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METEOROLOGICAL DEPARTMENT

SEISMOLOGICAL BULLETIN

July, 1961



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Director General of Observatories

List of Seismograph Stations with their Instruments and Constants

STATION	LATI-TUDE	LONGI-TUDE	HEIGHT a. s. l. (Metres)	LITHOGRAPHIC FOUNDATION	INSTRUMENT	COMPT.	PERIOD IN SECS	STATIC MAGNIFI- CATION	DAMPING RATIO	PAPER SPEED mm/min
Agra					Columbia	E	To=15			15
					Long Period	N	Tg=100			15
					-do-	Z	To=15 Tg=8.5 To=15 Tg=70		15	
Bombay	18°54'N	72°49'E	6 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	-	Fock	Milne-Shaw	N	12	250	20:1	15
					Milne-Shaw	E	12	250	20:1	15
					Wood-Anderson	E	0.8	950	h=0.8	60
Calcutta	22°32'N	88°22'E	(1) 7(Milne-Shaw) (2) 6(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
Chatra	25°50'N	87°10'E	161	Sand Stone	Milne-Shaw	E	12	250	20:1	15
					Wood-Anderson	N	1	1000	30:1	60
					Benioff	Z	To=0.72	Tg=0.45	Critical	60
					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	582	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
Hyderabad	17°25'N	78°27'E	536	Granite	Milne-Shaw	E	12	250	20:1	8
					Milne-Shaw	N	12	250	20:1	8
					Sprengnether	E	To=Tg=72	secs	Critical	30
Kodaikanal	10°14'N	77°28'E	2345	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
Fort Blair	11°49'N	92°43'E	-	-	Wood-Anderson	N	2	1000	20:1	30
					Wood-Anderson	E	0.8	1000	55:1	30
					Milne-Shaw	N	12	350	20:1	8
Sehore					Wood-Anderson	N	0.8	980	Critical	30
Shillong	25°34'N	91°53'E	1500	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		60
					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

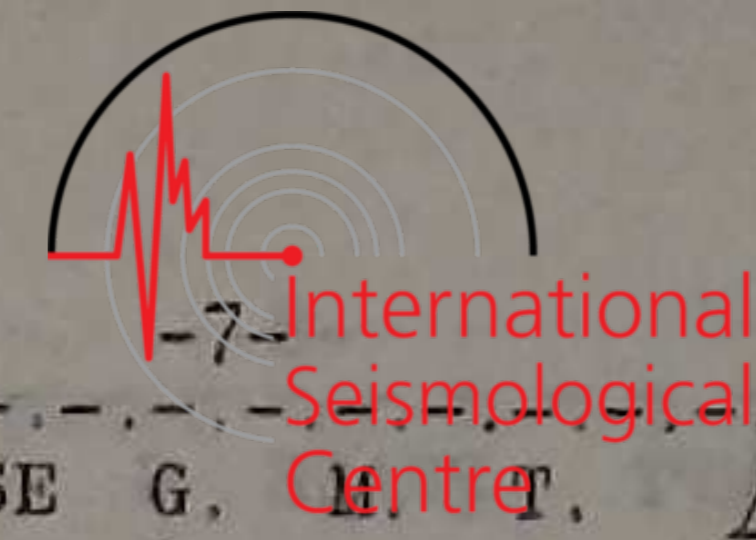


DATE	STATION	INSTRUMENT	PHASE	TIME	AMPLITUDE	PERIOD	CHARACTER
July, 1961							
01	Chatra		iP	01 00 06			Feeble, distant Rarefaction.
01	Chatra		eS	11 55			Mild
	Shillong	Z	eP	06 12 14			Mild, near.
01	Shillong	Z	iP	07 05 41			Slight, distant. Compression.
01	Bokaro	NE	iP	08 03 14			Slight, tremor.
01	Shillong	Z	iP	08 08 14			Slight, distant. Compression.
01	Shillong	Z	eP	11 50 22			Slight, distant.
01	Shillong	Z	iP	13 30 39			Slight, distant. Rarefaction.
01	Shillong	Z	eP	14 30 24			Slight, local
01	Shillong	Z	eP	14 32 03			Slight, local
01	Shillong	Z	eP	14 52 50			Slight, distant.
01	Shillong	Z	eP	21 45 34			Slight, distant.
01	Shillong	Z	eP	22 02 06			Slight, distant.
01	Shillong	Z	eP	22 39 13			Slight, distant.
01	Shillong	Z	eP	23 45 00			Slight, distant.
01	Shillong	Z	eP	23 54 32			Slight, distant.
02	Chatra	Z	iP	02 38 14			Feeble, Rarefaction. Phases uncertain.
			i	38 31			
			i	39 34			
02	Tocklai	E	iP	04 32 22			Slight near, Initial ground movement toward West.
	Chatra	Z	i	04 33 03			Feeble, distant. Rarefaction.
02	Bokaro	NE	iP	08 55 19			Slight, Tremor.
02	Tocklai	E	eP	11 47 36			Slight near.
	Chatra	Z	eP	11 49 47			Feeble, distant.
03	Shillong	Z	iP	08 32 10			Slight, distant. Rarefaction.
3	Epc:- 26.8°N 95.4°E, Assam. -H= 08 h 59 m 23 s (Shillong).						

DATE	STATION	COMPT	PHASE	G. h.	M. m.	T. s.	△ km.	REMARKS
July, 1961								
	Tocklai	E	ePg iSg	09	00	16 00 33	140	Slight.
	Shillong	ZNE	eP PPP iS Sg,M	09	00	28 00 42 01 20 01 42	490	Slight.
	Chatra	ZN	eP eS	09	00	50 02 16	830	Feeble.
03	Shillong	Z	iP eS	13	15	06 15 35	210	Slight.
03	Shillong	Z	iP	13	40	45		Slight distant. Rarefaction.
03	Shillong	Z	iP e	15	20	05 21 27		Slight Compression.
	Chatra	Z	eP	15	21	58		Feeble, distant.
03	Shillong	Z	eP	21	02	00		Slight, distant.
03	Shillong	Z	iPg Sg	23	43	10 43 20	90	Slight.
04	Shillong	Z	eP	02	13	46		Slight, near.
04	Shillong	Z	iP	06	19	36		Slight, distant. Rarefaction.
	Chatra	Z	eP	06	20	11		Very feeble, distant. Compression.
04	Shillong	Z	eP	13	14	08		Slight, distant.
04	Shillong	Z	iPg iSg	13	14	23 14 33	90	Slight.
04	Shillong	Z	iP	18	14	02		Slight, distant. Compression.
04	Shillong	Z	iP	18	14	16		Slight, Rarefaction.
04	Shillong	Z	eP	21	23	05		Slight, distant.
05	Shillong	Z	iP	02	28	37		Slight, distant. Rarefaction.
05	Shillong	Z	eP	02	49	40		Slight, distant.
05	Chatra	Z	iPg Sg	03	26	54 27 00	50	Very feeble, Compression.



DATE	STATION	COMPT	PHASE	G. h.	M. m.	T. s.	△ km.	REMARKS
July, 1961								
05	Shillong	Z	iP iS	04	05	04 05 36	230	Slight.
	Chatra	Z	iP	04	06	18		Feeble, distant. Compression.
05	Shillong	Z.	ePg iSg	04	58	03 59 19	130	Slight.
	Chatra	Z	eP	04	59	08		Feeble, distant.
05	Shillong	Z	iP	05	49	43		Slight, distant.
	Chatra	Z	iP	05	50	43		Feeble, distant. Compression.
05	Shillong	Z	eP	05	58	26		Slight, distant.
05	Chatra	Z	eP	06	25	37		Feeble, distant. Compression.
	Shillong	Z	eP	06	26	26		Slight, distant.
05	Dehra Dun	Z NE	e i i	06	36	48 38 33 39 47		Slight, phases not clear.
	Shillong	Z	eP	06	37	56		Slight, near.
	Chatra	Z	iP S	06	38	01 40 49	1670	Feeble, Compression.
	Bokaro	E	i i	06	41	52 47 22		Slight, distant, phases not well developed.
05	Visakhapatnam	NE	iP	06	48	25		Probably near, merged in microseisms.
05	Shillong	Z	iP	06	54	31		Slight, distant.
05	Shillong	Z	eP	11	49	07		Slight, very distant.
05	Shillong	Z	eP ePP PPP S SS/Sg/M	17	15	34 15 41 15 47 15 57 16 15	290	Slight, Rarefaction.
05	Chatra	Z	iP iS	17	17	24 17 48	200	Feeble, Compression.
05	Shillong	Z	iP	23	42	56		Slight, distant. Compression.
06	Shillong	Z	eP Pg LR S* SSS	05	36	55 37 05 37 25 37 36 37 47	290	Slight.



DATE	STATION	COMPT	PHASE	G.M. T. h.m.s.	△ km	REMARKS	DATE	STATION	COMPT.	PHASE	G. h. m. s.	△ km.	REMARKS
July..... 1961							July, 1961						
06	Shillong	Z	eP	06 09 41		Slight, distant	06	Poona	Z N	eP PP SKS SKKS iS SS M	22 23 31 27 39 33 59 34 25 34 57 41 54 23 04 17	10960	
06	Shillong	Z	iP eS	08 20 44 21 06	170	Slight.							
06	Shillong	Z	iP	17 49 14		Compression, slight distant.							
06	Shillong	Z	iP	18 41 46		Slight, distant. Compression.		Visakhapatnam	E	e e e eS e e	22 23 42 27 05 29 11 34 12 35 23 35 58		First ground movement towards West.
06	Shillong	Z	eP	22 07 32		Slight, distant							
06	Epc:- 20°S 169°E. New Hebrides Islands, -H=22h 09m 31.4s (USCGS). -h= about 47 Kms. Mag:- 6-6½ (Pas), 6½-6¾ (Pal)							Dehra Dun	NE	P e iSKS i i	22 23 19 28 52 33 59 36 18 38 44	11110	
	Tocklai	E	iP	22 21 29		Distant. Initial ground motion towards West.							
	Port Blair	E	iP iSKS	22 21 49 31 55	9110			Bombay	E	PP SKS e	22 27 42 34 00 36 42	11610	Phases not clear due to microseisms. Spreng-nether record defective
	Shillong	ZNE	iP PP PPP SKS PS PPS SS	22 22 18 26 08 28 08 32 43 34 41 35 17 39 43	9610	Initial ground movement towards West, North & Compression.		Kodaikanal	E	e	22 33 40		A tremor recorded.
								Chatra	ZNE	iP SKS	22 34 07 44 41	10330	Feeble, Compression.
	Bokaro	E	iP iSKS i i i	22 22 41 33 11 33 45 35 01 35 40	10000	Very distant. Other phases not identifiable. First ground motion towards West.	06	Bombay	E NE	e e e	22 41 00 42 12 50 27		Slight.
	Madras	E	iP PP PPP SKS iS PS PPS SS SSS LQ LR	22 22 47 26 32 28 43 33 20 33 59 35 17 36 01 40 29 44 07 49 34 53 39	10520	Initial ground motion towards West.	06	Calcutta	E	i i	23 22 27 33 03		Moderate.
	Hyderabad	N	eP SKS PS SS SSS LR M	22 22 50 33 32 34 23 38 47 43 02 51 15 59 14	10560		07	Shillong	Z	eP	01 59 54		Slight, distant.
							07	Shillong	Z	eP iSg	04 15 31 15 49	140	Slight.
							07	Shillong	Z	iP	04 25 31		Slight, distant. Compression.
							07	Shillong	Z NE	eP eS	04 53 04 58 39	3960	Slight.
							07	Shillong	Z	iP	07 02 06		Slight, distant. Rarefaction.
							07	Shillong	Z	iP	07 53 21		Slight, distant. Rarefaction.
							07	Calcutta	N	e	11 08 03		Slight.
							07	Dehra Dun	NE N	e e e e	12 22 42 23 27 28 06 32 20		Slight, phases not clear.

