

June all



STATE	STATION	NO.	DATE	TIME	MAGNITUDE	DEPTH	LOCATION
ANDHRA PRADESH	RAJAHMUNDRAM	101	1961	10:15	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	102	1961	10:30	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	103	1961	10:45	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	104	1961	11:00	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	105	1961	11:15	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	106	1961	11:30	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	107	1961	11:45	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	108	1961	12:00	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	109	1961	12:15	2.5	10	10° 15' N, 82° 45' E
ANDHRA PRADESH	RAJAHMUNDRAM	110	1961	12:30	2.5	10	10° 15' N, 82° 45' E

GOVERNMENT OF INDIA
METEOROLOGICAL DEPARTMENT

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June, 1961



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List of Seismograph Stations with their Instruments and Constants

STATION	LATITUDE	LONGI-TUDE	HEIGHT a. s. l. (Metres)	LITHOGRAPHIC FOUNDATION	INSTRUMENT	COMPT.	PERIOD IN SECS	STATIC MAGNI- FICATION	DAMPING RATIO	PAPER SPEED mm/min.
BOMBAY	18°54'N	72°49'E	5	Deccan Trap	Milne-Shaw	N	12	350	13:1	15
					Milne-Shaw	E	12	350	23:1	8
					Sprengnether	E	To = Tg = 7 secs		30	
BOKARO	23°50'N	85°48'E	-	Rock	Milne-Shaw	N	12	250	20:1	16
					Milne-Shaw	E	12	250	20:1	16
					Wood-Anderson	E	0.8	950	h = 0.8	60
					Wood-Anderson	N	0.8	1000	h = 0.8	60
CALCUTTA	22°32'N	88°22'E	(1) 7 (2) 6	(Milne-Shaw) (Omori-Ewing) Alluvium	Milne-Shaw	E	12	250	20:1	8
					Wood-Anderson	N	2	870	Critical	30
					Omori-Ewing	N	16	32	-	25.4
					Omori-Ewing	E	21	30	-	25.4
CHATRA	26°50'N	87°10'E	161	Sand Stone	Milne-Shaw	E	12	250	20:1	16
					Wood-Anderson	N	1	1000	30:1	60
					Benioff	Z	To = 0.72 Tg = 0.45 secs.		Critical	
					Wenner-Accelerograph	ZNE	-	-	-	-
COLOMBO	06°54'N	79°52'E	7	Beach Sand	Milne-Shaw	E	12	250	20:1	-
DEHRA DUN	30°19'N	78°02'E	682	Gravel	Wood-Anderson	N	0.8	950	Critical	60
					Wood-Anderson	E	0.8	850	Critical	60
					Milne-Shaw	N	12	250	20:1	8
					Milne-Shaw	E	12	250	20:1	8
HYDERABAD	17°26'N	78°27'E	536	Granite	Milne-Shaw	E	12	250	20:1	8
					Milne-Shaw	N	12	250	20:1	8
KODAIKANAL	10°14'N	77°28'E	2346	Rock	Milne-Shaw	E	10	250	20:1	8
MADRAS	13°00'N	80°11'E	15	-	Sprengnether	E	To=Tg=72 secs		Critical	30
NEW DELHI	28°35'N	77°12'E	207	Massive Quartzite						
POONA	18°32'N	73°51'E	560	Deccan Trap	Sprengnether	Z	To=Tg=1.5		Critical	30
					Wood-Anderson	E	4	1000	20:1	15
					Milne-Shaw	N	12	280	20:1	8
PORT BLAIR	11°49'N	92°43'E	-	-	Wood-Anderson	N	2	1000	20:1	30
					Wood-Anderson	E	0.8	1000	66:1	30
					Milne-Shaw	N	12	350	20:1	8
SHILLONG	25°34'N	91°53'E	1600	Quartzite Sand Stone (Shillong Quartzite)	Wood-Anderson	N	0.8	1000	h = 0 h = 0.8	30
					Wood-Anderson	E	0.8	1000	h = 0.8	30
					Milne-Shaw	N	12	250	20:1	8
					Benioff	Z	To = 1.0 Tg = 0.18		50	
					Sprengnether	E	To = Tg = 5.5		Critical	30
					Wenner Accelerograph	ZNE	-	-	-	-
TOCKLAI	28°45'N	94°45'E	-	Alluvium	Wood-Anderson	E	0.8	970 h = 0.8	60	
VIZIANAGRAM	18°07'N	83°27'E	-	-	Wood-Anderson	E	0.8	1000 h = 0.8	30	
					Wood-Anderson	N	2	1000	20:1	30

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

June 1961.

01	Shillong	Z	iPg iSg	03 42 20 42 31	100	Slight.
01	Shillong	Z	eP	09 03 16		Slight near.
01	Shillong	Z	eP	13 39 56		Slight, distant.
01	Shillong	Z	iP iSg	13 53 58 54 10	100	Slight.
01	Shillong	Z	eP	18 53 20		Slight, distant.
01	Epc:- 10.6°N, 39.3°E Ethiopia -H= 23h 29m 21.1s (USCGS). -h= 51 km Considerable damage at Karo-Kore Felt: Addisababa. 9°N, 39°E Ethiopia. -H= 23h 29m 05s (Shillong) Mag:- 6½-6¾(Pas), 6½(Pal).					
Bombay	NE	E	eP	23 35 59	3890	
			PP	37 06		
			eS	41 31		
			LQ	43 52		
			LR	44 55		
			M	45 29		
Poona	Z	N	iP	23 36 05	4000	Initial ground motion towards East & Compression.
			PPP	37 48		
			iS	41 44		
			PcS	42 09		
			e	43 59		
			SS	44 08		
Hyderabad	E	EN	iP	23 36 41	4350	Initial ground motion towards West.
			PP	38 09		
			PcS	42 18		
			iS	42 42		
			SS	45 14		
			LR	47 38		
Madras	E	N	M	50 14	4570	Initial ground motion towards East.
			M	50 17		
			iP	23 36 51		
			PP	38 25		
			PPP	38 58		
			PcS/ScP	42 39		
Dehra Dun	ZNE	N	iS	43 05	4740	
			e	45 08		
			LQ	46 07		
			SSS	46 41		
			LR	48 20		
			M	52 04		

DATE	STATION	COMPT	PHASE	G. M. T h. m. s.	△ km	REMARKS
June 1961 . . . (contd)						
01	Bokaro	NE	iP	23 37 44	5340	
			PcP	39 01		
			PP	39 31		
			PPP	40 26		
			i	41 00		
			ScP	42 52		
			S	44 42		
			SS	48 13		
			e	52 08		
			M	56 56		
			Mn	00 02 45		Period= 15 sec. Gr. dis= 15 μ
	Chatra	ZNE	eP	23 37 54	5410	
			PcP	39 13		
			PP	39 43		
			PPP	40 35		
			iS	44 56		
			PS	45 07		
			ScS	47 50		
			SS	48 30		
			LQ	49 33		
			SSS	49 43		
			LR	51 50		
		E	M	00 02 03		Period= 13 sec. Gr. dis= 25 μ
		N	M	00 05 06		Period= 11 sec. Gr. dis= 17 μ
	Calcutta	E	eP	23 38 02	5520	
			iS	45 11		
			SS	48 47		
	Vishakhapatnam	E	iP	23 38 20	4760	Initial ground movement towards East. <u>Probably 1mt. error in absolute timings.</u>
			PP	40 04		
			PPP	40 53		
			ScP	43 35		
			iS	44 55		
			e	45 03		
			e	45 13		
			ScS	47 59		
			SS	48 15		
			LQ	49 13		
			SSS	49 25		
			LR	51 24		
			M	54 34		Period= 7 sec, amp= 19 mm.
	Shillong	ZNE	eP	23 38 23	5920	
		NE	iS	45 54		
			PS	46 05		
			PPS	46 12		
			SS	49 35		
			SSS	51 19		
			LR	53 48		
			M	58 15		
		N	Mn	00 04 -		Period= 14 sec. Gr. dis= 10 μ
	Port Blair	E	eP	23 38 28	5890	
			iS	45 57		
			M	52 28		
	Tocklai	E	eP	23 38 44		Distant.



DATE	STATION	COMPT	PHASE	G. M. T h. m. s.	△ km	REMARKS
June 1961 . . . (contd)						
02	Shillong	Z	iP	00 59 34		Slight, near.
02	Epc:- 9°N, 38°E Ethiopia Aftershock. -H= 04h 50m 56s (Shillong). 9.8°N, 40°E Ethiopia. -H= 04h 51m 10.4s (USCGS) -h= 41 km. Felt. Addisababa. Mag: 6 $\frac{1}{4}$.6 $\frac{1}{2}$ (Pas).					
	Bombay	E	eP	04 57 50	3890	
			e	58 59		
		NE	PP	59 20		
			eS	05 03 22		
			LR	07 00		
	Poona	Z	eP	04 57 59	4010	
		N	PP	59 18		
			PPP	59 41		
			iS	05 03 39		
			PcS	04 08		
			SS&LQ	05 53		
			LR	07 41		
			ScS	08 11		
			M	10 42		
	Hyderabad	E	iP	04 58 35	4280	Initial ground motion towards West.
			PP	59 56		
			PcS	05 04 11		
		EN	iS	04 32		
		E	SS	07 23		
			LR	09 02		
			M	12 11		Period= 15 sec. Gr. dis= 11 μ
		N	M	12 53		
	Madras	E	iP	04 58 43	4570	Initial ground motion towards West.
			PP	05 00 18		
			PPP	00 47		
			PcS/ScP	04 28		
			iS	04 57		
			SS	04 49		
			LQ	08 21		
			SSS	08 31		
			ScS	08 42		
			LR	11 02		
			M	14 28		
	Dehra Dun	ZNE	eP	04 58 57	4760	
		N	PP	05 00 39		
			PPP	01 24		
			iS	05 22		
			SS	08 22		
			SSS	09 09		
			LR	10 50		
			M	19 56		
	Bokaro	NE	eP	04 59 35	5370	Initial ground movement towards West.
			e	05 00 43		
			PP	01 54		
			e	04 47		
			iS	06 35		
			i	09 57		
			e	11 13		
			e	11 57		
			i	14 50		
			M	23 01		

