	3	Three shocks at an interval of one second.
Gulmerg	6.7.52	17 30	5	VII	3	Three separate shocks at an interval of one second.
Peddur	23.7.52	01 00 to 01 30	A few Secs	-	-	Slight.
Shillong	27.7.52	21 00	30	VI	1	
Gauhati	31.7.52	17 30	10	VI	1	
Shillong	31.7.52	17 31	45	VI	2 to 3	

S.M./19.1.54

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