Period= 24 secs
Gr. dis= 18 μ



DATE	STATION	COMPT.	PHASE	G. M. h. m. s.	T. s.	△ km.	REMARKS
<u>July, 1961.</u>							
07	Epc:- 5.7° S 149.7° E New Britain, h about 57 Kms. - H = 13 h 10 m 43.8 s, Felt. (USCGS). Mag:- 6-6 $\frac{1}{4}$ (Pas).						
	Shillong	ZE	iP iS	13 21 30	22 14	7420	
	Kodaikanal	E	e	13 22	37		Tremor.
	Chatra	ZNE	eP eS	13 21 31	48 06	7930	Compression.
	Madras	E	e e e	13 24 31 47	40 23 12		
	Bombay	E	e	13 33	27		Phases not clear to microseisms.
07	Shillong	Z	eP	14 31	08		Slight, distant.
	Tocklai	E	iP	14 31	09		Slight, distant.
07	Epc:- 24.8° N 98.5° E, Burma China Border. -H = 17 h 01 m 52.3 s h about 25 Kms. (USCGS)						
	Tocklai	E	eP iS SSS	17 02 02 03	17 55 15	370	Slight.
	Shillong	ZNE	iP Pg iS SSS Sg	17 03 03 04 05 05	23 43 40 09 33	740	Slight, Rarefact
	Chatra	Z	iP iS	17 04 06	23 28	1220	Feeble, distant. Rarefaction.
07	Dehra Dun	NE N	eP PPP iS SSS M	17 06 06 09 10 12	19 50 39 29 00	2010	Slight.
	Visakhapatnam	NE	iP	17 06	22		Slight, first ground movement towards and West.
	Bokaro	E	i i i	17 07 09 09	11 10 25		Slight, distant, other phases not identifiable.
07	Visakhapatnam	E	eP e e	17 12 14 14	03 15 59		Slight, tremor.
07	Shillong	Z	eP	21 13	16		Slight, distant.
07	Shillong	Z	iP	22 32	18		Slight, distant. Compression.

DATE	STATION	COMPT.	PHASE	G. M. h. m. s.	T. s.	△ km.	REMARKS
<u>July, 1961.</u>							
08	Shillong	Z	iP	02 48	05		Slight, distant. Compression.
08	Visakhapatnam	NE	e	02 59	00		Slight, distant. First ground movement towards North & East.
	Kodaikanal	E	e	02 59	38		Tremor.
	Dehra Dun	NE	e	03 00	42		Slight phases not clear.
08	Tocklai	E	iP iS	07 28 29	20 20	570	Very slight.
	Chatra	Z	iP S	07 30 32	17 23	1230	Feeble, Rarefaction.
08	Shillong	Z	iP	07 44	26		Slight, distant. Rarefaction.
	Shillong	Z	iPg	14 11	12		Slight, near.
	Chatra	Z	eP S	14 12 12	06 57	480	Feeble.
08	Shillong	ZNE	iP iS	15 47 16 00	25 49	10510	Slight, distant.
	Chatra	Z	iP	15 47	47		Feeble, distant. Rarefaction.
	Madras	E	iP PcP PP PPP iS SKS i PPS SS SSS LQ	15 48 48 51 53 58 58 58 59 16 00 03 06 09	30 42 50 21 27 39 58 26 14 48 35 37	8730	Slight. Initial ground motion towards East.
	Port Blair	E	i	15 57	04		Slight.
	Kodaikanal	E	e	15 59	01		Tremor.
	Dehra Dun	NE	e e	15 59 16 05	01 35		Slight, phases not clear.
08	Shillong	Z	eP	17 58	09		Slight, distant.
08	Chatra	Z	iP S	18 38 38	27 47	160	Feeble, Compression.
08	Shillong	Z	eP	19 56	34		Slight, distant. Tremor.
08	Shillong	Z	eP	21 26	45		Slight, distant.



DATE	STATION	COMPT.	PHASE	G. n.	M. m.	T. s.	△ km.	REMARKS
<u>July, 1961</u>								
08	Shillong	Z	iP	22	01	31		Slight, distant Compression.
08	Shillong	Z	iP	23	32	35		Slight, local Tre
09	Dehra Dun	Z NE	e i	08	10	27 15 59		Slight, phases no clear.
	Shillong	Z	iP	08	12	04		Slight, distant. Rarefaction.
09	Shillong	Z	eP iS	09	14	29 15 20	480	Slight.
09	Shillong	Z	iP	16	56	33		Slight, distant. Compression.
09	Shillong	Z	iP iS	17	54	18 54 49	280	Slight.
09	Shillong	Z	eP	21	37	20		Slight, distant.
10	Shillong	Z	eP	04	10	06		Slight, distant.
10	Shillong	Z	iP	07	55	54		Slight, distant. Compression.
10	Shillong	Z	eP	16	51	06		Slight, distant.
10	Shillong	Z	e	17	15	11		Slight, distant.
10	Shillong	Z	iP Pg iS Sg	17	22	37 22 39 23 02 23 06	190	Slight, Compressi
11	Shillong	Z	eP	01	29	50		Slight, distant.
11	Chatra	Z	e	05	07	47		Very mild, local, phases not clear.
11	Epc:- 7° N 94° E South of Nicobar Islands. - H = 09 h 31 m 30 s (Shillong). 8.3° N 93.3° E Nicobar Islands Region. -H= 09 h 31 m 57.2 s h about 163 Kms (USCGS)							
	Port Blair	E	iP iS	09	32	42 33 19	330	Slight.
	Madras	E	iP PP PPP iS LQ SS SSS LR M	09	34	57 35 09 35 18 37 39 37 39 37 54 38 05 38 16 39 29	1610	Moderate, Initial ground motion towa West.

DATE	STATION	COMPT	PHASE	G. h.	M. m.	T. s.	△ km.	REMARKS
<u>July, 1960.</u>								
11	Visakhapatnam (Contd.)	NE	iP PP PPP iS SS SSS LR M	09	34	58 35 05 35 08 37 47 37 56 38 09 38 06 39 46	1670	Moderate distant first ground movement towards South & East. Period = 8.0 secs, Amp = 40.8 mms.
	Calcutta	EN	iP iS M	09	35	10 38 33 41 28	1930	Moderate, Initial ground movement towards East.
	Kodaikanal	E	iP iS/LQ PcP M PcS	09	35	21 38 37 40 00 41 00 43 37	1970	Moderate, Initial ground movement towards East. Period = 13 secs, Gr. dis = 18.5 μ
	Hyderabad	NE	iP PP iS N E N E N	09	35	45 35 50 39 05 39 32 40 15 40 25 41 23 41 26	2010	Moderate, Initial ground movement towards North & East. Period = 9 sec, Gr. dis = 11 μ Period = 18 secs, Gr. dis = 33 μ
	Shillong	ZNE	eP iS LR M PcS ScS	09	35	47 39 08 40 04 41 25 43 40 47 20	2020	Slight, Initial ground movement towards East.
	Bokaro	NE	iP PPP eS SSS LR M ScP ScS	09	35	53 36 19 39 15 39 58 40 10 41 38 43 28 47 13	2030	Slight.
	Tocklai	E	iP eS SS SSS LR M	09	36	04 39 34 40 00 40 12 40 33 41 54	2120	Slight, distant.



DATE	STATION	COMPT. PHASE	G. M. T. h. m. s.	△ km.	REMARKS
July, 1961.					
11	Chatra (Contd.)	Z N ZNE" N SS SSS LR M E	iP i PP PPP eS LQ SS SSS LR M M	09 36 14 36 16 36 35 36 44 39 55 40 03 40 24 40 39 41 03 59 10	2230 Moderate, Rarefact Period = 11.25 sec Gr. dis = 20.7 μ Period = 11.25 sec Gr. dis = 20.2 μ
	Poona	Z N	iP PP iS LQ SSS LR M	09 36 35 37 02 40 37 41 10 41 45 42 18 44 08	2490 Moderate, Rarefacti Initial ground moti towards South. Period = 15 secs, Gr. dis = 23.6 μ
	Sehore	N	iP PP S	09 36 39 37 06 40 43	2530 Moderate, other pha not clear.
	Bombay	E NE E N E N E	iP i i e i eS iS	09 36 46 37 01 37 31 39 01 40 56	2600 Moderate.
		NE E	i i	41 29 42 00	
	Dehra Dun	Z N	eP PP PPP iS LQ SS SSS LR M	09 37 21 38 14 38 40 42 08 43 37 43 57 44 16 45 04 47 32	3160 Moderate. Period = 9.75 secs.
11	Shillong	Z	eP	15 31 03	Slight, distant.
Epc:- 26.9° N 81.0° E, North Eastern India. -H = 17 h 23 m 42.3 s h about 25 Kms (USCGS).					
	Dehra Dun	Z NE	eP iS	17 25 02 25 55	500 Feeble.