DATE	STATION	COMPT	PHASE	C. M. T. h. m. s.	Δ km.	REMARKS
June 1961 . . . (contd)						
02	Chatra	ZNE	eP	04 59 49	5300	
			PcP	05 01 24		
			PP	01 41		
			PPP	02 33		
			PcS	05 18		
			S	06 45		
			ScS	09 54		
			SS	10 19		
			LQ	11 17		
			SSS	11 28		
			LR	13 33		
		N	M	26 27		Period= 13 sec. Gr. dis= 11 μ
		E	M	28 29		Period= 10 sec. Gr. dis= 5 μ
	Calcutta	E	iP	04 59 54	5390	Initial ground motion towards East.
			iS	06 55		
	Shillong	ZNE	iP	05 00 17	5890	Initial ground movement towards West & Rarefaction.
		NE	PP	02 19		
		E	PPP	03 23		
		NE	eS	07 46		
		E	PS	07 57		
			PPS	08 04		
			SS	11 23		
	Port Blair	E	eP	05 00 28	5970	
			iS	08 01		
02	Bombay	E	eP	05 29 11	3780	Slight.
			PP	30 22		
			eS	34 36		
	Poona	Z	eP	05 29 15		Slight, Other phase not clear, Rarefaction.
02	Epc:- 10.3°N, 39.8°E. Ethiopia. -H= 05h 44m 52.4s (USCGS) -h= 31 km.					
	Bombay	E	eP	05 51 29	3890	Slight.
			PP	52 46		
		NE	eS	57 01		
	Poona	Z	eP	05 51 35		Slight. Compression other phases not clear.
	Madras	E	iP	05 52 24	4480	Slight. Initial ground motion towards East.
			PP	53 59		
			iS	58 32		
			LQ	06 01 51		
			LR	04 28		
			M	08 08		
	Chatra	ZNE	iP	05 53 30	5300	Feeble. Rarefaction.
			S	06 00 26		
	Shillong	Z	iP	05 53 58		Slight distant. Rarefaction.
02	Shillong	Z	e	06 21 53		Slight, distant.
02	Madras	E	eP	07 10 19	4570	Slight.
			PP	11 51		
			PPP	12 19		
			eS	16 33		
			LQ	1) 54		
			LR	22 14		
			M	25 53		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km	REMARKS
June 1961 . . . (contd)						
02	Shillong	Z	eP	07 11 53		Slight, distant.
02	Bokaro	NE	iP	08 45 03		Slight, tremor.
02	Shillong	Z	iPg	16 04 13		Slight, local.
02	Shillong	Z	eP	18 18 16		Slight, distant.
	Chatra	Z	iP	18 18 47		Feeble, distant. Compression.
02	Shillong	Z	iP	19 27 29		Slight, distant. Compression.
02	Shillong	Z	eP	23 41 41		Slight, distant.
03	Shillong	Z	eP	00 02 58	530	Slight.
			iS	03 55		
	Chatra	Z	iP	00 03 58		Feeble, distant. Compression.
03	Shillong	Z	eP	01 10 30		Slight, distant.
03	Epc:- 56.1N, 164.8E. Off East Coast of Kamchatka. -H= 01h 13m 25.4s(USCGS) -h= 29 km.					
	Shillong	Z	iP	01 23 30		Slight, distant. Compression.
	Chatra	Z	iP	01 23 43		Feeble, distant. Rarefaction.
	Bombay	E	eP	01 25 29	8440	Slight.
			e	26 35		
			e	34 57		
			eS	35 08		
			eS	35 12		
	Hyderabad	E	M	01 54 47		Period= 15 sec. Gr. dis= 4 μ
		N	M	54 51		Period= 14 sec. Gr. dis= 4 μ
03	Shillong	Z	e	03 29 28		Slight, distant.
03	Shillong	Z	e	03 31 16		Slight, distant.
03	Shillong	Z	iP	04 36 58		Slight, distant.
			e	37 58		
03	Shillong	Z	eP	06 05 52		Slight, distant.
03	Shillong	Z	eP	09 10 41		Slight, local
03	Shillong	Z	eP	09 25 11		Slight, distant.
03	Shillong	Z	iP	12 08 27		Slight, distant. Rarefaction.
03	Shillong	Z	e	13 31 20		Slight, distant.
03	Bombay	E	e	15 27 03		Slight.
			e	29 56		
			e	31 11		
03	Shillong	Z	e	15 29 29		Slight, distant.
03	Chatra	Z	iP	15 31 54		Feeble distant. Compression.
03	Shillong	Z	iP	15 32 22		Slight, distant. Rarefaction.
	Madras	E	e	15 32 23		Slight.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	REMARKS
June 1961 . . . (contd)					
03	Shillong	Z	iP	15 40 56	Slight, distant. Rarefaction.
03	Dehra Dun	ZNE N	e e e e e	16 28 11 31 02 32 46 35 06 37 19 40 08	Slight, Phases not clear.
03	Shillong	Z	iP	16 44 29	Slight, distant.
	Chatra2	Z	iP	16 45 33	Very feeble near. Rarefaction.
03	Shillong	Z	iP	17 50 52	Slight, distant. Rarefaction.
	Chatra	Z	iP	17 51 38	Feeble, distant. Rarefaction.
03	Shillong	Z	e	18 09 02	Slight, near.
03	Shillong	Z	iP	18 09 30	Slight, distant.
03	Shillong	Z	eP	20 16 59	Slight, near.
03	Chatra	Z	eP	20 18 01	Very feeble, near.
03	Shillong	Z	e i	20 50 47 51 19	Slight, distant.
03	Shillong	Z	iP	21 47 38	Slight, distant. Compression.
03	Shillong	Z	iP	21 58 31	Slight, distant. Rarefaction.
03	Shillong	Z	eP	22 04 11	Slight, near.
04	Shillong	Z	iP	00 33 39	Slight, distant.
04	Shillong	Z	e	04 16 31	Slight, distant.
04	Shillong	Z	iP	04 25 28	Slight, near.
04	Shillong	Z	iP iS	06 49 21 49 43	190 Slight.
04	Epc:- 33°N, 82°E Tibet. -H= 07h 33m 10s (Shilong). 33.8°N, 81.8°E Tibet. -H= 07h 33m 5.4s (USCGS) -h= 46 km. Mag:- 6½ (Pas)				
	Chatra	ZNE N	iP PP Pg LQ S SS LR SSS S* Sg,M	07 35 08 35 16 35 51 36 36 36 46 36 57 37 52 37 10 37 18 37 42	950 Compression. Period= 6 sec. Gr. dis= 17 μ



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	REMARKS
June 1961 . . . (contd)					
04	Bokaro	NE	iP PPP iS SS M Mn PcP PcS	07 35 39 35 54 37 34 38 40 41 38 42 47 45 16 48 42	1120 Initial ground movement towards North & West. Period= 11 sec. Gr. dis= 133 μ
	Sehore	NE	iP PP sP eS SS M	07 35 54 38 04 36 19 38 03 38 18 39 33	1270
	Shillong	ZNE NE	iP PP PPP eS SS LR/SSS	07 35 57 36 08 36 15 38 10 38 24 38 34	1300 Initial ground movement towards North & West. Rarefaction.
	Calcutta	NE	iP eS LR M Mn	07 36 06 38 31 39 33 40 28 43 06	1420 Initial ground motion towards East. Period= 9 sec. Gr. dis= 225 μ
	Tocklai	E	eP i i	07 36 12 39 51 40 29	Distant.
	Hyderabad	EN E N E	iP iS SS M M	07 36 59 39 57 40 15 41 31 41 51	1780 Initial ground movement towards North & West. Period= 5 sec. Gr. dis= 77 μ Period= 7 sec. Gr. dis= 146 μ
	Bombay	NE N NE	eP PPP eS SS SSS E M	07 37 02 37 33 40 07 40 28 40 41 42 33 42 33	1850
	Madras	E	iP PP PPP iS LQ SS SSS LR M	07 37 52 38 13 38 20 41 33 41 41 41 57 42 09 42 42 43 52	2230 Initial ground motion towards East.
	Visakhapatnam	EN	iP PP PPP iS SS	07 37 53 38 10 38 18 40 38 40 51	1630 Probably error in absolute timings.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 ... (contd)						
04	Visakhapatnam	EN	SSS	07 41 11		
			LQ	41 27		
			M	42 15		
			PcS	46 34		
			ScS	50 02		
	Kodaikanal	E	iP	07 38 22	2620	
			PP	38 58		
			iS	42 34		
			LQ	43 28		
			SS	43 43		
			LR	44 37		
			M	46 34		Period= 28 sec. Gr. dis= 10 p
	Port Blair	N	iP	07 38 27	2610	
			iS	42 38		
04	Chatra	ZN	eP	07 45 51	940	Slight.
			S	47 28		
	Shillong	Z	eP	07 46 30		Slight, distant.
04	Shillong	Z	eP	08 13 43		Slight, near.
04	Chatra	Z	eP	08 51 33	220	Very feeble.
			S	52 00		
	Shillong	Z	e	08 52 27		Slight, near.
04	Chatra	ZN	iP	11 12 45	210	Feeble, Compression.
			S	13 10		
	Shillong	Z	iP	11 13 23		Slight, distant. Compression.
04	Shillong	Z	eP	11 22 58		Slight, distant.
04	Epc:- 33.6°N, 82.4°E Tibet. -H= 13h 51m 26.6s (USCGS) -h= 40 km.					
	Chatra	ZN	eP	13 53 36	950	Feeble.
			S	55 15		
	Shillong	Z	eP	13 54 19		Slight, distant.
	Tocklai	E	eP	13 54 35		Slight.
	Bombay	NE	e	13 55 34		Slight.
			e	58 35		
		E	e	58 54		
	Bokaro	NE	eP	13 56 00		Slight.
			i	57 18		
			i	57 51		
			i	14 00 18		
	Madras	E	e	13 56 38		Slight
			i	14 00 05		
			e	01 07		
			e	02 16		
	Visakhapatnam	EN	i	13 59 21		Slight.
			e	59 28		
			e	59 37		



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June 1961 ... (contd)						
04	Visakhapatnam	EN	e	14 01 05		
			i	01 15		
			e	01 23		
			e	01 29		
			e	01 42		
	Hyderabad	E	M	14 00 55		Period= 9 sec. Gr. dis= 7 p
		N	M	00 58		Period= 9 sec. Gr. dis= 5 p
04	Shillong	Z	iP	15 20 56		Slight, distant. Compression.
04	Shillong	Z	e	16 53 41		Slight, distant.
04	Chatra	Z	eP	20 41 23		Very feeble, near.
	Shillong	Z	eP	20 42 07		Slight, distant.
04	Shillong	Z	eP	23 14 18	80	Slight.
			S	14 28		
04	Chatra	Z	eP	23 15 59	160	Very feeble.
			S	16 19		
04	Shillong	Z	iP	23 30 00	90	Slight, Compression.
			iS	30 12		
04	Chatra	Z	iP	23 38 23	1240	Feeble, Rarefaction.
		N	S	40 30		
	Shillong	Z	iP	23 39 17		Slight, distant. Rarefaction.
	Bombay	NE	e	23 43 08		Slight.
05	Shillong	Z	iP	00 30 12	160	Slight.
			eS	30 31		
05	Shillong	Z	e	02 13 35		Slight, distant.
05	Poona	Z	iP	03 35 29		Tremor. Rarefaction.
05	Chatra	Z	eP	03 36 45		Feeble, distant.
05	Shillong	Z	eP	03 39 32		Slight, distant.
05	Chatra	Z	iP	11 29 33		Feeble, compression.
			i	29 43		
05	Shillong	Z	iP	17 40 10		Slight, distant. Compression.
05	Shillong	Z	iP	19 13 31		Slight, near. Compression.
	Chatra	Z	eP	19 14 19	390	Very feeble.
			S	15 03		
05	Chatra	Z	eP	21 36 44		Feeble, distant.
	Shillong	Z	eP	21 37 38		Slight, distant.
06	Chatra	Z	e	01 52 41		Feeble, Probably near.
06	Dehra Dun	ZNE	e	03 02 02		Tremor.
06	Chatra	Z	e	04 23 02		Very weak.
			i	23 47		
06	Dehra Dun	ZNE	eP	20 58 35	970	Slight.
		N	PP	58 42		
			PPP	58 47		

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

June 1961 . . . (contd)

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
06	Dehra Dun	N	LQ	21 00 02		
			iS	00 13		
			SS	00 26		
			SSS	00 38		
			Sg,M	01 08		
	Chatra	Z	eP	20 59 45		Slight, probably near.
			e	21 02 24		
		NE	i	02 29		
			e	02 55		
	Shillong	Z	eP	21 00 26		Slight, distant.
	Poona	Z	eP	21 01 07		Feeble, pya phases not clear.
	Bombay	NE	e	21 05 09		Slight.
			e	08 17		
07	Shillong	Z	iP	03 26 59		Slight, distant. Rarefaction.
07	Shillong	Z	e	05 11 49		Slight, distant.
07	Dehra Dun	NE	e	10 10 14		Tremor.
07	Chatra	Z	eP	11 32 32		Very feeble, distant.
07	Shillong	Z	iP	13 12 30		Slight, distant. Rarefaction.
07	Poona	Z	iP	14 28 09		Feeble, Compression.
07	Dehra Dun	NE	e	14 28 34		Slight, phases not clear.
			i	39 38		
	Shillong	Z	e	14 33 36		Slight, distant.
	Bombay	E	e	14 38 38		Slight.
	Kodaikanal	E	e	14 39 01		Tremor.
	Madras	E	e	14 39 13		Slight.
			e	40 50		
			e	15 05 10		
07	Shillong	Z	iP	15 50 08		Slight, distant. Compression.
07	Shillong	Z	iP	19 27 09		Slight, distant. Compression.
07	Shillong	Z	iP	20 55 54		Slight, distant. Compression.
08	Chatra	Z	iP	01 01 26	130	Very feeble.
			S	01 43		
08	Shillong	Z	e	03 14 46		Slight, distant.
08	Shillong	Z	eP	04 03 46		Slight, distant.
08	Shillong	Z	iP	14 04 27		Slight, distant. Rarefaction.
08	Shillong	Z	iP	15 25 24	170	
			iSg	25 37		
08	Shillong	Z	iP	15 52 15		Slight, distant. Rarefaction.
	Chatra	Z	i	15 52 17		Slight, distant. Rarefaction.