DATE	STATION	COMPT. PHASE	G. M. T. h. m. s.	△ km.	REMARKS
July, 19 61.					
11	Chatra (contd.)	Z N	eP i PP P* PPP Pg LQ	17 25 09 25 10 25 13 25 16 25 19 25 28 25 51	550 Slight, Compression.
	Chatra	ZN N	S SS S* SSS Sg	26 06 26 16 26 19 26 26 26 31	
	Bokaro	NE	iP PPP LQ eS SS SSS M	17 25 50 26 05 27 04 27 03 27 23 27 38 27 59	700 Slight.
	Shillong	ZE	iP iS	17 26 05 29 05	910 Slight, Compression.
	Sehore	E	eP eS	17 26 57 27 45	450 Slight, near.
	Calcutta	EN	e e e e	17 27 30 28 14 28 26 30 58	Slight, near.
	Visakhapatnam	NE	eP PP PPP LQ iS SS,LR SSS M	17 28 11 28 38 28 47 29 42 29 52 30 06 30 18 30 42	980 Slight, first ground movement towards South & East. Period = 5.3 secs, Amp = 1.8 mms.
	Poona	Z	eP	17 29 01	Slight, other phases not clear.
	Bombay	N NE N	eP e eS	17 29 21 30 48 31 20	1200 Feeble.
	Madras	E	e e	17 30 21 32 10	Slight, earlier phases not recorded.
11	Chatra	Z	e	18 14 14	Very very mild, phases not clear.
11	Shillong	Z	iP	18 43 32	Slight, distant. Compression.
	Chatra	Z	eP	18 44 03	Very weak, probably distant, phases not clear.



DATE	STATION	COMPT.	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961.</u>						
12	Shillong	Z	ePg eS SS	04 54 34 55 12 55 23	270	Slight.
12	Shillong.	Z	iP	42 38 05		Slight, distant. Compression.
12	Shillong	Z	iP	13 38 25		Local tremor.
	Chatra	Z	iP	13 39 20		Feeble, Compression.
12	Shillong	Z	eP	17 50 42		Slight.
13	Chatra	Z	iPg Sg	00 56 58 57 09	90	Feeble, Compression.
	Shillong	Z	eP	00 57 33		Slight.
13	Chatra	Z NZ	iPg Sg S	03 33 55 34 11 34 12	130	Feeble, Rarefaction.
	Shillong	Z	iP	03 34 35		Slight, Rarefaction.
13	Dehra Dun	Z	e	03 57 08		Tremor.
	Chatra	Z	eP S	03 59 00 04 00 35	920	Feeble.
	Shillong	Z	iP	03 59 54		Slight, distant. Compression.
13	Dehra Dun	NE	iP	09 17 00		Slight, Tremor.
13	Shillong	Z	iP	09 35 28		Slight, distant. Compression.
13	Dehra Dun	NE	e	09 40 24		Feeble.
13	Chatra	Z	eP S	10 16 31 17 00	250	Feeble.
13	Shillong	Z	eP	18 29 42		Slight, distant.
13	Shillong	Z	iP	21 21 01		Slight, near.
	Chatra	Z	iP	21 21 04		Feeble, distant. Compression.
13	Shillong	Z	eP	21 50 23		Slight, distant.
	Dehra Dun	NE	e e	21 51 59 59 07		Feeble.
14	Shillong	Z	iP	00 12 34		Slight, distant. Rarefaction.
	Chatra	Z	iP	00 13 15		Feeble, distant. Compression.
14	Chatra	Z	eP	01 53 13		Very feeble, Compression.

DATE	STATION	COMPT.	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961</u>						
14	Shillong	Z	eP eS	03 19 04 20 20	530	Slight, near.
	Chatra	Z	eP eS	03 20 00 03 22 02	910	Very feeble.
14	Chatra	Z	eP	03 40 17		Very weak.
14	Shillong	Z	iP	07 03 57		Slight, distant. Compression.
14	Port Blair	N	eP eSg	07 22 02 22 24	170	Slight.
	Shillong	Z	eP	07 24 50		Very slight, near.
14	Shillong	ZNE	eP	07 40 25		Slight, near.
	Chatra	Z	iP S	07 41 18 42 29	680	Feeble, distant. Rarefaction.
	Bokaro	NE	eP	07 42 28		Slight near, other phases not clear.
14	Shillong	Z	iP	10 05 45		Slight, distant. Rarefaction.
14	Shillong	Z	iP	12 13 50		Slight, distant. Rarefaction.
14	Shillong	ZNE	iP iSg	13 17 21 17 40	160	Slight, Compression.
	Chatra	Z	iP PP PPP P* Pg LQ S LR,SSS Sg/M	13 18 06 18 13 18 20 18 25 18 44 19 24 19 36 19 58 20 25	870	Feeble, Rarefaction.
	Bokaro	NE	eP	13 18 48		Slight, near.
14	Shillong	Z	iPg iSg	13 30 44 31 00	140	Slight.
14	Shillong	Z	iP e	13 38 33 38 53		Slight, near.
14	Shillong	Z	iP iSg	14 49 05 49 25	170	Slight.
14	Shillong	Z	iPg iSg	16 32 07 32 27	170	Slight.
14	Port Blair	N	iP eSg	17 57 51 58 14	180	Slight.
14	Shillong	Z	iP	18 00 42		Slight, distant. Compression.



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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961.</u>						
14	Shillong	Z	iP	18 39 56		Slight, distant. Compression.
14	Port Blair	N	eP eSg	23 03 55 04 19	200	Slight.
	Madras	E	e	23 05 50		Feeble tremor, appears near.
	Shillong	Z	iP	23 06 48		Slight distant. Compression.
	Chatra	Z	eP	23 07 28		Very feeble, distant.
	Visakhapatnam	NE	iP iS	23 07 33 08 26	500	Slight near first movement towards N and East.
14	Port Blair	N	eP eSg	23 59 58 00 00 20	180	Slight.
15	Madras	E	eP	00 01 56		Feeble, tremor appears near.
	Shillong	Z	eP	00 02 45		Slight, distant.
	Chatra	Z	eP	00 03 09		Feeble, distant.
	Visakhapatnam	NE	iP	00 03 37		Slight, first group movement towards E
15	Bokaro	NE	eP	00 05 21		Slight near.
15	Port Blair	N	eP eSg	00 05 54 06 16	130	Slight.
15	Poona	Z	e	00 07 00		Slight, phases not clear.
15	Shillong	Z	iP	00 23 52		Slight, distant. Rarefaction.
	Chatra	Z	iP	00 24 34		Feeble, distant. Compression.
	Bokaro	NE E	eP i	00 25 08 30 23		Slight near. Other phases not clear.
15	Shillong	Z	iP	02 43 29		Slight, distant. Compression.
15	Port Blair	N	ePg	04 39 03		Slight.
15	Shillong	Z	iP	05 52 43		Slight, distant. Rarefaction.
	Chatra	Z	eP	05 53 02		Very feeble, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1960.</u>						
15	Shillong	Z	iP	10 48 28		Slight near tremor.
15	Shillong	Z	iP	12 08 28		Slight near tremor.
15	Shillong	Z	iP	14 00 00		Slight near tremor.
15	Shillong	Z	eP	14 02 19		Slight distant.
	Chatra	Z	eP S	14 02 55 04 25	870	Feeble.
15	Shillong	Z	iP i	18 29 05 29 25		Slight near Tremor.
15	Shillong	Z	iP	20 22 58		Slight near Tremor.
16	Shillong	Z	iP	05 41 22		Slight distant. Compression.
16	Bokaro	NE	eP	07 51 56		Slight Tremor.
16	Bokaro	NE	eP	08 17 03		Slight Tremor.
16	Dehra Dun	Z NE	e i	09 07 49 08 13		Feeble.
	Chatra	Z	iP	09 08 28		Feeble distant. Rarefaction.
	Shillong	Z	iP	09 09 09		Slight distant. Compression.
	Poona	Z	e	09 11 00		Slight.
16	Shillong	Z	eP	11 01 56		Slight distant.
16	Shillong	Z	iP eS	12 27 17 27 59	390	Slight Rarefaction.
	Chatra	Z	eP	12 29 27		Feeble distant.
16	Shillong	Z	iPg	13 42 05		Slight near Tremor.
16	Shillong	Z	eP	14 14 34		Slight distant.
16	Shillong	Z	iP	21 18 10		Slight distant. Rarefaction.
16	Shillong	Z	iP	23 19 15		Slight distant. Rarefaction.
17	Shillong	Z	iP	03 41 14		Slight distant. Rarefaction.
17	Shillong	ZNE	iP iSg	04 13 17 13 37	170	Slight
	Chatra	Z	eP S	04 14 06 14 26	170	Feeble.



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
July, 1961.						
17	Shillong	ZNE	iP iSg	04 31 32 31 53	180	Slight.
17	Shillong	Z	iP	05 19 56		Slight distant. Compression.
17	Dehra Dun	NE	e	05 21 51		Feeble.
17	Shillong	Z	iP Pg S	08 06 11 06 31 07 21	670	Slight.
17	Shillong	Z	iP	11 27 41		Slight distant. Rarefaction.
17	Shillong	Z	eP	14 16 30		Slight distant.
17	Cha tra	Z	eP	14 57 43		Feeble, distant.
17	Dehra Dun	Z NE	e i	14 58 18 15 00 01		Feeble.
17	Shillong	Z	iP	14 58 22		Slight, Compression
17	Poona	N	e	15 00 00		Slight shocks.
17	Shillong	Z	iP	16 14 35		Slight, distant. Rarefaction.
17	Shillong	ZE	iP iS M	16 28 11 34 58 45 03	5140	Slight, Compression
17	Chatra	Z	iP	16 28 46		Feeble, distant. Rarefaction.
17	Bokaro	NE	eP	16 29 14		Slight, distant. phases not clear.
17	Dehra Dun	NE	eP iS	16 29 34 36 57	5780	Slight, phases not clear.
17	Poona	N	e	16 37 00		Slight.
17	Shillong	Z	iP	17 19 02		Slight, distant. Compression.
17	Shillong	Z	e P	19 03 57		Slight, distant.
17	Chatra	Z	ePg Sg	21 46 16 46 24	70	Very feeble, local
17	Shillong	Z	iP	22 10 34		Slight, distant. Compression.
18	Shillong	Z	iP	00 30 46		Slight, distant. Rarefaction.
18	Shillong	Z	iP	05 12 59		Slight, distant.
18	Shillong	Z	iP	06 01 56		Slight, near. Rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ Km.	REMARKS
July, 1961						
18	Shillong	Z	eP	06 16 17		Slight, near.
18	Shillong	Z	iP	08 56 01		Slight, near. Rarefaction.
18	Shillong	Z	eP	09 53 20		Slight, near.
18	Shillong	Z	iP	13 12 25		Slight, distant. Compression.
18	Chatra	Z	eP	13 12 56		Very feeble, Compression Probably distant.
18	Epc:- 30° N 131° E, Ryukyu Islands Region in the Pacific. -H= 14 h 03 m 40 s (Shillong). 29.4°N 131.6°E Northern Ryukyu Islands. -H= 14 h 03 m 36.5 s h about 21 Kms. Felt at Kyushu, Japan (USCGS). Mag:- 6½-6¾(Pas), 6¾-7(Berk), 6½(Pal).					
18	Tocklai	E	iP	14 09 45		Distant.
18	Shillong	ZNE	iP PP PPP PcP iS ScP SS/LQ ScS LR M	14 10 31 11 46 12 08 13 02 16 00 16 53 18 10 18 41 20 00 23 00	3820	Rarefaction, Initial ground movement towards South. Period = 12.5 secs. Gr. dis = 148.6 μ.
18	Chatra	Z N	iP PP PPP PcP PcS eS SS LQ SSS ScS LR M	14 11 05 12 40 13 01 13 11 16 57 17 05 19 45 19 59 20 21 21 10 22 00 29 30	4330	Rarefaction. Period = 13 sec, Gr. dis = 154 μ Period = 13 secs, Gr. dis = 262 μ.
18	Port Blair	E	iP PP PcP iS M	14 11 21 12 51 13 37 17 15 27 24	4230	



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

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

July, 1961.

July, 1961.

18 Bokaro (contd.) E N iP eP PP PcP PPP iS PS PPS SS LQ SSS ScS M Mn 14 11 24 4210 First ground motion towards West.
 12 57
 13 13
 13 23
 17 16
 17 25
 17 38
 19 48
 20 16
 20 45
 21 05
 24 56
 29 55
 52 12
 Period = 12.2
 Gr. dis = 33
 Period = 10.3
 Gr. dis = 26 μ

18 Madras (contd.) E iP PcP PP PPP PcS/ScP iS PS PPS ScS SS i LQ SSS LR M 14 12 36 5520 Initial ground motion towards West.
 13 55
 14 34
 15 31
 17 55
 19 45
 19 52
 19 59
 22 19
 23 08
 24 07
 24 26
 24 40
 26 26
 31 30

Visakhapatnam NE iP PcP PP PPP PcS/ScP iS SS SSS LR M 14 12 00 5500 First ground motion towards South
 13 55
 14 12
 15 00
 19 50
 19 00
 22 38
 24 05
 26 31
 31 07
 Period = 15 se
 Amp = 50.4 mm

Poona Z N iP PPP iS PPS SS LQ LR M 14 12 59 5930 Rarefaction.
 16 24
 20 30
 20 50
 24 20
 26 20
 29 02
 33 26
 Period = 16.5 secs,
 Gr. dis = 68.2 μ

Dehra Dun Z N eP PP iS SS LQ SSS LR M 14 12 02 5020
 14 08
 18 42
 22 00
 22 45
 23 08
 24 43
 28 57

Bombay NE E eP e PPP e NE PS PPS E NE E N E N M 14 13 07 5980
 14 24
 15 37
 16 19
 18 09
 20 41
 20 47
 20 55
 21 18
 21 55
 22 49
 24 11
 24 39
 26 43
 39 24
 40 25
 Period = 17 secs,
 Gr. dis = 44 μ
 Period = 13 secs,
 Gr. dis = 23 μ

Calcutta E iP PPP PcP iS LQ LR 14 12 24 4220 Moderate, Initial ground movement towards West.
 14 30
 15 52
 18 17
 20 07
 21 52

18 Shillong Z eP 14 40 54 Slight, distant. Compression.
 Chatra Z eP 14 41 29 Slight, presumably aftershock of the shock at 14 11 05 hrs of date. Other phases superposed on previous shock.

Hyderabad EN E N E N E M iP PcP PP PcS iS ScS SS LR LR M 14 12 29 5480 Initial ground motion towards East and West.
 13 43
 14 43
 17 49
 19 36
 22 23
 23 22
 24 25
 24 37
 29 18
 32 28
 Period = 18 s
 Gr. dis = 95
 Period = 14 s
 Gr. dis = 14

18 Shillong Z iP 15 23 05 Slight, distant. Rarefaction.
 Chatra Z eP 15 23 40 Very feeble.
 18 Shillong Z eP 15 43 42 Slight, distant.



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961</u>						
18	Shillong	Z	iP	16 26 58		Slight, distant, Compression.
	Chatra	Z	e	16 27 33		Very feeble.
18	Shillong	Z	iP	16 55 30		Slight, distant, Compression.
	Chatra	Z	eP	16 56 04		Very feeble.
18	Shillong	Z	eP	17 49 38		Near Slight.
	Chatra	Z	eP	17 50 07		Very feeble.
18	Shillong	Z	eP	19 35 59		Slight, near.
	Chatra	Z	eP	19 36 39		Slight.
18	Dehra Dun	NE	e	19 52 24		Feeble.
18	Shillong	Z	eP	21 33 22		Slight, distant.
18	Dehra Dun	NE	e	21 36 32		Feeble.
18	Chatra	Z	eP	21 37 51		Feeble.
18	Shillong	Z	iP	23 49 30		Slight, distant, Compression.
	Chatra	Z	eP	23 50 02		Very feeble.
19	Shillong	Z	eP	00 18 36		Slight, distant.
19	Shillong	Z	eP	06 40 14		Slight, distant.
19	Tocklai	E	iP	06 50 10		Slight, distant, Initial ground movement towards East.
	Shillong	ZNE	iP eS	06 51 08 52 31	800	Slight, Compression.
19	Dehra Dun	NE	e	06 57 16		Feeble.
19	Shillong	Z	eP	07 50 42		Slight, distant.
19	Shillong	ZNE	iP	08 08 29		Slight, Rarefaction.
19	Shillong	Z	eP	09 15 48		Slight, near, tremor.
19	Shillong	Z	iP	12 05 37		Slight, distant, Rarefaction.
19	Dehra Dun	NE	e	12 22 17		Feeble.
19	Shillong	Z	eP	16 36 43		Slight, tremor.
19	Shillong	Z	iP	16 44 45		Slight, Rarefaction.
19	Shillong	Z	eP	19 52 27		Slight, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961.</u>						
20	Dehra Dun	Z	e	00 52 33		Tremor.
20	Epc:- 13.0° N 91.7° E Bay of Bengal. -H = 02 h 13 m 55 s (Shillong)					
	Port Blair	N	iPg eS	02 14 01 14 21	170	Felt at Kadamtala. Moderate.
	Visakhapatnam	NE	iP PP PPP LQ iS SS LR SSS M PcS	02 16 12 16 21 16 26 17 52 17 59 18 12 18 18 19 23 19 04 22 20	1050	Slight, Initial ground movement towards North and West. Period = 4.7 sec. Amp. = 1.7 mms.
	Madras	E	eP eS	02 16 25 18 39	1120	Feeble, tremor.
	Chatra	Z	iP S	02 17 17 19 59	1610	Feeble, Rarefaction.
	Poona	Z	iP	02 21 25		Slight, phases not clear.
20	Madras	E	e	02 28 58		Feeble, tremor appears near.
20	Shillong	Z	iP	03 11 34		Slight, distant, Compression.
20	Shillong	Z	eP	04 39 05		Slight, distant.
20	Shillong	Z	iP	06 50 46		Slight, distant, Rarefaction.
20	Shillong	Z	iP	06 54 27		Slight, distant, Compression.
	Chatra	Z	iP	06 55 09		Feeble, distant, Compression.
	Dehra Dun	NE	e	07 03 11		Feeble.
20	Shillong	Z	eP	15 06 11		Slight, distant.
20	Shillong	Z	eP	15 38 52		Slight, distant.
20	Shillong	Z	iP	17 38 01		Slight, distant, Compression.
20	Shillong	Z	eP	20 17 21		Slight, distant.
20	Shillong	Z	iP	22 37 06		Slight, distant.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961.</u>						
20	Shillong	Z	iP	22 48 41		Slight near tremor.
20	Tocklai	E	iP	22 53 54		Slight, distant.
	Shillong	ZNE	iP iS Sg	22 54 24 54 55 55 06	220	Moderate.
	Chatra	NE	iP S	22 55 23 56 33	670	Feeble.
	Dehra Dun	Z	e	23 00 01		Tremor.
	Poona	Z	eP	23 01 23		Slight, phases not clear. Compression.
21	Madras	E	e e	02 52 15 53 20		Slight, Initial phases not recorded.
	Shillong	Z	iP	02 53 02		Slight, distant. Compression.
21	Chatra	Z	iP S	07 36 20 37 31	680	Feeble, distant. Compression.
	Shillong	Z	iP	07 38 15		Slight, distant. Rarefaction.
21	Shillong	Z	iP eSg	11 34 49 35 08	160	Slight, near. Compression.
	Chatra	Z	iP	11 35 11		Feeble, Compression.
21	Shillong	Z	eP	12 19 56		Slight, distant.
21	Shillong	Z	iP	18 06 08		Slight, distant. Compression.
21	Shillong	Z	eP	18 20 52		Slight, distant.
21	Shillong	Z	iP	18 41 13		Slight, distant. Compression.
21	Dehra Dun	NE	e	19 01 36		Feeble.
21	Shillong	Z	iP iS	19 52 17 53 13	520	Slight, near. Compression.
21	Shillong	Z	eP	19 57 13		Slight, distant.
21	Shillong	Z	eP	20 03 22		Slight, distant.
21	Shillong	Z	iP iS	20 06 02 06 33	280	Slight, near.
21	Shillong	Z	iP	22 46 48		Slight, distant. Compression.
21	Dehra Dun	NE	e	23 03 51		Feeble.



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km.	REMARKS
<u>July, 1961.</u>						
22	Shillong	Z	iPg iSg	03 53 09 53 28	160	Slight, near.
22	Chatra	Z	eP	06 12 00		Very feeble, favily distant, phases not clear.
22	Shillong	Z	iPg	06 16 05		Slight, near. Rarefaction.
22	Shillong	Z	eP	07 43 27		Slight, distant.
22	Shillong	Z	iPg iSg e e	10 00 43 00 48 00 59 01 05	50	Slight, near.
22	Shillong	Z	eP	10 58 04		Slight, distant.
22	Madras	E	e	11 34 50		Feeble, near.
	Shillong	Z	eP	11 35 43		Slight, distant.
	Chatra	Z	eP	11 35 59		Very feeble, favily distant.
	Poona	Z	e	11 40 00		Tremor.
22	Chatra	Z	iPg Sg	13 50 46 50 58	110	Mild.
22	Tocklai	E	iPg iSg	13 52 45 53 05	150	Slight, tremor.
	Dehra Dun	Z	e	13 57 38		Feeble.
	Chatra	Z ZNE	iP eS	13 57 49 14 00 49	1800	Feeble, near. Rarefaction
	Poona	Z	iP	13 57 55		Slight.
	Shillong	Z	iP	13 58 30		Slight, distant. Rarefaction.
22	Shillong	Z	iP	18 25 23		Slight, distant. Rarefaction.
22	Shillong	Z	iP PP PPP iSg	20 02 08 02 14 02 22 02 30	170	Slight.
22	Dehra Dun	Z N	e e e	20 58 08 59 32 21 00 19		Feeble.
	Shillong	Z	iP	20 58 20		Slight, distant. Rarefaction.
22	Shillong	Z	iP	21 11 53		Slight, distant. Rarefaction.