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

June 1961 . . . (contd)

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
08	Dehra Dun	NE	e	15 57 03		Slight.
			e	16 01 40		
			e	06 42		
08	Kodaikanal	E	e	16 11 37		Tremor
08	Shillong	Z	iP	16 36 20		Slight, distant. Rarefaction.
08	Shillong	Z	iP	16 55 25		Slight, distant. Rarefaction.
08	Shillong	Z	eP	17 50 58		Slight, distant.
08	Shillong	Z	iP	18 07 01		Slight, distant. Compression.
08	Shillong	Z	eP	20 30 45		Slight, near.
08	Shillong	Z	eP	21 36 20		Slight, distant.
	Chatra	Z	e	21 36 51		Very mild, local.
			e	38 46		
	Tocklai	E	e	21 37 11		Slight, distant.
08	Shillong	Z	eP	22 54 24		Slight, distant.
09	Dehra Dun	ZNE	eP	03 57 09	590	Slight.
		N	PP	57 18		
			PPP	57 25		
			LQ	57 59		
			iS	58 11		
			LR	58 16		
			SS	58 22		
			SSS	58 34		
			Sg	58 40		
	Chatra	Z	iP	03 58 58	1450	Feeble, Compression.
			S	04 01 26		
	Shillong	Z	eP	03 59 48		Slight, distant.
09	Chatra	Z	eP	09 43 26		Feeble, distant.
09	Shillong	Z	eP	13 40 48		Slight, distant.
09	Shillong	Z	iP	14 30 39		Slight, distant. Rarefaction.
	Chatra	Z	iP	14 31 08		Feeble, distant. Compression.
09	Shillong	Z	eP	15 22 26		Slight, distant.
	Chatra	Z	iP	15 22 40		Feeble, distant. Rarefaction.
09	Shillong	Z	e	15 50 46		Slight, distant.
09	Shillong	Z	eP	15 56 11		Slight, distant. Compression.
09	Shillong	Z	e	17 13 33		Slight, distant.
09	Shillong	Z	eP	18 05 00		Slight, distant.
09	Shillong	Z	iP	18 14 44		Slight, near.
09	Shillong	Z	e	19 04 43		Slight, distant.
09	Shillong	Z	eP	22 05 25		Slight, near.



14

REMARKS

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

15

REMARKS

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

June 1961 . . . (contd)

June 1961 . . . (contd)

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
09	Shillong	Z	eP	22 14 04		Slight, distant.
09	Tocklai	E	eP	23 52 54		Slight, distant.
	Shillong	Z	iP	23 52 58		Slight, distant. Compression.
10	Shillong	Z	iP	01 04 38		Slight, distant.
	Chatra	Z	eP	01 05 21		Very feeble, distant.
10	Shillong	Z	iP	07 35 37		Slight, local
X	Shillong	Z	iP	08 25 15		Slight, distant.
X	Chatra	Z	eP	08 25 56		Mild near.
X	Chatra	Z	e	08 27 31		Mild, not clear, near.
10	Shillong	Z	i	08 56 39		Slight, distant.
10	Shillong	Z	i	11 43 25		Slight, distant.
10	Shillong	Z	i	12 04 50		Slight, distant.
10	Chatra	Z	iPg	12 34 46		Very mild. Compression.
10	Chatra	Z	iP	13 17 49		Very mild. Rarefaction.
10	Shillong	Z	eP	16 48 44		Slight, distant.
10	Shillong	Z	eP	20 21 42		Slight, near.
10	Chatra	Z	e	20 50 57		Feeble, distant.
			e	51 41		
10	Shillong	Z	e	20 51 53		Slight, distant.
10	Shillong	Z	e	20 58 11		Slight, distant.
	Dehra Dun	NE	e	21 00 49		Feeble.
			e	06 32		
10	Shillong	Z	eP	22 11 21		Slight, near.
11	Shillong	Z	e	03 51 44		Slight, distant.
11	Shillong	Z	i	04 12 25		Slight, distant.
11	Dehra Dun	ZNE NE	e e	04 44 29 45 56		Feeble.
11	Epc:- 28°N, 53°E, South Iran. -H= 05h 10m 15s (Shillong) 28.9°N, 54.6°E Southern Iran. -H= 05h 10m 26s (USCGS) -h= 38 km. Major property damage, many casualties in Lar Area. Mag:- 6 $\frac{1}{2}$ -6 $\frac{3}{4}$ (Pas) 6 $\frac{1}{4}$ -6 $\frac{1}{2}$ (Pal).					
	Bombay	NE	eP	05 14 47	2260	
			PP	15 02		
			PPP	15 18		
		N	eS	18 31		
		E	i	18 38		
		NE	SS	19 02		
			LR	19 55		
		N	M	23 36		
		E	M	27 42		
	Poona	Z	iP	05 14 56	2410	
		N	iS	18 52		

Period= 21 sec. Gr. dis= 77 p
 Period= 15 sec. Gr. dis= 45 p
 Initial ground movement towards North, West & Rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
11	Calcutta	E	e	05 14 58		
			i	16 09		
			i	19 09		
			e	20 10		
			i	25 58		
	Dehra Dun	ZNE	eP	05 15 05	2380	
		N	PP	15 30		
			PPP	15 55		
			iS	18 59		
			SS	19 32		
			SSS	19 58		
			LR	20 25		
			M	22 12		
	Sehore	NE	eP	05 15 11	2590	
			e	15 30		
			e	15 40		
			PP	15 45		
			PPP	15 55		
			iS	19 20		
			e	19 56		
			SSS	20 34		
			M	22 48		
	Hyderabad	EN	iP	05 15 44	2880	
		N	PP	16 11		
			iS	20 12		
			SS	21 21		
		E	M	25 26		Period= 11 sec. Gr. dis= 8 p
		N	M	25 30		Period= 15 sec. Gr. dis= 55 p
	Madras	E	iP	05 16 16	3220	Initial ground motion towards West.
			PP	17 07		
			PPP	17 20		
			PcP	19 24		
			iS	21 07		
			e	21 40		
			LQ	22 20		
			SS	22 34		
			SSS	22 54		
			LR	23 48		
			M	26 11		
	Visakhapatnam	EN	eP	05 16 20	2570	Initial ground movement towards North & West.
			PP	16 50		
			PPP	17 05		
			PcP	19 51		
			iS	20 28		Probably + 1 mt Error in the absolute timings.
			SS	21 26		
			SSS	21 45		
			LR	22 25		
			ScP	23 29		
			M	24 17		
			ScS	27 14		
	Bokaro	E	iP	05 16 21		Distant. Phases overlapping, First ground motion towards East.
			i	17 21		
			i	17 34		
			i	20 46		
			i	21 10		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
11	Kodaikanal	E	iP	05 16 24		Initial ground movement towards East.
			PP	17 06		
			i	20 54		
			LQ	21 51		
			SSS	22 27		
			LR	23 09		
			M	25 24		Period= 12 sec. Gr. dis= 14 μ
	Chatra	ZNE	iP	05 16 26	3350	Rarefaction.
			PP	17 36		
			PPP	17 53		
			PcP	19 04		
			eS	21 25		
			S	21 51		
			PcS	22 54		
			LQ	23 50		
			SS	24 09		
			SSS	24 24		
			LR	25 42		
			ScS	27 10		
		N	M	29 30		Period= 11 sec. Gr. dis= 63 μ
		E	M	30 31		Period= 13 sec. Gr. dis= 59 μ
	Shillong	ZNE	iP	05 17 01	3710	
		NE	PP	18 17		
			PPP	18 36		
			iS	22 22		
			e	25 56		
			e	26 26		
			e	27 33		
			M	30 25		
	Tocklai	E	eP	05 17 21	4040	
			eS	23 03		
	Port Blair	E	iP	05 17 59	4510	
			iS	24 09		
			M	30 23		
11	Chatra	Z	iP	05 36 10		Feeble, distant. Rarefaction.
	Shillong	Z	eP	05 36 44		Slight, distant.
	Dehra Dun	ZNE	eP	06 51 26	2240	Slight.
		N	PPF	51 52		
			eS	55 08		
			LR	56 05		
			M	58 05		
	Chatra	Z	eP	06 52 42		Feeble, distant.
11	Shillong	Z	iP	10 04 44	240	Slight.
			iSg	05 18		
11	Dehra Dun	ZNE	e	11 28 51		Slight, phases not clear.
		N	e	32 47		
11	Poona	Z	iP	12 33 20	2130	Moderate. Initial ground motion towards South, East & Compression.
		N	iS	37 02		Probably- 2 mt. error in absolute timings.

ADD 2 MIN
TRY NEXT STACK.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS
June 1961 . . . (contd)						
11	Epc:-			28.0°N, 54.6°E Iran.		
				-H= 12h 31m 26.8s (USCGS).		
				-h= 36 km		
	Dehra Dun	ZNE	e	12 35 02		Slight.
		N	e	35 57		
			e	36 20		
			iS	39 59		
			LQ	41 21		
			SS	41 33		
			SSS	41 53		
			LR	42 59		
			M	45 10		
	Bombay	N	eP	12 35 48	2100	Slight.
			eS	39 16		
			LQ	39 40		
	Shillong	Z	e	12 37 01		Slight, distant.
	Madras	E	iP	12 37 19	3220	Moderate. Initial ground motion towards East.
			PP	38 07		
			PPP	38 19		
			iS	42 10		
			LQ	43 19		
			SS	43 35		
			SSS	43 55		
			LR	44 44		
	Bokaro	E	iP	12 37 23		Slight, distant, other phases unidentifiable.
			i	42 09		Initial ground motion towards East.
			i	42 36		
	Chatra	Z	iP	12 37 26		Feeble.
			e	38 49		
			e	39 09		
			e	40 01		
			i	42 46		
			e	45 37		
		N	e	45 10		
			e	45 20		
	Calcutta	E	i	12 37 39		Slight.
			i	38 42		
			i	41 01		
			i	44 00		
	Visakhapatnam	EN	e	12 37 54		Slight.
			e	38 22		
			e	38 34		
			e	41 50		
			e	42 16		
			e	42 28		
			e	42 53		
			e	43 07		
			M	45 06		
	Shillong	Z	iP	12 38 04		Slight, distant. Compression.
11	Bombay	N	e	12 47 32		Slight.
		NE	e	51 02		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	km.	REMARKS
June						
11	Poona	Z	eP	14 00 51		Tremor
	Bombay	NE	e	14 02 21		Slight.
			e	06 08		
	Dehra Dun	NE	e	14 02 37		Slight, phases not clear.
			e	06 28		
	Chatra	Z	iP	14 03 56		Feeble, distant. Compression.
	Shillong	Z	eP	14 04 32		Slight, distant.
11	Shillong	Z	iP	15 12 53		Slight, distant. Rarefaction.
11	Epc: 24.3°N, 98.4°E Burma-China border region; -H= 17h 15m 30s (USCGS) -h= 38 km.					
	Tocklai	E	eP	17 16 42		Slight, distant.
	Shillong	Z	eP	17 17 01	780	Slight.
		NE	eS	18 22		
	Chatra	Z	iP	17 18 01	1110	Rarefaction. Feeble.
			iS	19 55		
	Poona	Z	iP	17 19 26		Slight, Initial ground movement is towards South & Compression.
	Dehra Dun	ZNE	eP	17 19 53	2160	Slight.
		N	eS	23 27		
			SSS	24 08		
			LR	24 38		
			M	26 19		
	Madras	E	iP	17 20 21	2350	Slight.
			eS	24 13		
			e	25 51		
			e	28 45		
	Bokaro	E	i	17 21 10		Slight, distant. Other phases unidentifiable
			i	23 48		
	Port Blair	E	e	17 23 03		Slight.
	Bombay	NE	e	17 25 27		Slight.
			e	29 02		
			e	30 25		
11	Tocklai	E	e	18 32 21		Tremor
11	Tocklai	E	e	19 23 14		Slight, distant.
	Shillong	Z	e	19 23 27		Slight, distant.
	Chatra	Z	iP	19 24 24		Feeble, distant. Rarefaction.
11	Chatra	Z	iP	22 09 37		Feeble, distant. Compression.
12	Epc:- 21.5°N, 106.0°E. North Vietnam. -H= 09h 58m 17.6s (USCGS). -h= 55 km.					
	Shillong	Z	eP	10 01 29		Moderate, Initial ground motion towards East.
			i	04 42		