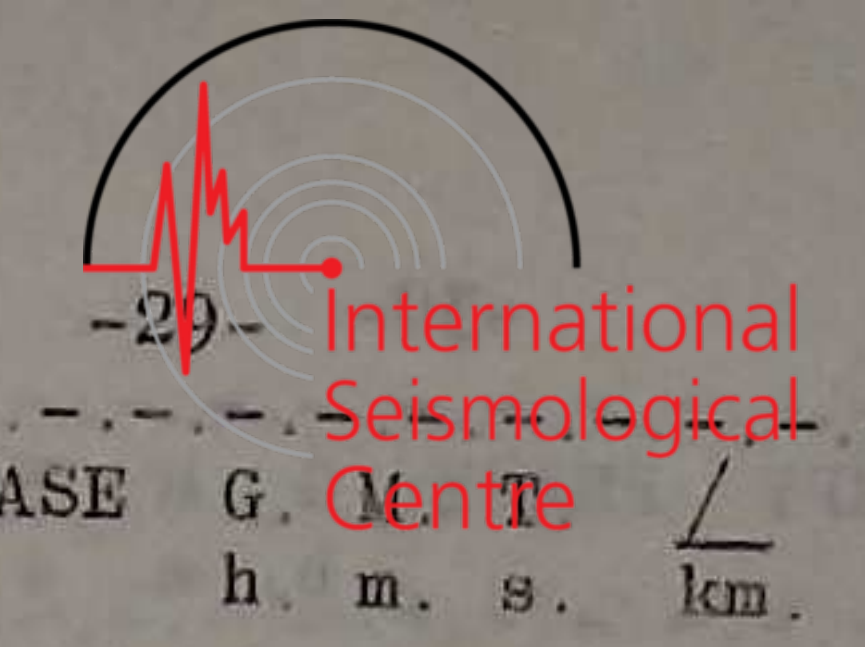


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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	km.	REMARKS
<u>July, 1961</u>						
23	Shillong	Z	iPg iSg	02 34 20 34 29	80	Slight, Compression.
23	Shillong	Z	iP	10 44 58		Slight, distant. Compression
23	Shillong	Z	iP	11 25 14		Slight, distant. Compression.
23	Shillong	ZE	iP	14 16 20		Slight, distant. Rarefaction.
23	Dehra Dun	NE	e	14 27 28		Feeble.
	Madras	E	e e	14 27 55 59 55		Slight. Earlier phases not recorded.
	Shillong	ZE	iP	14 29 13		Slight, distant. Compression.
23	Shillong	Z	e P	14 56 56		Slight, distant.
	Poona	Z	iP	14 57 45		Slight.
23	Shillong	Z	eP	15 00 31		Slight, near.
	Chatra	Z	eP	15 00 53		Feeble, distant.
23	Shillong	Z	iP	15 41 33		Slight, distant. Rarefaction.
	Tocklai	E	eP	15 42 00		Slight, distant.
	Chatra	Z	iP	15 43 18		Feeble, distant. Rarefaction.
23	Epc: - 19° S 167° E, New Hebrides Islands Region in the Pacific Ocean. -H = 21 h 51 m 10 s (Shillong)					
	18.3° S 168.3° E New Hebrides Islands. -H = 21 h 51 m 07.5 s h about 44 Kms. (USCGS).					
	Tocklai	E	iP	22 02 53		Moderate, distant. Initial ground movement towards West.
	Port Blair	N	eP eS	22 03 26 13 24	8780	Moderate.
	Shillong	ZNE	iP PP PPP SKS SKKS ScS PS PPS SS SSS LQ LR M	22 03 49 07 45 09 50 14 11 14 36 14 56 15 25 17 06 19 34 23 14 25 56 29 41 35 07	9310	Moderate. Initial ground movement towards North, West and Compression.

Period = 15 secs,
Gr. dis= 21.4 μ

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	km.	REMARKS
<u>July, 1961</u>						
	Calcutta	E	iP PP PPP iSKS	22 04 00 07 12 09 19 14 22	9620	Moderate
	Chatra	ZNE	eP PP PPP SKS PS PPS SS SSS LQ LR M	22 04 11 07 32 09 25 14 35 15 38 16 02 20 15 23 46 27 32 31 40 55 56	9860	Moderate, distant. Rarefaction.
	Bokaro	E N E	iP eP PP PPP SKS SKKS S PS PPS SS	22 04 11 07 52 09 55 14 24 14 39 14 58 16 19 16 46 21 21	9890	Moderate, Initial ground motion towards West.
	Visakhapatnam	E N E NE E NE E	iP eP PP PPP e e iSKS PS PPS SS SSS	22 04 12 07 39 09 39 14 19 14 31 14 42 15 56 16 29 20 28 24 19	10000	Great distant. First ground motion towards South and East.
	Madras	E	iP PP PPP SKS SKKS iS ScS PS PPS SS SSS	22 04 17 08 00 10 00 14 48 15 02 15 16 15 21 16 28 17 01 21 24 25 16	10190	Moderate, Initial ground motion towards West.
	Hyderabad	E	iP iSKS SS LR M	22 04 32 15 08 21 28 32 12 42 24	10490	Moderate, Initial ground movement towards West. Period = 18 secs, gr. dis= 10 μ.



DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS
July, 1961.						
23	Dehra Dun (contd.)	NE N	eP PP PPP iSKS SS SSS LQ M	22 04 47 07 54 10 04 15 28 21 27 25 04 29 45 41 21	10910	Moderate. Period = 17.77 secs, Gr. dis = 48.5 μ
	Poona	Z N	iP PP PPP SKS1 SKS2 SKKS1 iS PS PPS PKKP1 SS SSP/PKKS1 SKKS2 SKKKS LQ LR M	22 04 51 09 02 11 15 15 28 15 58 16 24 18 00 18 58 20 19 23 24 23 47 27 09 31 01 34 09 39 09 52 53	11130	Moderate, Compression. Period = 18.7 secs, Gr. dis = 74.7 μ
	Bombay	E	eP PP SKS1 SKS2 eS PS SS M	22 04 58 08 06 15 38 15 55 16 27 18 10 23 50 53 25	11030	Moderate. Period = 20 secs, Gr. dis = 83 μ
	Sehore	NE	eS	22 15 35		Slight.
23	Shillong	Z	iP	23 34 45		Slight, distant. Rarefaction.
23	Shillong	Z	iP	23 58 59		Slight, distant. Compression.
24	Shillong	Z	iP	02 11 33		Slight, distant. Rarefaction.
24	Shillong	Z	iP iS i	03 02 37 03 10 03 17	290	Slight, near.
24	Shillong	Z	eP	04 16 38		Slight, distant.
24	Shillong	Z	iP	08 55 39		Slight, distant.
	Chatra	Z	iP S	08 56 14 57 56	990	Feeble, distant. Rarefaction.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	△ km	REMARKS
July, 1961.						
	Shillong	Z	iP iS SS	09 00 54 01 17 01 26	180	Slight, near.
	Shillong	Z	iPg iSg	12 42 16 42 31	130	Slight, near.
	Shillong	Z	i	17 18 56		Near tremor.
	Shillong	Z	eP	18 18 24		Slight, distant.
	Shillong	Z	iP	20 36 34		Slight, distant. Rarefaction.
	Shillong	Z	eP	23 33 40		Slight, distant.
	Chatra	Z	eP	03 06 58		Very feeble, probably distant.
	Shillong	Z	eP	03 07 01		Slight, distant.
	Chatra	Z	iP	06 09 55		Very mild, distant. Compression.
	Shillong	Z	eP	08 11 36		Slight, distant.
	Chatra	Z	eP	11 27 17		Very feeble, fairly distant.
	Shillong	Z	eP	12 06 49		Slight, distant.
	Chatra	Z	eP	12 07 27		Very feeble, fairly distant.
	Bokaro	NE	eP	12 43 45		
	Shillong	Z	i	14 30 56		Slight, tremor.
	Shillong	Z	i e e	14 33 02 33 09 33 13		Slight, tremor.
	Chatra	Z	e	14 34 00		Very mild, distant. Beginning not clear.
	Shillong	Z	iP	16 58 52		Very slight, distant. Rarefaction.
	Shillong	Z	eP	18 03 35		Slight, distant.
	Shillong	Z	iP	18 47 02		Slight, distant. Compression.
	Visakhapatnam	NE	eP eS	18 47 37 49 38		
	Chatra	Z	eP	18 47 42		Feeble, distant. Compression.
	Shillong	Z	iP	20 23 01		Slight, distant. Compression.

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	km	REMARKS
July, 1961.						
25	Shillong	Z	eP	23 28 03		Slight, distant.
26	Shillong	Z	iP	03 04 31		Slight, distant. Compression.
	Chatra	Z	iP	03 05 04		Feeble, distant. Rarefaction.
26	Bokaro	NE	eP	08 25 11		Slight, Tremor.
26	Shillong	Z	eP	09 26 20		Slight, distant.
26	Shillong	Z	iP	14 26 05		Slight, distant. Compression.
26	Shillong	Z	eP	20 45 09		Slight, distant.
	Shillong	Z	iP	21 40 13		Slight, distant. Rarefaction.
26	Shillong	Z	eP	23 50 02		Slight, distant. Rarefaction.
27	Shillong	Z	iP iSg	00 35 04 35 37	230	Slight, near.
28	Chatra	Z	iP	00 05 55		Feeble, distant. Compression.
28	Chatra	ZN ZNE	iP S	01 24 06 24 49	390	Feeble, distant. Rarefaction.
	Dehra Dun	Z N	eP e	01 24 47 34 42		Slight.
	Poona	Z	eP	01 24 58		Compression.
	Bokaro	NE	eP i	01 25 15 35 34		Slight.
28	Shillong	Z	eP	03 40 22		Slight, distant.
28	Chatra	Z	eP	05 49 13		Feeble, distant.
	Shillong	Z	iP	05 49 39		Slight, distant. Compression.
28	Epc:- 18.6° S 167.7° E New Hebrides Islands. -H = 06 h 11 m 38.7 s h about 41 Kms (USCGS) Mag:- 5 ³ / ₄ (Berk)					
	Shillong	ZNE	iP PP iSKS ScS PS	06 24 20 27 51 34 49 35 43 37 15	9330	Compression.
	Visakhapatnam	E	eP PP PPP eSKS SKKS	06 24 44 28 14 30 11 34 57 35 04	9550	Initial ground movement towards West.