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	km.	REMARKS
June 1961... (contd)						
12	Calcutta	E	eP	10 02 09	1930	Slight.
			e	04 54		
			iS	05 22		
	Chatra	Z	iP	10 02 27	2080	Feeble, Rarefaction.
			eS	05 53		
	Bokaro	E	eP	10 02 35	2170	Slight, other phases unidentifiable
			eS	06 11		
	Visakhapatnam	EN	iP	10 03 07	2330	Slight.
			PP	03 30		
			PPP	03 39		
			e	04 57		
			e	05 11		
			SSS	07 27		
	Dehra Dun	ZNE	e	10 03 52		Slight, phases not clear.
		N	e	08 51		
	Madras	E	i	10 03 50		Slight.
12	Bombay	E	e	10 09 53		Slight.
			e	13 06		
12	Eq. shock felt at Delhi.					
	Dehra Dun	ZNE	eP	10 22 20	260	Slight.
		N	PP/Pg	22 26		
			PPP	22 33		
			LQ	22 39		
			iS	22 49		
			SS	23 01		
			SSS	23 12		
	Chatra	Z	iP	10 23 59	1040	Feeble, Compression.
			S	25 46		
12	Shillong	Z	e	10 29 17		Slight, distant.
12	Shillong	Z	eP	10 44 49		Slight, near.
	Chatra	Z	eP	10 45 39	740	Feeble.
			eS	46 56		
12	Hyderabad	EN	iP	12 36 47	2740	Slight. Initial ground motion towards North & West.
		E	PP	37 29		
		EN	iS	41 07		
		E	LQ	41 22		
			SS	41 37		
			M	44 27		Period= 5 sec. Gr. dis= 2 μ
			M	44 46		Period= 8 sec. Gr. dis= 6 μ
12	Shillong	ZNE	iP	14 36 37	110	Slight, Initial ground motion towards West & Compression.
			iSg	36 50		Slight, near.
	Tocklai	E	eP	14 37 10		
12	Dehra Dun	NE	e	17 10 55		Feeble.
12	Hyderabad	N	P	17 23 53	2020	Slight.
			S	27 14		
			M	29 49		Period= 12 sec. Gr. dis= 6 μ
12	Shillong	Z	iP	17 34 27		Slight, distant. Rarefaction.
12	Shillong	Z	eP	18 09 18		Slight, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
13	Shillong	Z	iP	02 35 44		Slight, distant. Compression.
13	Dehra Dun	ZNE	e	04 03 12		Tremor.
13	Tocklai	E	eP	06 31 46		Slight, distant.
	Shillong	Z	eP	06 32 06		Slight, distant.
13	Tocklai	E	iP	10 25 59		Moderate. Initial ground motion towards East.
	Shillong	Z	eP	10 26 29	490	Slight.
			iS	27 21		
	Chatra	Z	eP	10 27 19	910	Very feeble
		NE	iS	28 53		
13	Shillong	Z	iP	12 03 09		Slight, distant. Compression.
13	Shillong	Z	eP	21 51 29		Slight, distant.
14	Epc:- 24.5°N, 95.0°E. Northern Burma. -H= 00h 41m 10.3s (USCGS) -h= 52 km.					
Felt at Gauhati, Jorhat, Imphal & Mangaldai.						
	Tocklai	E	eP	00 41 52		Moderate, near.
	Shillong	Z	iP	00 41 56	220	Slight.
			iS	42 22		
	Calcutta	N	eP	00 42 49	550	Moderate.
			iS	43 48		
	Chatra	Z	eP	00 42 56	720	Moderate, Rarefaction.
			i	42 58		
			PP	43 03		
)PPP(P*)	43 11		
		N	Pg	43 27		
		ZN	LQ	43 59		
		ZNE	iS	44 11		
		Z	LR	44 11		
		ZN	SS	44 22		
			SSS(S*)	44 31		
		Z	Sg	44 51		
	Bokaro	NE	iP	00 43 23	860	Slight.
			PP	43 22		
			S	44 51		
			SS	45 03		
			M	45 36		
			PcP	49 50		
	Vishakhapatnam	E	eP	00 44 13	1400	Moderate, Initial ground movement towards West.
			PPP	44 35		
			i	46 15		
			iS	46 36		
			SSS	47 01		
	Port Blair	N	eP	00 44 20	1310	Slight.
			eS	46 34		



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
14	Dehra Dun	ZNE	eP	00 44 53	1620	Slight.
		N	PP	45 07		
			PPP	45 14		
			iS	47 37		
			SS	47 51		
			LR	48 12		
			M	49 20		
	Madras	E	eP	00 45 14	1830	Slight.
			PP	45 29		
			PPP	45 38		
			eS	48 18		
			LQ	48 21		
			SS	48 42		
			SSS	48 56		
			LR	49 08		
			M	50 35		
			e	52 14		
	Hyderabad	N	e	00 45 26		Slight.
			S	48 17		
			M	54 37		Period= 8 sec. Gr. dis= 3 μ
	Poona	Z	iP	00 45 36	1840	Slight.
			iS	48 41		
	Bombay	E	eP	00 46 13	2630	Slight.
			PP	46 42		
			PPP	47 02		
			e	47 50		
		NE	eS	50 26		
		E	LR	51 46		
		N	M	52 42		Period= 5 sec. Gr. dis= 3 μ
14	Chatra	Z	iP	02 37 23	380	Very feeble. Rarefaction.
			iS	38 05		
	Shillong	Z	e	02 38 20		Slight, distant.
14	Shillong	Z	iP	06 09 04		Slight, near.
14	Bokaro	NE	eP	07 08 53		Slight, tremor.
14	Shillong	Z	eP	09 10 10		Slight, distant.
14	Dehra Dun	NE	e	09 12 09		Feeble.
	Shillong	Z	e	09 13 31		Slight, distant.
14	Chatra	Z	eP	13 04 27		Feeble, distant.
14	Chatra	Z	iP	13 05 09		Slight, distant. Rarefaction.
14	Shillong	Z	eP	14 16 03		Slight, near.
14	Shillong	Z	iP	14 33 38	290	Slight.
			iS	34 10		
	Chatra	Z	eP	14 34 55	670	Feeble.
			S	35 45		
14	Dehra Dun	ZNE	e	17 34 09		Feeble.
			i	36 16		
			i	37 37		
	Shillong	Z	iP	17 36 30		Slight, distant. Compression.
14	Shillong	Z	e	19 51 58		Slight, distant.

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

June 1961 . . . (contd)

14 Epc:- 10.8°N, 40.1°E Ethiopia.
-H= 20h 32m 24s (USCGS)
-h= 56 km.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
	Bombay	E	eP	20 38 58	3830	Slight.
			e	40 05		
		NE	eS	44 26		
		E	LR	48 07		
	Poona	N	e	20 39 00		Slight, phases not clear.
	Madras	E	i	20 39 52		Slight, phases not clear.
		N	i	41 29		
			e	46 03		
			e	53 50		
	Dehra Dun	ZNE	e	20 40 01		Slight, phases not clear.
		N	i	41 44		
			i	46 12		
			i	49 25		
	Bokaro	NE	eP	20 40 53	5190	Slight.
			PcP	42 15		
			PP	42 42		
			ScP	46 02		
			S	47 43		
			PS	47 52		
			PPS	47 59		
			ScS	50 26		
			SS	51 12		
			LR	54 24		
			M	58 01		
	Chatra	Z	eP	20 40 59		Very feeble, distant.
	Shillong	Z	eP	20 41 20		Slight, distant.
	Calcutta	E	e	20 49 09		Slight.
14	Shillong	Z	eP	21 29 21		Slight, near.
14	Shillong	Z	iP	23 09 38	70	Slight.
			iS	09 47		
15	Shillong	Z	iP	00 01 45		Slight, distant. Rarefaction.
15	Shillong	Z	e	01 04 17		Slight, distant.
15	Shillong	Z	iP	01 10 49		Slight, distant. Compression.
	Shillong	Z	eP	06 28 09		Slight, distant.
	Dehra Dun	NE	e	06 30 13		Feeble.
15	Dehra Dun	NE	e	20 52 20		Feeble.
			e	54 24		
	Chatra	Z	iP	20 54 05		Feeble, distant. Compression.
	Shillong	Z	eP	20 54 46		Slight, distant. Compression.
15	Shillong	Z	iP	22 35 32		Slight, distant. Compression.

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

June 1961 . . . (contd)

15 Epc:- 45.4°N, 151.3°E Kurile Islands.
-H= 23h 24m 40.5s (USCGS)
-h= 38 km.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
	Shillong	Z	iP	23 33 45		Slight, distant. Compression
	Chatra	Z	iP	23 34 04		Feeble, distant. Compression.
	Dehra Dun	ZNE	eP	23 34 34	6310	Slight, Other phases not clear.
		N	eS	42 27		
	Bokaro	NE	eP	23 34 38		Slight.
16	Shillong2	Z	eP	00 15 43		Slight, near.
16	Shillong	Z	iP	03 27 02		Slight, distant. Rarefaction.
16	Chatra	Z	eP	06 40 56		Very feeble, near.
	Shillong	Z	eP	06 42 48		Slight, distant.
16	Shillong	NE	e	07 28 16		Feeble.
16	Shillong	Z	iP	10 49 49		Slight, near.
16	Dehra Dun	NE	eP	10 51 00	2130	Slight, phases not clear.
			eS	54 31		
	Chatra	Z	eP	10 51 07		Very feeble, distant.
			i	54 51		
	Shillong	Z	iP	10 51 16		Slight, distant. Compression.
	Vishakapatnam	EN	iP	10 51 26		Slight.
	Madras	E	e	10 51 27		Slight.
16	Shillong	Z	e	11 35 25		Slight, distant.
16	Shillong	Z	eP	12 16 42		Slight, distant.
	Chatra	Z	iP	12 16 56		Feeble, distant. Rarefaction.
16	Shillong	Z	iP	12 39 57		Slight, near.
	Chatra	Z	eP	12 40 59		Feeble, near.
16	Bokaro	NE	eP	12 46 56		Slight, tremor.
16	Chatra	Z	iP	14 53 26		Feeble, distant. Rarefaction.
16	Chatra	Z	iP	16 17 31		Feeble, distant. Rarefaction.
16	Shillong	Z	e	18 27 33		Slight, distant.
16	Chatra	Z	iP	22 57 03		Very feeble. Rarefaction.
			i	59 14		
17	Shillong	Z	eP	02 20 24		Slight, near.
17	Shillong	Z	eP	08 02 22		Slight, distant.
17	Bombay	E	e	08 10 12		Slight.
			e	19 08		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
17	Dehra Dun	NE	e i i i i	08 10 23 10 42 14 17 14 49 16 37		Slight, phases not clear.
	Chatra	Z	iP	08 11 50		Feeble, distant. Rarefaction.
	Shillong	Z	eP	08 12 26		Slight, distant.
17	Poona	Z	i	11 16 21		Tremor.
17	Shillong	Z	iP	12 45 09		Slight, distant. Rarefaction.
17	Shillong	Z	iP	12 49 58		Slight, distant. Rarefaction.
17	Shillong	Z	eP	14 39 33		Slight, distant.
	Chatra	Z	iP	14 40 11		Very feeble, distant. Rarefaction.
17	Shillong	Z	eP	14 39 33		Slight, distant.
	Chatra	Z	iP	14 40 11		Very feeble, distant. Rarefaction.
17	Shillong	Z	eP	15 26 44		Slight, distant.
	Chatra	Z	eP	15 26 49		Very feeble, distant. Start not clear.
	Dehra Dun	NE	e e	15 26 53 30 22		Slight, phases not clear.
	Poona	Z N	eP i	15 27 02 35 02		Slight.
17	Shillong	Z	iP	15 33 27		Slight, distant. Rarefaction.
	Chatra	Z	iP	15 34 01		Feeble, distant. Rarefaction.
17	Shillong	Z	eP	17 32 00		Slight, near.
17	Shillong	Z	eP	18 58 59		Slight, distant.
17	Shillong	Z	eP	19 48 43		Slight, near.
17	Shillong	Z	e	21 05 05		Slight, distant.
17	Shillong	Z	e	23 07 14		Tremor.
17	Shillong	Z	e	23 09 27		Tremor.
18	Shillong	Z	iP	03 19 02		Slight, distant. Rarefaction.
	Chatra	Z ZN	iP S	03 19 33 21 17	1010	Feeble, Rarefaction.
	Poona	Z	iP	03 20 05		Tremor. Rarefaction.
18	Shillong	Z	iP	03 23 53		Slight, distant. Compression.
	Tocklai	E	eP	03 24 01		Slight, Initial ground motion towards West.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
18	Dehra Dun	ZNE N	e i i	03 34 52 35 10 36 25		Feeble
	Chatra	Z	eP S	03 35 39 37 23	1020	Feeble.
	Shillong	Z	iP	03 36 23		Slight, distant. Compression.
18	Bombay	E	e e	03 42 25 42 46		Slight, near.
18	Shillong	Z	eP	05 04 01		Slight, distant.
18	Shillong	Z	iP	05 12 17		Slight, near.
18	Dehra Dun	NE	e i i	06 27 24 28 30 28 54		Feeble.
	Chatra	Z ZN	iP S	06 28 14 29 53	960	Feeble.
	Shillong	Z	iP	06 28 56		Slight, distant. Compression.
	Chatra	Z	eP i	06 30 02 33 06		Slight.
	Bombay	E	e e	06 33 33 35 22		Slight, near phases list in microseisms.
18	Dehra Dun	NE	e	10 18 28		Feeble
18	Shillong	Z	e	13 29 24		Slight, distant.
18	Shillong	Z	e	14 12 36		Slight, distant.
18	Tocklai	E	eP	14 35 59		Slight, near.
18	Shillong	Z	eP	14 50 40		Slight, distant.
18	Shillong	Z	iP	17 13 55		Slight, distant. Compression.
18	Shillong	Z	e	20 35 15		Slight, distant.
18	Shillong	Z	eP	21 50 59		Slight, near.
18	Shillong	Z	e	22 34 47		Slight, distant.
19	Shillong	Z	eP	01 41 19		Slight, distant.
19	Shillong	Z	iP	01 51 40		Slight, distant. Compression.
	Poona	Z	iP	01 53 52		Slight, other phases not clear.
	Bombay	E	e e e	01 53 57 55 55 02 02 26		Slight.
19	Chatra	Z	eP	02 27 45		Feeble, distant.
	Shillong	Z	eP	02 29 09		Slight, distant.
19	Shillong	Z	iP	02 45 34		Slight, near.
19	Shillong	Z	eP	02 54 10		Slight.



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

June 1961 . . . (contd)

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
19	Epc:- 39.2°N, 142.9°E Off East coast of Honshu Japan. -H= 07h 38m 29.6s (USCGS). -h= 98 km.					
	Chatra	Z	iP	07 47 02		Feeble, distant. Compression.
	Shillong	Z	eP	07 46 37		Slight, distant.
	Dehra Dun	ZNE	eP	07 47 44		Slight,
			e	55 35		
	Bombay	E	e	07 57 18		Slight.
		NE	M	08 18 -		
19	Shillong	Z	iP	08 07 52		Slight, distant. Rarefaction.
	Chatra	Z	iP	08 08 16		Feeble, distant. Compression.
19	Bokaro	NE	eP	09 09 17		Slight, tremor.
19	Shillong	Z	eP	14 13 15		Slight, near.
19	Shillong	Z	iP	17 06 36		Slight, near. Rarefaction.
19	Epc:- 37°N, 70°E. Hindukush Region. -H= 17h 04m 35s (Shillong) -h= 200 km 36.6°N, 71.0°E -H= 17h 04m 30.3s (USCGS) -h= 151 km.					
	Dehra Dun	ZNE	eP	17 06 38	840	Moderate.
		N	PP	06 46		
			PPP	06 52		
			LQ	07 54		
			iS	08 04		
			SS	08 16		
			SSS	08 30		
			M	08 50		
	Sehore	NE	eP	17 07 49	1530	Moderate.
			iS	10 17		
			SS	10 34		
			SSS	10 50		
			M	12 02		
	Chatra	ZNE	iP	17 08 22	1870	Feeble, Rarefaction.
			PP	08 34		
			PPP	08 42		
			LQ	11 18		
			S	11 20		
			SS	11 39		
			SSS	11 52		
			LR	12 03		
			M	13 14		
	Bombay	NE	eP	17 08 31	1940	Slight.
		N	eN	08 52		
		NE	PPP	09 20		
			e	09 41		
			eS	11 45		
		E	SS	12 42		

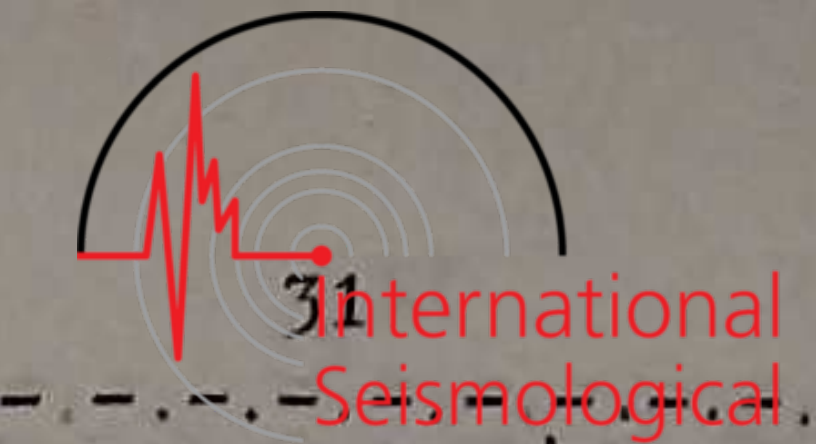
DATE STATION COMPT PHASE G. M. T. Δ REMARKS
h. m. s. km.

June 1961 . . . (contd)

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
19	Bokaro	NE	iP	17 08 34	1900	Slight, Initial ground motion South and East
			PPP	08 56		
			i	09 33		
			S	11 44		
			SS	12 02		
			LR	12 30		
			PcP	13 10		
			M	13 56		
	Poona	Z	iP	17 08 37	2090	Moderate. Initial ground movement towards South & Compression.
		N	iS	11 53		
			e	12 14		
			e	12 28		
			M	14 09		
	Hyderabad	N	iP	17 08 56	2400	Slight, Initial ground motion towards North.
			PP	09 17		
			e	09 52		
			iS	12 35		
			e	13 09		
			M	15 09		Period= 5 sec. Gr. dis= 4 μ
	Calcutta	E	iP	17 09 05	2430	Slight, Initial ground motion towards West.
			i	10 05		
			iS	12 46		
	Shillong	ZNE	iP	17 09 06	2430	Initial ground motion towards North, West & Rarefaction.
			PP	09 38		
			sP	10 05		
		NE	iS	12 47		
			SS	13 48		
	Visakhapatnam	EN	iP	17 09 17	2600	First ground movement towards North & West.
			e	09 37		
			PP	09 51		
			PcP	12 13		
			iS	13 10		
			e	13 31		
			e	13 53		
			e	14 12		
			SS	14 34		
	Tocklai	E	eP	17 09 19		Slight, distant.
	Madras	E	eP	17 09 45	2790	Moderate.
			PP	10 26		
			sP	10 46		
			iS	13 51		
			sS	14 52		
			LQ	15 06		
			SS	15 19		
			SSS	15 38		
			LR	16 17		
			M	18 16		
	Port Blair	E	e	17 10 44		Slight.
19	Shillong	Z	eP	18 00 09		Slight, distant.
19	Shillong	Z	iP	19 15 08		Slight, near Compression.
19	Shillong	Z	e	22 27 01		Slight, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
19	Shillong	Z	eP	23 22 08		Slight, distant.
20	Chatra	Z	iP	01 11 57		Very feeble, near.
20	Epc:- 11.5°N, 44.5°E Gulf of Aden -H= 03h 21m 26.5s (USCGS) -h= 98 km.					
	Bombay	E	eP	03 27 30	3150	Slight.
			PP	28 15		
		NE	eS	32 17		
		E	LR	35 03		
	Poona	Z	iP	03 26 36		Slight. Compression.
	Madras	E	iP	03 28 25	3930	Slight, Initial ground motion towards East.
			PP	29 45		
			iS	34 00		
			e	34 32		
			e	35 39		
			LQ	36 46		
			LR	39 54		
			M	41 00		
	Dehra Dun	ZNE	e	03 28 35		Feeble.
		N	e	30 02		
			i	34 23		
	Visakhapatnam					
		EN	i	03 28 56		Slight, distant.
			e	30 19		
			i	30 31		
			i	35 02		
	Bokaro	EN	iP	03 29 19	4570	Slight, Initial ground motion towards West.
		E	PP	30 39		
			PPP	31 18		
			eS	35 33		
			e	35 44		
			e	35 54		
			SS	38 32		
			SSS	39 04		
			i	41 02		
	Chatra	Z	eP	03 29 28		Feeble, distant.
		NE	e	39 25		Rarefaction.
	Shillong	Z	eP	03 29 59		Slight, distant.
	Kodaikanal	E	e	03 33 39		Tremor.
20	Shillong	Z	eP	08 33 56		Slight, near.
20	Shillong	Z	e	14 02 34		Slight, near
20	Shillong	Z	e	14 02 34		Slight, near.
20	Shillong	Z	iP	14 39 54		Slight, distant. Rarefaction.
	Dehra Dun	ZNE	e	14 43 29		Feeble
		N	e	44 54		
20	Shillong	Z	iP	16 44 00		Slight, distant. Rarefaction.
20	Shillong	Z	iP	19 36 01		Slight distant. Rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . P(contd)						
21	Shillong	Z	iP	02 50 59		Slight, distant. Rarefaction.
	Chatra	Z	iP	02 51 31		Feeble, distant. Compression.
21	Epc:- 27.9°N, 55.0°E Iran -H= 06h 39m 22.8s (USCGS) .h= 48 km.					
	Bombay	NE	eP	06 43 44	2170	Slight.
			eS	47 20		
		E	e	48 17		
	Poona	Z	iP	06 43 55		Slight, Compression.
	Dehra Dun	ZNE	eP	06 44 02	2340	Slight.
		N	PP	44 32		
			PPP	44 54		
			eS	47 52		
			LQ	48 25		
			SS	48 46		
			SSS	48 55		
			LR	49 19		
			M	51 59		
	Bokaro	E	iP	06 45 17		Slight, distant.
			i	57 45		
	Chatra	Z	iP	06 45 21		Feeble, distant. Compression.
	Shillong	Z	iP	06 45 57		Slight, distant. Compression.
21	Shillong	Z	iP	07 00 49		Slight, distant. Rarefaction.
21	Shillong	Z	eP	07 44 03		Slight, distant.
	Chatra	Z	iP	07 44 33		Feeble, distant. Compression.
21	Shillong	Z	e	08 13 11		Slight, distant.
21	Shillong	Z	iP	09 10 29		Slight, distant. Compression.
	Chatra	Z	iP	09 11 06		Feeble, distant. Compression.
21	Shillong	Z	e	09 15 22		Slight, distant.
21	Shillong	Z	eP	15 01 54		Slight, distant.
21	Chatra	Z	eP	16 13 38		Very feeble, distant.
	Shillong	Z	e	16 14 08		Slight, distant
21	Chatra	Z	iP	16 21 57		Very feeble, near probab- ly a land slide in that near vicinity.
			i	21 59		
21	Shillong	Z	iP	16 45 38		Slight, distant. Compression.
21	Dehra Dun	NE	e	19 19 18		Feeble
			e	23 44		
			e	26 34		



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS
June 1961 . . . (contd)						
21	Chatra	Z	eP	19 20 34		Very feeble distant.
	Shillong	Z	eP	19 21 10		Slight, distant.
21	Port Blair	E	e	20 31 09		Slight.
	Madras	E	e	20 31 58		Slight.
			e	33 22		
			e	33 39		
			e	37 21		
	Shillong	Z	iP	20 32 02		Slight, distant. Rarefaction.
	Chatra	Z	iP	20 32 30	1170	Feeble, Rarefaction.
			S	34 30		
	Tocklai	E	e	20 32 47		Slight, distant.
	Poona	Z	eP	20 32 57		Slight, Compression.
	Dehra Dun	ZNE	e	20 33 31		Feeble.
		N	e	38 43		
			i	43 12		
21	Shillong	Z	eP	20 37 56		Slight, distant.
	Chatra	Z	iP	20 38 11		Feeble, Rarefaction.
			e	42 24		
21	Bombay	N	e	20 42 50		Slight.
		E	e	21 17 28		
22	Shillong	Z	iP	01 06 11		Slight, distant. Compression.
22	Shillong	Z	iP	08 54 09		Slight, distant. Rarefaction.
22	Shillong	Z	e	18 54 26		Slight, distant.
22	Shillong	Z	eP	00 04 35		Slight, near.
23	Shillong	Z	eP	08 38 47		Slight, near.
	Chatra	Z	iP	08 39 20	320	Very feeble.
			S	39 56		
23	Dehra Dun	NE	eP	09 30 35		Slight, phases not clear.
23	Kodaikanal	E	e	09 39 19		Tremor.
23	Shillong	Z	eP	10 14 08		Slight, distant.
23	Shillong	Z	eP	11 12 44		Slight, distant.
23	Shillong	Z	iP	13 29 33		Slight, distant. Compression.
	Chatra	Z	P	13 29 51		Very feeble, distant. Rarefaction.
23	Epc:- 28.5°N, 55.5°E Iran -H= 16h 36m 28s (USCGS) -h= 54 km.					
	Dehra Dun	ZNE	eP	16 40 59	2280	Slight.
		N	PP	41 15		
			PPP	41 33		
			iS	44 44		
			SS	45 17		
			SSS	45 35		
			LR	45 49		
			M	47 44		