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DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	km	REMARKS
July, 1961.						
8	Visakhapatnam	E	eS PS PPS	35 18 36 20 36 53		(contd.) (contd.)
	Dehra Dun	NE	e e	06 29 45 36 03		
	Bombay	E NE	e e	06 32 07 34 02 36 10		
3	Shillong	Z	eP	09 22 35		Slight, distant.
3	Tocklai	E	eP	09 23 04		Feeble, near.
3	Shillong	Z	iP	09 40 18		Slight, distant. Compression.
Epc:- 0.6° S 122.4° E, Celebes. -H= 13 h 20 m 33.8 s, h about 35 Kms (USCGS)						
	Shillong	ZE	iP iS	13 28 05 34 12	4460	Slight distant. Rarefaction.
	Visakhapatnam	NE	iP eS	13 28 35 35 05	4850	Slight, Initial ground movement towards North and West.
	Chatra	Z	eP	13 28 42		Feeble.
	Madras	E	i	13 28 48		Presumably surface waves.
	Dehra Dun	NE	iP iS	13 29 42 37 08	5840	Feeble.
	Shillong	Z	eP	14 24 28		Slight, distant.
	Shillong	Z	iP	15 28 15		Slight, distant. Compression.
	Chatra	Z	iP	15 28 38		Feeble, distant. Compression.
	Chatra	Z	eP	22 58 10		Slight, distant. Compression.
	Shillong	Z	eP	22 58 46		Feeble, distant.
	Shillong	Z	iP	00 07 49		Slight, distant. Compression.
	Shillong	Z	iP	03 03 28		Slight, distant. Rarefaction.
	Bokaro	NE	eP	09 16 22		Slight, tremor.
	Shillong	Z	iPg	13 51 55		Slight, near.
	Shillong	Z	eP	16 41 11		Slight, distant.
	Chatra	Z	eP	17 19 54		Feeble, distant. Rarefaction.

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

July, 1961.

DATE	STATION	COMPT	PHASE	G. M. T. h. m. s.	Δ km.	REMARKS
29	Shillong	Z	iP	17 45 56		Slight, distant. Rarefaction.
29	Shillong	Z	eP eS	19 16 19 17 16	530	Slight.
29	Chatra	Z	iPg Sg	19 21 34 21 47	110	Feeble, local Compression.
29	Shillong	Z	iP	23 43 27		Slight, distant. Compression.
30	Dehra Dun	NE	e	01 57 22		Tremor.
30	Chatra	Z	iP	02 37 42		Feeble, distant. Compression.
	Shillong	Z	iP	06 43 58		Slight, near. Rarefaction.
30	Shillong	Z	e P	11 10 00		Slight, distant.
30	Shillong	Z	iP	11 14 10		Slight, near. Rarefaction.
30	Shillong	Z	iP	14 18 55		Slight, distant. Compression.
30	Shillong	Z	e P	16 13 46		Slight, distant.
30	Shillong	Z	eP	17 50 48		Slight, distant.
30	Chatra	Z	iP	21 35 34		Feeble, Rarefaction.
30	Shillong	Z	iP	23 07 47		Slight, distant. Rarefaction.
31	Shillong	Z	iP	00 21 36		Slight, distant. Rarefaction.
31	Shillong	Z	iP	06 56 58		Slight, Rarefaction.
31	Shillong	Z	eP	12 35 04		Slight, near.
31	Chatra	Z ZNE	iP S	13 28 59 29 19	170	Feeble, Rarefaction.
31	Shillong	Z	eP	13 30 15		Slight, near.
31	Shillong	Z	eP	14 45 39		Slight, distant.
31	Shillong	Z	iPg e e	16 15 21 15 29 15 44		Slight, near.
31	Shillong	Z	iP	16 35 31		Slight, distant. Compression.
31	Shillong	Z	iP	19 53 35		Slight, distant. Rarefaction.
31	Shillong	Z	iPg	21 11 39		Slight, local.
31	Shillong	Z	iP	23 10 29		Slight, distant. Rarefaction.

International
Seismological
Centre
MICROSEISMIC TABULATION

DATE HOUR K Mean Mean Date Hour K Mean Mean
 G.M.T. amplitude period G.M.T. amplitude period
 in m.m. in sec. in m.m. in sec.

DATE	HOUR	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
					Station : Shillong				
					Month : July, 1961.				
					Component : E-W.				
	00	2	0.4	5.0	12	00	2	0.3	4.5
	06	2	0.5	5.0		06	2	0.4	4.4
	12	2	0.3	4.9		12	2	0.5	4.4
	18	2	0.4	5.0		18	2	0.4	5.0
	00	2	0.4	5.1	13	00	...	-	-
	06	2	0.5	5.3		06	...	-	-
	12	2	0.4	5.0		12	...	-	-
	18	3	0.6	5.5		18	...	-	-
	00	2	0.5	5.4	14	00	...	-	-
	06	2	0.4	5.2		06	...	-	-
	12	2	0.3	5.4		12	...	-	-
	18	2	0.4	5.5		18	...	-	-
	00	2	0.5	5.0	15	00	...	-	-
	06	2	0.4	5.3		06	...	-	-
	12	2	0.4	5.3		12	...	-	-
	18	2	0.3	5.1		18	...	-	-
	00	2	0.3	4.6	16	00	...	-	-
	06	3	0.3	6.0		06	...	-	-
	12	2	0.4	4.5		12	...	-	-
	18	2	0.3	4.8		18	...	-	-
	00	2	0.4	4.7	17	00	...	-	-
	06	2	0.3	6.0		06	2	0.5	5.0
	12	2	0.3	4.4		12	2	0.5	5.1
	18	2	0.3	5.0		18	2	0.4	5.2
	00	2	0.2	4.8	18	00	2	0.4	5.2
	06	2	0.2	4.8		06	2	0.3	5.6
	12	2	0.2	4.0		12	2	0.3	5.0
	18	2	0.3	4.6		18	2	0.3	4.0
	00	2	0.3	5.4	19	00	2	0.3	4.3
	06	2	0.4	4.8		06	2	0.4	5.1
	12	...	-	-		12	2	0.2	4.6
	18	3	0.2	4.4		18	2	0.3	4.3
	00	3	0.3	4.5	20	00	2	0.3	4.8
	06	2	0.3	4.7		06	2	0.2	5.6
	12	2	0.2	5.0		12	2	0.3	5.4
	18	2	0.3	4.8		18	2	0.3	4.6
	00	2	0.3	4.8	21	00	2	0.2	4.6
	06	2	0.4	5.6		06	2	0.5	5.0
	12	3	0.4	5.2		12	2	0.4	4.7
	18	2	0.3	5.0		18	2	0.4	5.1
	00	2	0.3	5.0	22	00	2	0.3	4.0
	06	2	0.3	5.4		06	2	0.3	4.4
	12	2	0.3	5.2		12	2	0.3	4.5
	18	2	0.3	5.7		18	2	0.2	5.0

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
G.M.T.	G.M.T.				G.M.T.	G.M.T.			

July, 1961

Component : E-W

Station : Shillong					Station : Bombay (Colaba)				
23	00	2	0.3	5.4	01	18	3	4.1	4.3
	06	2	0.2	5.2	(contd.)				
	12	2	0.3	5.3	02	00	3	3.6	4.3
	18	2	0.2	5.4				2.5	2.7
								1.2	2.0
24	00	...	-	-		06	...	-	-
	06	2	0.2	5.5		12	...	-	-
	12	2	0.3	5.6		18	...	-	-
	18	2	0.3	5.0					
25	00	2	0.2	5.4	03	00	...	-	-
	06	...	-	-		06	3	4.3	3.5
	12	2	0.3	6.0				3.5	2.7
	18	2	0.2	6.0				1.6	1.8
						12	3	4.5	3.8
26	00	2	0.3	6.0				4.0	2.6
	06	2	0.4	5.9				1.6	1.8
	12	...	-	-		18	3	4.1	3.8
	18	2	0.4	5.5				3.0	2.5
27	00	2	0.4	5.0	04	00	3	4.2	3.4
	06	...	-	-				1.4	1.9
	12	...	-	-		06	3	3.9	4.0
	18	2	0.4	5.6				1.6	2.1
28	00	2	0.3	6.0		12	3	4.1	3.6
	06	2	0.2	5.0				2.0	2.3
	12	2	0.2	6.0		18	3	4.3	3.7
	18	2	0.3	5.8				2.5	2.5
29	00	2	0.2	6.0	05	00	3	3.9	3.7
	06	2	0.3	5.8				2.5	2.5
	12	2	0.2	6.2		06	3	3.8	3.6
	18	2	0.3	5.5				3.0	2.6
						12	3	3.7	3.5
30	00	2	0.2	5.0		18	3	2.5	2.5
	06	2	0.3	4.5				3.7	3.8
	12	2	0.4	4.5				2.5	2.6
	18	2	0.4	4.6					
31	00	2	0.4	4.5	06	00	3	4.3	3.4
	06	2	0.4	5.0		06	3	1.8	2.0
	12	2	0.4	4.2				3.6	3.2
	18	2	0.5	4.7		12	3	1.6	2.1
								4.1	3.4
						18	...	-	2.3
								-	-
								-	-
					07	00	...	-	-
						06	...	-	-
						12	3	2.9	3.6
								2.0	2.5
						18	3	2.7	3.4
								1.7	2.5
					08	00	3	2.6	3.7
								1.6	2.2
						06	3	2.3	3.4
								1.1	2.0

Station : Bombay (Colaba)



Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
G.M.T.	G.M.T.				G.M.T.	G.M.T.			

Station : Bombay (Colaba)

July, 1961

Component : E-W

12	00	3	3.0	3.2	15	00	...	-	-	
	06	...	-	-		06	...	-	-	
	18	3	2.6	3.3		12	...	-	-	
			1.4	2.1		18	...	-	-	
	00	3	2.5	3.4	16	00	...	-	-	
			0.9	2.1		06	3	2.1	3.5	
	06	3	3.1	4.1				1.3	2.5	
			1.0	2.0		12	3	2.4	3.4	
	12	3	3.4	3.8				1.6	2.5	
			2.5	2.6		18	3	2.6	3.5	
	18	3	3.5	3.8				1.5	2.5	
			2.6	2.5						
						17	00	3	2.5	4.0
	00	3	3.1	2.6				1.8	2.4	
			2.5	2.5		06	3	2.2	3.9	
			1.2	2.0				1.8	3.0	
	06	3	3.2	3.5		12	3	2.4	3.3	
			1.1	2.0				1.7	2.3	
	12	3	3.4	3.6		18	...	-	-	
			1.5	2.2						
	18	3	3.7	3.3	18	00	3	3.0	3.8	
			1.2	2.3				1.4	2.3	
						06	3	2.7	3.7	
	00	3	3.6	3.2				1.0	2.0	
			1.0	2.1		12	3	2.5	3.9	
	06	3	3.1	3.5				1.2	2.0	
			2.3	2.5		18	3	2.3	3.8	
	12	3	3.2	3.6				1.5	2.5	
			2.3	2.5				1.1	2.0	
	18	3	3.5	3.3						
			2.4	2.3	19	00	3	2.5	4.1	
								1.3	2.0	
	00	3	3.1	3.1		06	...	-	-	
			2.2	2.3		12	...	-	-	
	06	3	3.2	3.0		18	3	2.2	4.2	
			1.1	1.8				1.0	2.5	
	12	3	2.7	3.3						
			1.2	2.0	20	00	...	-	-	
	18	3	3.1	3.1		06	...	-	-	
			1.1	2.0		12	3	2.1	4.2	
								1.0	2.0	
	00	3	2.5	3.4		18	3	2.1	4.5	
			1.1	2.0				0.9	2.3	
	06	3	2.9	3.0						
			1.1	2.0	21	00	3	1.4	2.9	
	12	3	2.4	3.6				1.1	2.2	
			1.6	2.2		06	...	-	-	
	18	3	3.7	3.2		12	...	-	-	
			2.3	2.3		18	...	-	-	
	00	3	2.3	3.4	22	00	...	-	-	
			1.0	2.0		06	...	-	-	
	06	...	-	-		12	...	-	-	
	12	3	2.3	3.6		18	...	-	-	
			1.2	2.0						
	18	...	-	-						

DATE Hour K Mean amplitude Mean period
G.M.T. in m.m. in sec.

July, 1961

Component : E-W.

Station : Bombay (Colaba)

DATE	Hour G.M.T.	K	Mean amplitude in m.m.	Mean period in sec.
23	00	...	-	-
	06	3	2.9	4.5
			1.0	2.2
	12	3	3.1	4.3
			1.1	2.0
	18	3	2.6	4.0
			1.1	2.3

DATE	Hour G.M.T.	K	Mean amplitude in m.m.	Mean period in sec.
24	00	...	-	-
	06	...	-	-
	12	...	-	-
	18	...	-	-

Station : Madras

DATE	Hour G.M.T.	K	Mean amplitude in m.m.	Mean period in sec.
25	00	...	-	-
	06	3	1.9	3.8
			1.0	2.2
	12	3	1.9	3.5
			1.2	2.3
	18	3	2.4	3.9
			1.1	2.2
26	00	3	2.1	3.5
			1.1	2.3
	06	3	2.1	3.4
			1.1	2.2
	12	...	-	-
	18	...	-	-
27	00	3	1.9	3.6
			1.1	2.3
	06	...	-	-
	12	...	-	-
	18	3	1.7	3.6
			1.3	2.2
28	00	3	1.4	3.8
			1.1	2.2
	06	3	1.6	3.7
			1.1	2.0
	12	3	1.5	3.6
			0.9	2.3
	18	3	1.7	3.8
			0.9	2.0
29	00	3	1.4	4.0
			1.1	2.0
	06	3	1.7	3.6
			1.2	2.0
	12	3	1.6	3.4
			1.2	2.0
	18	...	-	-
30	00	...	-	-
	06	...	-	-
	12	3	1.7	3.7
			0.9	2.3
	18	3	1.6	3.7
			1.0	2.0

Hour K Mean amplitude Mean period
G.M.T. in m.m. in sec.

July, 1961

Component : E-W

Station : Madras

DATE	Hour G.M.T.	K	Mean amplitude in m.m.	Mean period in sec.
	00	1	1.2	5.0
	03	3	1.3	5.0
	06	3	1.3	5.0
	12	3	1.2	5.0
	18	3	1.3	5.4
	00	3	1.2	4.8
	03	3	1.1	5.2
			0.7	2.7
	06	3	1.1	4.8
			0.7	2.7
	12	3	1.1	5.0
			0.7	2.8
	18	3	1.1	4.8
			0.7	2.9
	00	3	1.1	4.7
			0.6	2.8
	03	3	1.1	4.8
	06	3	1.0	4.5
	12	3	1.1	4.5
	18	3	1.3	5.0
			0.7	3.0
	00	3	1.3	5.1
			0.7	2.8
	03	1	1.3	5.4
	06	1	1.2	5.2
	12	1	1.2	4.9
	18	1	1.1	5.0
	00	1	1.1	4.9
	03	1	1.2	5.0
	06	1	1.1	4.9
	12	1	1.1	4.8
	18	1	1.1	4.8
	00	3	0.8	3.4
	03	3	1.0	4.0
			0.8	3.0
	06	1	1.0	4.2
			0.9	3.3
	12	1	1.1	4.4
			0.7	3.2
	18	1	1.0	4.3
	00	1	0.9	4.3
	03	1	1.0	4.1
	06	1	1.0	4.4
	12	1	1.0	4.5
	18	1	1.1	4.7
			0.3	1.5
	00	1	1.1	4.5
	03	1	1.1	4.6
	06	1	1.0	4.6
	12	1	1.0	4.6
	18	1	1.1	4.6
			0.4	2.2

DATE	Hour G.M.T.	K	Mean amplitude in m.m.	Mean period in sec.
16	00	1	1.1	4.7
			0.7	2.9
	03	1	1.1	4.6
	06	1	1.1	4.6
	12	1	1.1	4.4
	18	1	1.1	4.3
17	00	1	1.1	4.2
	03	1	1.1	4.2
			0.3	2.6
	06	3	0.2	1.7
			1.0	4.1
	12	3	0.5	2.9
			1.0	4.2
	18	3	0.7	2.7
			1.2	4.0
			0.6	2.8
18	00	1	1.2	4.1
			0.7	3.0
	03	1	1.2	4.1
	06	1	1.3	4.2
	12	1	1.5	4.2
	18	1	1.3	4.3
19	00	1	1.3	4.3
	03	1	1.3	4.3
	06	1	1.3	4.3
	12	1	1.2	4.3
	18	1	1.3	4.4
20	00	1	1.3	4.3
	03	1	1.2	4.3
	06	1	1.2	4.4
	12	1	1.2	4.1
	18	1	1.1	4.2
21	00	1	1.1	4.3
	03	1	1.2	4.5
	06	1	1.3	4.3
	12	1	1.6	4.8
	18	1	1.7	4.9
22	00	1	1.7	4.8
	03	1	1.6	4.9
	06	1	1.5	4.9
	12	1	1.5	5.0
	18	1	1.7	5.0
23	00	1	1.6	5.0
	03	1	1.7	5.0
	06	1	1.7	5.1
	12	1	1.7	4.9
	18	1	1.7	5.1
24	00	...	-	-
	03	1	1.7	5.0
	06	1	1.7	5.0
	12	1	1.5	5.1
	18	1	1.4	4.8



38-
 Date Hour K Mean Mean
 G.M.T. amplitude period
 in m.m. in sec.

Station: Madras July, 1961

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
25	00	1	1.3	4.8
	03	1	1.1	4.8
	06	3	1.1	4.9
	12	3	0.9	4.9
	18	3	1.1	4.6
26	00	3	0.9	4.4
	03	3	1.0	4.7
	06	3	0.9	4.5
	12	3	0.9	4.6
	18	3	0.9	4.7
		3	0.1	1.4
27	00	3	0.9	4.6
	03	3	0.9	4.5
	06	3	0.9	4.6
		3	0.4	2.7
	12	3	1.0	4.7
		3	0.4	2.9
	18	3	1.0	4.6
		3	0.3	2.3
28	00	3	0.9	4.4
		3	0.3	2.4
	03	3	0.8	4.5
		3	0.4	2.8
	06	3	0.8	4.4
		3	0.4	2.9
	12	3	0.8	4.3
		3	0.5	3.0
	18	3	0.8	3.9
		3	0.5	2.9
29	00	3	0.8	4.2
		3	0.6	2.9
	03	...	-	-
	06	3	0.7	2.7
		3	0.8	4.3
	12	3	0.7	2.9
		3	0.9	4.3
	18	3	0.6	2.9
		3	0.9	4.2
30	00	3	1.0	4.2
		3	0.6	2.9
	03	3	0.9	4.3
		3	0.7	2.9
	06	3	0.9	4.3
		3	0.7	3.0
	12	3	0.9	4.2
		3	0.6	3.1
	18	3	0.8	4.0
31	00	3	0.8	4.0
	03	3	0.8	4.4
	06	3	0.8	4.3
	12	3	0.9	4.3
	18	3	0.9	4.4

Component : E-W.

Station : Bokaro.

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
01	00	-	-	-
	06	3	2.2	5.0
	12	3	2.3	5.4
	18	3	2.3	5.5
02	00	3	2.0	5.4
	06	3	1.9	5.0
	12	3	2.0	5.0
	18	3	1.8	5.0
03	00	3	1.8	4.8
	06	3	1.6	4.8
	12	3	1.6	4.9
	18	3	1.6	4.5
04	00	...	-	-
	06	3	1.5	4.3
	12	3	1.5	4.5
	18	2	1.5	4.8
05	00	2	1.8	5.0
	06	3	1.0	4.5
	12	3	1.4	5.0
	18	3	1.2	5.0
06	00	2	1.3	5.0
	06	2	1.1	5.4
	12	3	1.0	5.5
	18	3	1.0	5.2
07	00	3	0.5	4.7
	06	3	1.0	5.0
	12	3	1.0	5.0
	18	3	1.7	5.0
08	00	3	0.6	4.5
	06	3	0.5	4.5
	12	3	0.3	4.0
	18	3	0.3	4.8
09	00	3	0.4	4.2
	06	3	0.6	5.0
	12	3	0.5	4.0
	18	3	0.5	4.0
10	00	3	0.5	4.3
	06	3	0.4	4.0
	12	3	0.3	4.0
	18	3	0.5	4.2
11	00	3	0.4	4.1
	06	3	1.1	5.0
	12	3	1.0	5.2
	18	3	0.8	5.0

39-
 Hour K Mean Mean
 G.M.T. amplitude period
 in m.m. in sec.

Station : Bokaro

July, 1961

Component : E-W.