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS
June 1961 . . . (contd)						
23	Chatra	Z	eP	16 42 19		Very feeble, distant. Compression.
	Shillong	Z	eP	16 42 55		Slight, distant.
23	Shillong	Z	iP	19 51 44		Slight, distant.
24	Chatra	Z	iP	07 47 57	100	Feeble, Rarefaction.
			S	48 11		
24	Epc:- 4.1°N, 97.5°E Sumatra. -H= 09h 36m 8.8s (USCGS) -h= 188 km					
	Madras	E	iP	09 40 19	2500	Slight, Initial ground motion towards East.
			i	40 27		
			e	40 39		
			PP	40 50		
			iS	44 05		
			LQ	44 15		
			PcP	44 27		
			e	44 35		
			SS	45 16		
			M	46 57		
	Kodaikanal	E	e	09 40 34		Tremor.
	Shillong	ZE	iP	09 40 49	2810	Slight, Compression.
			iS	44 56		
	Visakhapatnam	EN	eP	09 41 06	2770	Slight, Initial ground movement towards North and West.
			e	41 27		
			PP	41 39		
			PP	41 58		
			e	44 53		
			iS	45 10		
			e	45 35		
			sS	45 57		
			SSS	46 10		
			LR	46 41		
			ScP	48 22		
			M	48 33		Period= 2 sec. Gr. dis= 17 mm
	Chatra	ZNE	iP	09 41 15	3270	Feeble, Rarefaction.
			S	45 51		
	Tocklai	E	e	09 41 28		Slight, distant.
	Dehra Dun	ZNE	eP	09 42 42	3410	Slight.
		N	eS	47 45		
			SSS	49 44		
			M	53 22		
	Calcutta	E	i	09 44 30		Slight.
	Bokaro	E	i	09 45 08		Slight, distant.
			i	45 13		Other phases not clear.
			i	45 34		
	Bombay	NE	e	09 46 42		Slight, phases lost in microseisms.
			e	48 48		
24	Shillong	Z	iP	16 09 03		Slight, distant. Compression.
24	Shillong	Z	iP	16 29 10		Slight, distant. Rarefaction.
	Chatra	Z	eP	16 29 40		Feeble, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	REMARKS
June 1961 . . . (contd)					
24	Shillong	Z	iP	19 43 07	Slight, distant. Compression.
	Chatra	Z	iP	19 43 39	Feeble, distant. Compression.
25	Chatra	Z	eP	02 38 13	Feeble, distant.
25	Chatra	Z	iP	16 28 13	Feeble, distant. Compression.
25	Epc:- 21.7°N, 143.1°E North of Mariana Islands. -H= 16h 46m 32.9s (USCGS) -h= 13 km. Mag:- 5- $\frac{3}{4}$ (Berk).				
	Chatra	Z	eP	16 55 44	Distant.
	Dehra Dun	ZNE	eP	16 56 37	6630 Other phases not clear.
		N	iS	17 04 47	
	Bokaro	E	e	16 56 55	Very feeble, distant.
			e	59 10	
			e	17 04 15	
25	Chatra	Z	eP	23 55 34	170 Very feeble.
			eS	55 55	
26	Shillong	Z	e	05 40 19	Slight, distant.
26	Felt at Lunding (Assam).				
	Shillong	Z	iP	06 58 48	Slight near.
	Shillong				
	Chatra	Z	eP	06 59 51	860 Feeble.
			eS	07 01 21	
26	Shillong	Z	eP	07 15 51	Slight, distant.
26	Shillong	Z	iP	07 34 42	Slight, distant. Rarefaction.
	Chatra	Z	eP	07 35 32	1080 Feeble.
			eS	37 23	
26	Chatra	Z	eP	13 58 39	Feeble, distant.
26	Epc:- 52.4°N, 174.5°E Near Islands, Aleutian Islands -H= 14h 47m 26.1s (USCGS) -h= 60 km. (Mag:- 5+ $\frac{1}{2}$ -5+ $\frac{3}{4}$ (Pal)				
	Shillong	Z	iP	14 58 08	Distant.
	Chatra	Z	iP	14 58 21	7550 Compression.
		NE	S	15 07 20	
	Dehra Dun	NE	e	14 59 18	Phases not clear.
			e	15 08 08	
	Poona	Z	iP	14 59 43	9070 Compression. Other
		N	eS	15 09 55	phases not clear.
26	Shillong	Z	e	15 26 44	Slight, distant.
	Bombay	E	e	15 34 45	Slight.
	Hyderabad	N	M	15 36 44	Period= 16 sec. Gr. dis= 6 μ
26	Shillong	Z	eP	16 05 37	Slight, near.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	REMARKS
June 1961 . . . (contd)					
26	Shillong	Z	e	19 48 15	Slight, distant.
26	Shillong	Z2	e	23 53 51	Slight, Tremor.
26	Shillong	Z	iP	23 54 32	Slight, near.
27	Epc:- 28°N, 100°E Sikang (China) -H= 07h 03m 40s (Shillong). 27.8°N, 99.4°E Yunam province, China. -H= 07h 03m 42.2s (USCGS) -h= 33 km. Mag:- 6- $\frac{1}{2}$ (Berk), 5 $\frac{3}{4}$.6 (Pal).				
	Tocklai	E	eP	07 04 58	Near.
	Shillong	Z	iP	07 05 27	780 Initial ground motion
			PP	05 35	towards West & Compression.
			PPP	05 42	
			Pg	05 47	
		EN	iS	06 48	
			SS	07 00	
			SSSS	07 11	
			Sg	07 32	
	Chatra	Z	eP	07 06 20	1180 Moderate.
		N	pP	06 28	
			PPP	06 36	
			e	06 49	
			e	07 17	
			LQ	08 07	
		ZNE	eS	08 21	
			SS	08 34	
			LR	08 43	
			SSS	08 44	
			e	09 26	
	Calcutta	NE	eP	07 06 41	1380 Moderate.
		N	i	07 29	
			i	08 15	
		E	iS	09 02	
	Bokaro	NE	iP	07 06 47	1500
			PPP	07 04	
			LQ	09 10	
			S	09 19	
			SS	09 28	
			SSS	09 43	
			M	10 54	
			PcP	12 10	
	Port Blair	N	e	07 07 44	1060
			e	10 07	
			M	12 37	
	Dehra Dun	ZNE	eP	07 08 07	2150
		N	PPP	08 36	
			iS	11 40	
			SS	12 12	
			SSS	12 33	
			LR	12 44	
			M	14 20	Period= 12 sec. Gr. dis= 47 μ
	Sehore	NE	eP	07 08 21	2410
			PP	08 46	

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
27	Sehore	NE	PPP eS LQ M	7 08 59 12 17 12 31 15 18		
	Hyderabad	EN N E	iP iS PcS M M	07 08 35 12 35 15 41 16 44 17 05	2460	Initial ground movement towards South & West. Period= 16sec. Gr. dis= 63 u Period= 12 sec. Gr. dis= 9 u
	Madras	E	iP PP PPP i iS LQ SS SSS LR M	07 08 50 09 22 09 34 10 13 13 06 13 42 13 56 14 10 14 53 16 41	2680	Initial ground motion towards West-
	Visakhapatnam	E	iP PP PPP iS/LQ SS SSS LR M	07 08 53 09 08 09 17 12 02 12 23 12 40 12 50 14 15	2140	Initial ground motion towards West. Probably + 1 mt. Error in the absolute timings.
	Poona	Z N	iP iS LQ SS LR PcS	07 09 10 13 34 14 28 14 43 15 40 16 04	2810	Compression.
	Bombay	NE N e NE E N	eP PP e eS i LQ LR M M	07 09 20 09 52 10 56 11 09 13 50 14 02 14 20 15 46 19 55 20 05	2900	Period= 9 sec. Gr. dis= 14 u Period= 11 sec. Gr. dis= 11 u
27	Chatra	Z NZ	eP eS	07 13 34 15 35	1200	Feeble
27	Shillong	Z	eP	07 46 22		Slight, distant.
	Tocklai	E	e	07 46 52		Slight, distant.
27	Shillong	Z	eP	08 02 03		Slight, distant.
	Chatra	Z	eP	08 02 17		Mild, Probably distant.
27	Shillong	Z	iP	09 16 29		Slight, distant. Rarefaction.
27	Shillong	Z	iP	09 27 33		Slight, distant. Rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
27	Tocklai	E	e	09 28 02		Slight, distant.
27	Tocklai	E	eP ee i	10 47 12 47 51 48 15		Slight, distant.
	Shillong	Z E	iP iS	10 47 41 48 54	700	Slight.
	Chatra	Z NE	eP eS	10 48 34 50 37	1200	Slight.
	Bokaro	NE	eP e i	10 49 17 51 19 53 29		Slight, distant.
	Dehra Dun	NE	e e	10 50 35 53 58		Slight, Phases not Clear.
	Calcutta	E	e	10 51 47		Slight.
	Bombay	NE	e	11 00 09		
27	Shillong	Z	iP	11 33 36		Slight, distant. Compression.
	Tocklai	E	e	11 34 23		Slight, distant.
	Chatra	Z	e	11 34 31	1200	Mild.
27	Shillong	Z	eP	11 39 49		Slight, distant.
	Tocklai	E	eP	11 40 07		Slight, distant.
	Chatra	Z	eP	11 40 43		Mild, near, Phases not clear.
27	Chatra	Z N	eP eS	11 41 27 43 29	1200	Feeble.
	Dehra Dun	NE	e i i	11 43 22 46 48 12 19 35		Slight, phases not clear.
	Calcutta	E	e	11 44 27		Slight.
27	Tocklai	E	eP	11 54 43		Slight, distant.
	Calcutta	Z	eP	11 55 11		Slight, distant.
	Chatra	Z	eP	11 56 05	1200	Mild.
27	Tocklai	E	e	12 19 05		Slight.
27	Shillong	Z	eP	13 00 41		Slight, distant.
27	Shillong	Z	iP	13 28 12		Slight, distant.
27	Shillong	Z	eP	14 06 14		Slight, distant.
27	Shillong	Z	iP	15 06 41		Slight, distant. Rarefaction.
27	Shillong	Z	eP	15 50 22		Slight, distant.
27	Tocklai	E	eP	18 15 44		Slight, distant.
	Shillong	Z	iP	18 16 09		Slight, distant. Compression.
	Chatra	Z	eP	18 17 04	1200	Mild.
27	Tocklai	E	eP	21 57 24		Slight, distant.

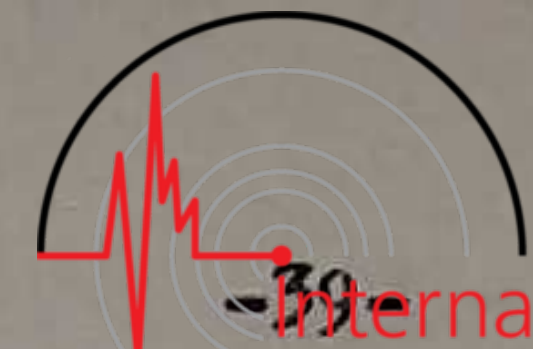
DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
27	Shillong	Z	iP	21 57 48		Slight, distant. Compression.
	Chatra	Z	eP	21 58 42	1200	Feeble.
	Calcutta	E	e	22 03 49		Slight.
27	Shillong	Z	iP	23 48 15		Slight, distant. Compression.
28	Shillong	Z	e	01 54 28		Slight, distant.
28	Shillong	Z	eP	01 55 53		Slight, distant.
28	Shillong	Z	e	03 25 27		Slight, distant.
28	Chatra	Z	iP	03 26 23		Feeble, distant. Compression.
	Shillong	Z	i	03 26 45		Slight, distant.
28	Shillong	Z	eP	03 57 34		Slight, distant.
28	Shillong	Z	eP	04 03 31		Slight, distant.
	Chatra	Z	eP eS	04 04 32 06 36	1220	Feeble.
28	Shillong	Z	e	04 12 36		Slight, distant.
28	Shillong	Z	iP	04 24 48		Slight, distant. Rarefaction.
	Chatra	Z	eP	04 25 33		Feeble, distant.
28	Dehra Dun	NE	e	04 34 38		Tremor.
28	Shillong	Z	e	04 45 26		Slight, distant.
28	Shillong	Z	eP	04 54 40		Slight, distant.
28	Shillong	Z	iP	05 07 37		Slight, near. Compression.
	Chatra	Z	eP	05 08 21		Feeble, near, other phases not clear.
28	Shillong	Z	eP	06 52 29		Slight, distant.
28	Shillong	Z	e	07 58 38		Slight, distant.
28	Shillong	Z	e	08 24 02		Slight, distant.
28	Shillong	Z	iP	11 05 41		Slight, distant.
28	Shillong	Z	eP	11 49 09		Slight, distant.
	Tocklai	E	e	11 49 56		Slight, distant.
	Chatra	Z	eP	11 51 04		Feeble, near.
28	Shillong	Z	eP	12 03 13		Slight, near.
28	Shillong	Z	eP	12 23 05		Slight, distant.
28	Shillong	Z	eP	12 33 33		Slight, distant.
28	Shillong	Z	iP	13 21 47		Slight, distant. Compression.
	Chatra	Z	iP	13 22 15		Feeble, near. Rarefaction.
28	Shillong	Z	e	18 54 30		Slight, distant.
28	Chatra	Z	eP	19 32 15		Feeble, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
June 1961 . . . (contd)						
28	Shillong	Z	eP	19 32 30		Slight, distant.
	Tocklai	E	eP	19 33 04		Slight, distant.
28	Shillong	Z	eP	19 33 42		Slight, distant.
28	Shillong	Z	e	20 58 01		Slight, distant.
28	Shillong	Z	eP	21 37 17		Slight, near.
28	Shillong	Z	e	22 17 11		Slight, distant.
28	Shillong	Z	eP	23 26 07		Slight, distant.
28	Shillong	Z	e	23 45 24		Slight, distant.
29	Shillong	Z	e	00 01 32		Slight, distant.
29	Shillong	Z	e	00 48 14		Slight, distant.
29	Shillong	Z	eP	01 21 07		Slight, distant.
29	Shillong	Z	e	01 42 08		Slight, distant.
29	Shillong	Z	iP	03 21 41		Slight, distant. Compression.
29	Shillong	Z	eP	04 53 31		Slight, distant.
29	Shillong	Z	eP	07 20 05		Slight, distant.
29	Shillong	Z	e	08 28 53		Slight, distant.
29	Shillong	Z	eP	09 35 16		Slight, distant.
	Chatra	Z	iP	09 35 41		Feeble, distant. Rarefaction.
29	Dehra Dun	NE	e i	09 40 11 46 54		Slight, phases not clear.
	Madras	E	e e	09 46 48 10 18 27		Phases could not be identified due to strong microseismic activity.
	Kodaikanal	E	e	09 46 59		Tremor.
29	Shillong	Z	iP	11 43 52		Slight, distant. Compression.
	Chatra	Z	iP	11 44 16		Feeble, distant. Compression.
29	Shillong	Z	iP	14 14 06		Slight, distant. Rarefaction.
	Chatra	Z	iP	14 14 19		Feeble, distant. Rarefaction.
29	Shillong	Z	eP	15 56 59		Slight, near.
29	Shillong	Z	i	22 11 26		Slight, distant.
30	Shillong	Z	iP	00 34 29		Slight, distant. Rarefaction.
30	Shillong	Z	e	06 29 04		Slight, distant.
30	Shillong	Z	iP	16 50 15		Slight, near. Compression.
	Chatra	Z	eP	16 51 22		Slight, distant.