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
00	00	3	0.8	4.8
	06	3	0.8	4.5
	12	3	0.7	4.6
	18	3	0.7	4.2
00	00	3	0.8	4.0
	06	3	0.6	4.0
	12	3	0.6	4.1
	18	3	0.6	4.2
00	00	3	0.5	4.0
	06	3	0.7	4.4
	12	3	0.6	4.2
	18	3	0.5	4.0
00	00	3	0.6	4.0
	06	3	0.6	4.2
	12	3	0.6	4.0
	18	3	0.8	4.2
00	00	3	0.6	4.0
	06	3	0.8	4.0
	12	3	0.8	4.2
	18	3	0.7	4.3
00	00	3	1.0	5.0
	06	3	1.1	5.2
	12	3	0.8	4.5
	18	3	0.6	4.0
00	00	3	0.5	4.0
	06	3	0.5	4.0
	12	3	0.5	4.2
	18	3	0.6	4.5
00	00	3	0.5	4.3
	06	3	0.5	4.0
	12	3	0.5	4.2
	18	3	0.5	4.0
00	00	3	0.6	4.3
	06	3	0.6	4.2
	12	3	0.6	4.2
	18	3	0.5	4.0
00	00	...	-	-
	06	3	0.5	4.2
	12	3	0.6	4.8
	18	3	0.6	4.5
00	00	3	0.8	5.0
	06	3	0.7	5.0
	12	3	0.8	4.7
	18	3	0.8	5.0

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
23	00	3	0.7	5.0
	06	2	0.9	5.0
	12	2	1.0	5.2
	18	2	0.8	5.0
24	00	...	-	-
	06	2	0.7	5.0
	12	3	0.8	4.8
	18	3	0.7	5.0
25	00	3	0.6	4.5
	06	3	0.5	4.8
	12	3	0.6	4.8
	18	3	0.5	4.5
26	00	3	0.6	4.8
	06	3	0.5	5.0
	12	3	0.5	4.8
	18	3	0.5	5.0
27	00	3	0.4	4.2
	06	3	0.4	4.8
	12	3	0.4	4.6
	18	3	0.4	4.2
28	00	3	0.4	4.0
	06	3	0.4	4.4
	12	3	0.4	4.0
	18	3	0.5	4.2
29	00	3	0.4	4.0
	06	3	0.5	4.0
	12	3	0.4	4.0
	18	3	0.3	4.0
30	00	3	0.3	4.0
	06	3	0.3	4.0
	12	3	0.3	4.2
	18	3	0.3	4.0
31	00	3	0.4	4.4
	06	3	0.4	4.2
	12	3	0.5	4.8
	18	3	0.4	4.4

Station : Visakhapatnam

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
01	00	...	-	-
	06	1	1.6	5.2
	12	1	1.8	5.4
	18	1	1.7	5.1

.....

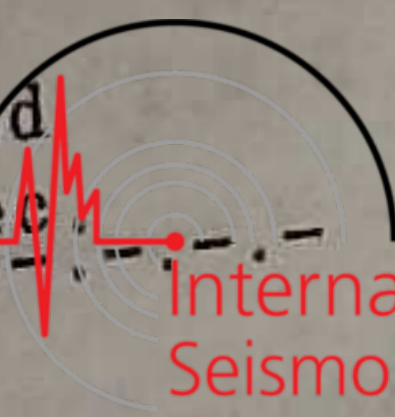


Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
Station : Visakhapatnam July, 1961 Component : E-W.									
02	00	3	1.9	5.6	14	00	3	0.6	4.0
	06	1	1.6	5.0		06	3	0.6	3.9
	12	1	2.0	5.4		12	3	0.6	3.9
	18	...	-	-		18	3	0.7	4.0
03	00	...	-	-	15	00	...	-	-
	06	1	1.5	4.7		06	3	0.8	3.8
	12	1	1.5	4.9		12	3	0.5	3.5
	18	3	1.6	4.7		18	3	0.8	3.9
04	00	3	1.4	4.7	16	00		0.7	3.9
	06	3	1.3	5.1		06	1	1.0	4.2
	12	3	1.4	4.7		12	1	1.1	4.4
	18	3	1.2	4.6		18	1	1.0	4.1
05	00	3	1.3	4.6	17	00	3	0.8	4.2
	06	3	1.3	4.4		06	1	1.0	4.6
	12	3	1.4	5.4		12	1	1.1	4.0
	18	3	1.1	4.8		18	1	1.0	4.1
06	00	...	-	-	18	00	1	1.0	4.7
	06	3	1.2	4.6		06	1	0.9	4.5
	12	3	1.0	5.0		12	1	0.8	4.1
	18	3	0.8	4.7		18	1	0.8	4.2
07	00	3	0.7	4.6	19	00	3	0.7	3.8
	06	3	0.8	4.4		06	3	0.7	4.1
	12	3	0.7	4.1		12	3	0.7	4.1
	18	3	0.6	4.5		18	3	0.7	3.8
08	00	3	0.6	3.5	20	00		1.0	4.4
	06	3	0.7	3.4		06	1	0.8	4.1
	12	3	0.7	4.1		12	1	0.7	4.1
	18	3	0.6	4.1		18	1	0.6	4.0
09	00	3	0.7	3.8	21	00	3	0.7	4.2
	06	...	-	-		06	3	0.7	4.1
	12	3	0.8	3.5		12	3	0.7	4.4
	18	3	0.8	4.1		18	3	0.8	3.9
10	00	3	0.9	3.9	22	00	3	0.7	3.8
	06	3	0.6	3.8		06	1	0.7	4.6
	12	3	0.7	4.4		12	1	0.8	4.3
	18	3	1.0	5.2		18	3	1.0	4.6
11	00	3	0.8	4.2	23	00	3	0.8	5.0
	06	3	0.8	3.8		06	1	0.8	4.9
	12	3	0.9	4.2		12	1	1.0	5.3
	18	3	0.7	4.0		18	3	0.8	5.1
12	00	3	0.5	3.7	24	00	...	-	-
	06	3	0.8	4.2		06	1	0.7	5.2
	12	3	0.6	4.1		12	3	0.8	4.8
	18	3	0.7	3.8		18	3	0.8	4.6
13	00	3	0.8	3.6	25	00	3	0.6	4.5
	06	3	0.8	3.9		06	3	0.6	5.1
	12	3	0.9	4.1		12	3	0.6	5.1
	18	3	1.0	3.9		18	3	0.5	4.1

Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.	Date	Hour	K	Mean amplitude in m.m.	Mean period in sec.
Station : Visakhapatnam July, 1961 Component : E-W.									
26	00	3	0.6	4.4	05	00	...	-	-
	06	3	0.5	4.5		06	...	-	-
	12	3	0.5	4.2		12	3	0.4	3.2
	18	3	0.7	4.8		18	3	0.4	3.2
27	00	3	0.5	4.7	06	00	3	0.4	3.2
	06	3	0.5	4.6		06	0,0	-	-
	12	3	0.5	4.8		12	0,0	-	-
	18	3	0.7	4.9		18	0,0	-	-
28	00	3	0.4	4.6	07	00	0,0	-	-
	06	3	0.7	4.5		06	0,0	-	-
	12	3	0.4	4.3		12	0,0	-	-
	18	3	0.6	3.6		18	0,0	-	-
29	00	3	0.6	4.3	08	00	0,0	-	-
	06	3	0.7	4.3		06	3	0.4	3.2
	12	3	0.6	3.3		12	3	0.4	3.3
	18	3	0.7	3.9		18	3	0.4	3.3
30	00	3	0.5	3.2	09	00	3	0.4	3.2
	06	1	0.8	4.0		06	3	0.4	3.1
	12	1	0.6	3.8		12	3	0.4	3.0
	18	3	0.6	3.9		18	3	0.4	3.0
31	00	3	0.6	3.6	10	00	3	0.4	3.0
	06	3	0.7	3.9		06	...	-	-
	12	3	0.6	3.8		12	...	-	-
	18	3	0.6	4.0		18	...	-	-
.....									
Station : Port Blair									
01	00	2	1.6	3.4	12	00	...	-	-
	06	2	1.6	3.3		06	...	-	-
	12	2	1.6	3.3		12	...	-	-
	18	2	1.2	3.4		18	...	-	-
02	00	2	1.2	3.3	13	00	...	-	-
	06	...	-	-		06	0,0	-	-
	12	3	0.8	3.4		12	0,0	-	-
	18	3	0.4	3.4		18	0,0	-	-
03	00	3	0.4	3.4	14	00	0,0	-	-
	06	...	-	-		06	0,0	-	-
	12	...	-	-		12	0,0	-	-
	18	...	-	-		18	0,0	-	-
04	00	...	-	-	15	00	0,0	-	-
	06	...	-	-		06	3	0.8	3.2
	12	...	-	-		12	3	0.8	3.4
	18	...	-	-		18	3	0.4	3.2

 Date Hour K Mean Mean Date Hour K Mean Mean
 G.M.T. amplitude period G.M.T. amplitude period

 in micron. in sec. in micron. in sec.



International
 Seismological
 Centre

Station : Port Blair

July, 1961

Component : E-W

Date	Hour	K	Mean amplitude in micron.	Mean period in sec.	Date	Hour	K	Mean amplitude in micron.	Mean period in sec.
16	00	3	0.4	3.2	27	00	0,0	-	-
	06	3	0.8	3.2		06	0,0	-	-
	12	3	0.8	3.3		12	0,0	-	-
	18	3	0.8	3.2		18	0,0	-	-
17	00	3	0.8	3.2	28	00	0,0	-	-
	06	3	0.8	3.1		06	0,0	-	-
	12	3	0.8	3.1		12	0,0	-	-
	18	3	0.8	3.1		18	0,0	-	-
18	00	3	0.8	3.2	29	00	0,0	-	-
	06	3	0.8	3.2		06	2	0.8	3.2
	12	3	0.8	3.2		12	2	0.8	3.2
	18	3	0.8	3.2		18	2	0.8	3.2
19	00	3	0.8	3.1	30	00	2	0.8	3.2
	06	3	1.2	3.1		06	2	0.4	3.1
	12	3	1.2	3.3		12	0,0	-	-
	18	3	1.2	3.1		18	0,0	-	-
20	00	3	1.2	3.2	31	00	0,0	-	-
	06	...	-	-		06	...	-	-
	12	...	-	-		12	...	-	-
	18	...	-	-		18	...	-	-
21	00	...	-	-					
	06	...	-	-					
	12	...	-	-					
	18	...	-	-					
22	00	...	-	-					
	06	...	-	-					
	12	...	-	-					
	18	...	-	-					
23	00	...	-	-					
	06	0..	-	-					
	12	0..	-	-					
	18	0..	-	-					
24	00	0..	-	-					
	06	...	-	-					
	12	...	-	-					
	18	...	-	-					
25	00	...	-	-					
	06	0,0	-	-					
	12	0,0	-	-					
	18	0,0	-	-					
26	00	0,0	-	-					
	06	0,0	-	-					
	12	0,0	-	-					
	18	0,0	-	-					

.....