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

June 1961 .. (contd.)

DATE	STATION	COMPT	PHASE	G.	M.	T.	REMARKS
				h.	m.	s.	km.
30	Shillong	Z	eP	16	54	26	Slight, distant
	Rocklai	E	e	16	54	50	Slight, distant
30	Shillong	Z	i	16	55	40	Slight, distant.
30	Shillong	Z	e	17	12	16	Slight, distant.
30	Shillong	Z	ir	18	59	45	Slight, distant. Compression.
30	Shillong	Z	ir	19	52	16	Slight, distant. Rarefaction.
30	Shillong	Z	e	21	04	51	Slight, distant.
	Chatra	Z	eP	21	54	16	Slight, distant.
30	Shillong	Z	e	22	54	51	Slight, distant.
30	Shillong	Z	e	23	00	46	Slight, distant.
30	Shillong	Z	e	23	50	56	Slight, distant.



The following is the list of Earthquakes that were reported by voluntary observers from different stations during the month of June 1961.

Place at which felt	Date in GMT	Time in GMT	No. of shocks in sec.	Duration of shocks in secs.	Intensity in R.R. scale	Remarks
		h m				
Banihal (J & K)	4	23-35	One	5	IV	Rattling sound from about Northern direction.
Srinagar	10	04-00	One	6	IV	
Lumding	14	00-40	One	2	IV	
Chaparmukh	14	00-40	One	1	III	
Imphal Airport	14	00-40	One	5	IV	From about South Easterly direction
Shillong	14	00-42	One	20	IV	Cracking sound during shock.
Gauhati Airport	14	00-43	One	10	IV	Movement from East to West
Kumbhigram	14	00-45	Two	10 secs each, 5 secs. interval	IV	
Srinagar	19	17-07	Two	4 secs each with 4 1/2 secs. interval.	V	
Banihal (J & K)	19	17-10	A few continuous shocks	15 to 20	V	Rattling sound from West during quakes.
Lumding	26	06-59	one	3	IV	



Station : Bombay (Colaba)

Station : Bombay (Colaba)

Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.
09	00	3	2.8	4.4	16	00	3	1.8	4.2
			1.2	2.2		06	3	0.8	2.0
	06	3	2.6	4.6		12	3	1.5	3.9
			0.9	2.0				0.8	2.3
	12	3	2.5	4.1		18	3	1.6	3.8
			1.3	2.0				0.9	2.2
	18	3	2.4	4.5					
			0.9	2.3	17	00	3	1.6	4.4
10	00	3	1.9	4.5		06	3	0.9	2.0
			1.1	2.2				1.5	4.2
	06	3	2.2	4.5		12	3	0.8	2.3
			1.2	2.3				1.7	4.4
	12	3	1.9	4.1		18	3	0.7	2.0
			0.8	2.0				1.3	4.0
	18	3	1.7	4.3				0.7	2.0
			0.9	2.3	18	00	3	1.4	4.4
11	00	3	1.5	3.6		06	3	0.8	2.5
			0.8	2.2				1.3	4.2
	06	...	-	-		12	3	0.7	2.2
	12	...	-	-		18	3	1.4	4.2
	18	3	1.7	3.6				0.6	2.3
			1.0	2.2		18	3	1.1	4.1
								0.6	2.3
12	00	3	1.3	3.7	19	00	3	1.3	4.2
			0.9	2.3		06	3	0.7	2.5
	06	3	1.6	3.7				1.2	4.7
			0.8	2.3		12	3	0.6	2.5
	12	3	1.7	3.9				1.1	4.4
			0.7	2.2		18	3	0.6	2.3
	18	3	1.7	3.8				1.1	4.4
			0.7	2.0				0.6	2.7
13	00	3	1.9	4.2	20	00	3	1.1	4.3
			0.8	2.3		06	3	0.5	2.3
	06	...	-	-				0.9	4.3
		3	1.7	4.1		12	3	0.4	2.5
			0.6	2.2				1.0	4.3
	18	3	2.0	4.3		18	3	0.5	2.0
			0.7	2.3				0.9	4.1
14	00	3	1.9	4.2	21	00	3	1.0	4.0
			0.7	2.0		06	3	0.4	1.8
	06	3	2.1	4.4				0.8	4.6
			0.9	1.9		12	3	0.7	1.8
	12	3	2.0	4.3				1.1	4.2
			0.8	2.2		15	1	1.2	2.3
	18	3	1.7	3.6		18	1	1.2	2.5
			1.1	2.2		21	1	1.2	2.6
15	00	3	1.8	4.1	22	00	1	1.3	2.8
			0.8	2.2		03	1	1.3	2.9
	06	3	1.7	3.7		06	1	1.3	2.9
			0.9	2.3		09	1	1.4	3.0
	12	3	1.6	3.8		12	1	1.5	3.0
			0.7	2.0				2.2	3.4
	18	3	1.7	4.0					
			0.6	2.0					

Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.
22	15	1	2.3	3.1	29	00	3	2.9	4.6
Contd)	18	1	3.0	3.3				1.2	2.6
	21	1	2.8	3.5		06	3	3.4	4.6
23	00	1	3.3	3.4				1.3	2.5
	06	3	3.4	3.7		12	3	3.2	4.2
			1.3	2.3				1.2	2.2
	12	3	3.6	3.7		18	3	2.7	4.3
			1.2	2.0				1.2	2.2
	18	3	3.3	4.0	30	00	3	2.9	4.4
			1.3	2.2				1.3	2.2
24	00	3	3.2	3.9		06	3	3.1	4.9
			1.3	2.4				1.1	2.2
	06	3	3.1	3.5		12	3	3.1	4.5
			1.2	2.2				1.0	2.2
	12	3	3.5	3.3		18	3	3.4	4.3
			1.4	2.3				0.9	2.2
	18	3	3.7	3.9					
			1.6	2.1					
25	00	3	2.6	3.5					
			1.3	2.0					
	06	3	3.4	4.0					
			1.2	2.0					
	12	3	3.4	3.3					
			1.1	2.2					
	18	3	3.0	3.6					
			1.1	2.2					
26	00	3	2.5	3.6					
			1.1	2.0					
	06	3	3.0	3.6					
			1.0	2.1					
	12	3	2.5	3.2					
			1.0	2.0					
	18	3	3.0	3.9					
			0.9	2.0					
27	00	3	2.4	3.9					
			1.3	2.0					
	06	3	3.0	4.4					
			1.3	2.6					
	12	3	3.1	4.6					
			1.3	2.2					
	18	3	3.0	4.7					
			1.4	2.6					
28	00	3	2.6	4.5					
			1.2	2.5					
	06	3	2.8	4.5					
			1.3	2.5					
	12	3	2.9	4.6					
			1.1	2.4					
	18	3	2.9	4.7					
			1.1	2.3					

Station : Madras

01	00	2	1.0	4.5
	03	2	1.1	5.0
	06	2	1.1	5.1
	12	2	1.1	4.8
	18	2	1.0	4.8
02	00	...	-	-
	03	2	0.9	4.7
	06	...	-	-
	12	2	0.9	4.7
	18	2	0.8	4.7
03	00	2	0.7	4.3
		3	0.3	2.6
	03	3	0.7	4.3
		3	0.3	2.7
	06	3	0.7	4.3
		3	0.3	2.5
	12	3	0.7	4.3
		3	0.3	2.5
	18	3	0.5	3.9
		3	0.3	2.4
04	00	3	0.3	2.8
		3	0.5	3.5
	03	3	0.6	3.9
		3	0.3	2.7
	06	3	0.5	3.9
		3	0.3	2.5
	12	1	0.5	2.6
	18	1	0.5	2.7



Station : Madras (Contd.)

Component : E-W.

Station: Madras (Contd).

Component : E-W.

Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.
05	00	1	0.5	2.7	13	00	3	0.5	2.7
	03	1	0.6	2.6		03	3	0.8	3.7
	06	1	0.7	2.8		06	3	0.7	3.7
	12	1	0.6	2.7		12	3	0.7	3.7
	18	1	0.6	2.6		18	3	0.8	3.9
06	00	1	0.5	2.7	14	00	3	0.8	3.9
	03	1	0.6	2.6		03	3	0.9	4.0
	06	1	0.6	2.7		06	3	0.7	4.0
	12	1	0.6	2.8		12	3	0.7	4.2
	18	1	0.7	2.9		18	3	0.8	4.3
07	00	1	0.7	3.0	15	00	3	0.9	4.3
	03	...	-	-		03	3	0.9	4.4
	06	1	0.9	3.2		06	3	0.7	4.2
	12	1	1.0	3.4		12	3	0.7	4.2
	18	1	1.0	3.7		18	3	0.7	4.2
08	00	1	1.1	3.9	16	00	3	0.7	4.1
	03	1	1.2	4.0		03	3	0.7	4.1
	06	1	1.2	4.2		06	3	0.3	2.7
	12	1	1.3	4.5		12	3	0.3	2.7
	18	1	1.5	4.6		18	3	0.7	4.0
09	00	1	1.5	4.5	17	00	3	0.3	2.6
	03	1	1.6	4.7		03	3	0.8	4.2
	06	1	1.6	4.8		06	3	0.3	2.5
	12	1	1.7	4.7		12	3	0.7	4.2
	18	1	1.6	4.7		18	3	0.8	4.1
10	00	1	1.2	4.7	18	00	3	0.8	4.3
	03	1	1.3	4.7		03	3	0.8	4.3
	06	1	1.3	4.7		06	3	0.7	2.4
	12	3	1.0	4.4		12	3	0.3	2.4
	18	3	1.0	4.6		18	3	0.7	4.3
11	00	3	0.9	4.2	19	00	3	0.4	2.4
	03	3	0.7	3.0		03	3	0.4	2.4
	06	3	0.9	4.5		06	1	0.5	2.4
	12	3	0.4	2.7		12	1	0.5	2.4
	18	3	0.7	4.3		18	1	0.9	2.7
		3	0.5	2.7		18	1	0.8	2.7
		3	0.4	2.9		18	1	0.8	2.6
12	00	3	0.5	2.8	20	00	3	0.5	2.6
	03	3	0.7	3.9		03	3	0.7	4.2
	06	3	0.5	2.7		06	3	0.4	2.4
	12	3	0.7	3.6		12	3	0.4	2.4
	18	3	0.5	2.8		18	1	0.5	2.4
		3	0.6	3.5		18	1	0.9	2.7
		3	0.4	2.7		18	1	0.9	2.7
		3	0.6	3.5					
		3	0.5	2.7					
		3	0.7	3.6					

Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour GMT.	K	Mean amplitude in m.m.	Mean period in sec.
21	00	3	0.7	4.2	28	00	1	2.1	5.0
	03	3	0.6	4.4		03	1	2.3	5.3
	06	3	0.6	4.2		06	1	2.2	5.1
	12	3	0.5	4.3		12	1	2.2	5.2
	18	3	0.5	4.2		18	1	2.1	5.1
22	00	3	0.2	2.0	29	00	1	1.8	4.9
	03	3	0.2	1.9		03	...	-	-
	06	3	0.2	2.0		06	1	1.8	4.6
		3	0.3	2.6		12	1	2.0	4.3
		3	0.5	3.6		18	1	1.9	4.6
	12	3	0.4	2.6	30	00	1	1.9	4.6
		3	0.6	3.8		03	1	1.9	4.5
	18	3	0.5	2.5		06	1	1.9	4.7
		3	0.6	3.8		12	1	2.0	4.7
23	00	3	0.7	3.7		18	1	2.0	4.8
		3	0.4	2.4					
	03	3	0.4	2.4					
		1	0.9	3.8					
	06	...	-	-					
	12	1	0.9	4.3					
	18	1	1.0	4.4					
24	00	1	0.9	4.4					
	03	1	1.0	4.4					
	06	1	1.0	4.5					
		3	0.6	2.7					
	12	1	1.0	4.4					
		3	0.7	2.9					
	18	3	1.0	4.1					
		1	0.8	2.8					
25	00	3	1.1	4.2					
		1	0.8	2.7					
	03	3	1.0	4.2					
		1	1.1	2.7					
	06	3	1.5	4.2					
		1	1.3	3.0					
	12	3	1.6	4.1					
		1	1.3	3.0					
	18	3	1.7	4.2					
		3	1.2	2.9					
26	00	3	1.5	4.4					
		3	1.0	2.7					
	03	1	1.5	4.1					
		3	0.9	2.8					
	06	1	1.7	4.3					
		1	1.7	4.4					
	12	1	1.7	4.4					
	18	1	1.6	4.5					
27	00	1	1.6	4.6					
	03	1	1.7	4.7					
	06	1	1.7	4.8					
	12	1	2.1	4.9					
	18	1	2.1	5.0					

Station : Bokaro

01	00	3	0.5	4.8
	06	3	0.4	4.8
	12	3	0.3	3.0
	18	3	0.4	3.0
02	00	...	-	-
	06	...	-	-
	12	3	0.4	3.2
	18	3	0.4	3.4
03	00	3	0.4	3.5
	06	...	-	-
	12	0,0	-	-
	18	3	0.4	2.5
04	00	3	0.3	2.4
	06	3	0.4	2.4
	12	3	0.5	2.5
	18	3	0.4	2.5
05	00	3	0.4	3.0
	06	3	0.4	3.2
	12	3	0.4	3.2
	18	3	0.5	2.8
06	00	3	0.4	2.2
	06	...	-	-
	12	...	-	-
	18	...	-	-
07	00	...	-	-
	06	...	-	-
	12	3	0.5	4.3
	18	3	0.5	4.0



Station: Bokaro (Contd.)
 Component: E-W
 June 1961.

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in secs	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in secs
08	00	...	-	-	19	00	3	0.4	4.0
	06	...	-	-		06	3	0.5	4.0
	12	3	0.5	4.5		12	3	0.4	4.2
	18	3	0.6	4.8		18	0,0	-	-
09	00	3	0.6	4.7	20	00	0,0	-	-
	06	3	0.7	4.5		06	3	0.3	4.0
	12	3	0.8	5.0		12	3	0.3	4.3
	18	3	0.7	5.0		18	3	0.4	5.0
10	00	...	-	-	21	00	3	0.3	4.3
	06	0,0	-	-		06	3	0.4	4.5
	12	0,0	-	-		12	3	0.4	4.5
	18	3	0.5	4.5		18	...	-	-
11	00	...	-	-	22	00	...	-	-
	06	...	-	-		06	...	-	-
	12	3	0.5	4.3		12	3	0.5	4.5
	18	...	-	-		18	3	0.5	4.0
12	00	3	0.4	4.0	23	00	3	0.5	4.0
	06	3	0.4	4.5		06	2	0.5	4.3
	12	3	0.4	4.6		12	2	0.5	4.3
	18	...	-	-		18	3	0.5	4.6
13	00	...	-	-	24	00	3	0.6	4.7
	06	3	0.5	3.8		06	3	0.6	4.5
	12	3	0.6	4.0		12	3	0.7	4.7
	18	3	0.5	4.2		18	3	0.6	4.5
14	00	3	0.6	4.0	25	00	3	0.5	4.5
	06	3	0.6	3.8		06	3	0.6	4.5
	12	3	0.5	3.8		12	3	0.6	4.5
	18	3	0.5	4.0		18	3	0.8	5.0
15	00	3	0.6	3.8	26	00	3	0.8	5.0
	06	3	0.5	3.5		06	3	0.7	5.0
	12	3	0.5	3.6		12	3	0.8	4.7
	18	3	0.4	3.2		18	3	0.7	5.0
16	00	...	-	-	27	00	2	0.7	5.0
	06	3	0.5	3.8		06	3	1.2	5.2
	12	3	0.6	4.0		12	3	1.2	5.5
	18	3	0.5	3.0		18	3	1.1	5.5
17	00	3	0.6	3.2	28	00	3	0.7	5.0
	06	...	-	-		06	3	1.1	5.2
	12	3	0.4	2.5		12	3	0.8	5.0
	18	3	0.5	2.8		18	3	1.0	5.4
18	00	3	0.5	2.5	29	00	3	0.8	5.2
	06	3	0.5	2.8		06	3	0.8	5.0
	12	3	0.5	3.0		12	3	0.7	4.8
	18	3	0.4	4.0	30	00	3	0.8	5.0
						06	3	1.0	5.2
						12	3	1.0	5.4
						18	3	1.0	5.5
							3	0.8	5.0

Station: Vishakapatnam
 June 1961
 Component: E.W.

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
01	12	2	0.6	4.3	13	00		0.6	3.3
	18	2	0.8	4.7		06		0.7	4.0
02	00	...	-	-		12		0.7	4.2
	06	...	-	-		18		0.7	3.6
	12		0.5	4.9	14	00		0.5	3.0
	18		0.6	3.9		06		0.7	3.8
03	00		0.5	3.2		12		0.6	4.2
	06		0.7	3.5		18		0.7	4.5
	12		0.6	3.6	15	00		0.5	3.8
	18		0.6	3.3		06		0.5	3.9
04	00		0.5	2.9		12		0.4	4.2
	06	2	0.7	3.5		18		0.5	3.9
	12	2	1.0	3.5	16	00		0.5	3.1
	18	2	0.6	3.2		06		0.6	3.6
05	00	2	0.7	3.3		12		0.6	4.0
	06	2	0.5	3.4		18		0.6	3.9
	12	2	0.6	3.9	17	00		0.6	3.3
	18	2	0.5	2.6		06		0.6	3.0
06	00	2	0.5	3.3		12		-	-
	06	2	0.5	2.9		18		0.6	2.9
	12	2	0.7	3.9	18	00		0.5	3.2
	18	2	0.5	2.8		06		0.7	3.2
07	00	2	0.6	3.1		12		0.7	3.1
	06	2	0.8	4.1		18		0.7	3.6
	12	2	0.8	4.3	19	00		0.5	3.3
	18	2	0.8	4.0		06		0.6	4.2
08	00	2	0.6	3.5		12		0.6	3.7
	06	3	0.6	4.2		18		0.3	4.1
	12	3	0.8	4.1	20	00		0.4	4.1
	18	3	0.9	4.6		06		0.5	4.3
09	00		0.9	3.2		12		0.5	4.5
	06	3	0.9	4.6		18		0.5	3.4
	12	3	0.9	4.2	21	00		0.4	3.3
	18		0.7	3.3		06		0.6	3.7
10	00		0.8	3.4		12		0.5	3.9
	06	3	0.8	3.8		18		0.4	3.5
	12	3	0.8	4.6	22	00		0.3	4.0
	18	3	0.9	3.7		06		0.4	4.0
11	00		0.8	3.8		12		0.5	3.8
	06	...	-	-		18		-	-
	12		0.7	3.7	23	00		-	-
	18		0.5	3.5		06		0.6	4.2
12	00	-	-	-		12		0.6	3.2
	06		0.8	4.0		18		-	-
	12		0.7	4.0	24	00		-	-
	18		0.6	4.1		06		0.7	4.2

Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
Station: Vishakapatnam (Contd.)					June 1961 Compt: E-W. Port Blair				
24	12		0.6	3.1	05	12	1	0.8	3.3
Contd.	18		0.7	4.0	(Contd.)	18	1	0.8	3.3
25	00		3.5	4.4	06	00	1	0.8	3.3
	06		0.9	4.1		06	...	-	-
	12		0.8	4.7		12	1	0.8	3.4
	18		0.9	4.8		18	1	0.8	3.2
26	00		1.0	5.0	07	00	1	0.8	3.2
	06	3	1.1	5.3		06	...	-	-
	12	3	1.1	5.0		12	1	0.8	3.6
	18		0.8	5.0		18	...	-	-
27	00		-	-	08	00	...	-	-
	06		1.0	4.6		06	1	4.0	3.6
	12		1.0	5.2		12	1	3.6	3.5
	18		1.1	5.4		18	1	3.6	4.0
28	00		-	-	09	00	1	3.6	4.0
	06		-	-		06	...	-	-
	12		1.0	4.8		12	3	2.4	3.6
	18		1.0	4.9		18	3	2.0	3.4
29	00		1.1	4.2	10	00	3	2.4	3.6
	06	1	0.9	4.4		06	...	-	-
	12	1	1.0	4.6		12	...	-	-
	18	1	1.0	4.6		18	...	-	-
30	00		0.9	4.6	11	00	...	-	-
	06		1.0	4.2		06	...	-	-
	12		-	-		12	...	-	-
	18		-	-		18	...	-	-
Station: Port Blair Compt: E-W.					June 1961 Compt: E-W. Port Blair				
01	00	...	-	-	12	00	...	-	-
	06	...	-	-		06	...	-	-
	12	...	-	-		12	...	-	-
	18	...	-	-		18	...	-	-
02	00	...	-	-	13	00	...	-	-
	06	...	-	-		06	...	-	-
	12	1	0.8	7.2		12	...	-	-
	18	1	0.8	7.2		18	...	-	-
03	00	1	0.8	7.2	14	00	...	-	-
	06	...	-	-		06	0,0	-	-
	12	3	0.4	3.4		12	0,0	-	-
	18	3	0.4	3.3		18	0,0	-	-
04	00	3	0.4	3.2	15	00	0,0	-	-
	06	3	0.4	3.2		06	0,0	-	-
	12	...	-	-		12	0,0	-	-
	18	...	-	-		18	0,0	-	-
05	00	...	-	-	16	00	0,0	-	-
	06	1	0.8	3.3		06	0,0	-	-
						12	0,0	-	-
						18	0,0	-	-

Date	Hour GMT	k	Mean Amplitude in mm	Mean Period in sec	Date	Hour GMT	K	Mean Amplitude in mm	Mean Period in sec
Station: Port Blair					June 1961 Component: E-W.				
17	00	0,0	-	-	24	00	3	0.4	3.4
	06	0,0	-	-		06	...	-	-
	12	0,0	-	-		12	...	-	-
	18	0,0	-	-		18	2	2.0	3.6
18	00	0,0	-	-	25	00	2	2.4	3.6
	06	0,0	-	-		06	2	3.6	3.8
	12	0,0	-	-		12	2	3.6	4.0
	18	0,0	-	-		18	2	5.6	4.0
19	00	0,0	-	-	26	00	2	5.6	4.0
	06	0,0	-	-		06	...	-	-
	12	0,0	-	-		12	...	-	-
	18	0,0	-	-		18	...	-	-
20	00	0,0	-	-	27	00	...	-	-
	06	0,0	-	-		06	2	4.0	4.1
	12	3	0.4	7.2		12	2	4.0	3.8
	18	3	0.4	7.2		18	2	3.2	3.7
21	00	3	0.4	7.2	28	00	2	3.2	3.7
	06	3	0.4	7.2		06	2	2.4	3.7
	12	3	0.4	7.2		12	2	2.0	3.4
	18	3	0.4	7.2		18	2	2.0	3.4
22	00	3	0.4	7.2	29	00	2	1.6	3.4
	06	3	0.8	7.2		06	2	1.6	3.5
	12	3	0.8	7.2		12	2	1.2	3.4
	18	3	0.8	7.2		18	2	1.2	3.4
23	00	3	0.8	7.3	30	00	2	1.2	3.3
	06	...	-	-		06	2	1.2	3.5
	12	...	-	-		12	2	1.6	3.5
	18	3	0.4	3.4		18	2	1.6	3.4