



SEISMOLOGICAL BULLETIN

JAN 1969

GOVERNMENT OF INDIA
METEOROLOGICAL DEPARTMENT

PUBLISHED UNDER THE DIRECTION OF
SHRI P. R. KRISHNA RAO
DIRECTOR GENERAL OF OBSERVATORIES

List of Seismograph Stations with their Instruments and Constants :

January 1964



Station	Latitude (° N)	Longitude (° E)	Height (Metres)	Lithographic foundation	Instrument	Component	Period in sec's	Static magnification	Damping ratio	Paper speed mm/min					
Bokaro	23 47	85 53		Rock	Press-Ewing	Z	To 15 Tg 100			15					
					do	N-S	To 15 Tg 100			15					
					do	E-W	To 15 Tg 94			15					
					Sprengnether	E-W	To Tg 7.3	5000	Critical	30					
Bombay	18 54	72 49		Deccan Trap	Wood-Anderson	N-S	0.8 sec	940	Critical	30					
					do	E-W	0.8 sec	950	do	30					
					Milne-Shaw	N	12	250	20:1	8					
					do	E	12	250	20:1	8					
Calcutta	22 32	88 20	(1) 7 Milne Shaw (2) 6 Omori Ewing Alluvium		Milne-Shaw	E	12.0	250	20:1	8					
					Omori Ewing	E	19.0	30		25.4					
					do	N	16.0	32		25.4					
					Sprengnether	N	To Tg 7.0	1000	Critical	30					
Chatra	26 50	87 10	161 Sand Stone		Benioff	Z	To 0.72 Tg 0.45			60					
					Wood-Anderson	N	0.8	1000	20:1	30					
					do	E	0.8	1000	20:1	30					
					Milne-Shaw	N	12.0	250	20:1	16					
De lhi	28 41	77 12	297 Massive Quartzite		Wanner Accelerograph	Z,N,E	To 0.1 sec	50	10:1	600					
					Sprengnether	E	To Tg 7.6	5000	Critical	30					
					Wood-Anderson	E	To 0.8	1000	do	30					
					do	N	To 0.8	1000	do	30					
Dehra Dun	30 19	78 03	682 Gravel		Milne-Shaw	N	To 12.0	250	20:1	8					
					do	E	To 12.0	250	20:1	8					
					Sprengnether	Z	To 15 Tg 100	1500	Critical	30					
					do	E	do do	1500 sec	do	15					
Goa	15 29	73 49	Laterite		Sprengnether	Z	To Tg 1.5		Critical	30					
					do	E	To Tg 7.4	5000	do	30					
					do	N	To Tg 7.5	5000	do	30					
					Hyderabad	17 26	78 27	536 Granite		Milne-Shaw	E	To 12	243.5	20:1	8
do	N	To 12	250.2	20:1						8					
Kodaikanal	10 14	77 28	2345 Rock							Benioff(S.P)	Z	To 1.0 Tg 0.75	100000	for Critical	60
										do	N	To 1.0 Tg 0.75	100000	TE-1 do	60
					do	E	To 1.0 Tg 0.75	100000	sec do	60					
					Sprengnether (LP)	Z	To 15.0 Tg 100	1500	for Critical	30					
Madras	13 00	80 11	15		do	N	do do	1500	TE-15 do	30					
					do	E	do do	1500 sec	do	30					
					Milne-Shaw	E-W	To 12.0	250	20:1	8					
					Sprengnether	Z	To Tg 7.5		Critical	30					
Poona	18 32	75 51	560 Deccan Trap		Benioff(S.P)	Z	To 1.0 Tg 0.75	50000	for Critical	60					
					do	N	do do	50000	TE-1 do	60					
					do	E	do do	50000	sec do	60					
					Sprengnether(LP)	Z	To 15.0 Tg 100	3000	for Critical	15					
Port Blair	11 40	92 43			do	N	do do	1500	TE-15 do	15					
					do	E	do do	1500 sec	do	15					
					Milne-Shaw	Z	12.0	250	20:1	8					
					Wood-Anderson	N	2.0	890	30:1	30					
Sehore	23 10	77 05			do	E	0.8	810	70:1	30					
					Benioff	Z	To 1.0 Tg 1.6			30					
					Wood-Anderson	N	0.8	860	Critical	30					
					do	E	0.8	950	do	30					
Shillong	25 34	91 53	1600 Quartzite Sand Stone (Shillong Quartzite)		Benioff(S.P)	Z	To 1.0 Tg 0.75	200000	for Critical	60					
					do	N	do do	200000	TE-1 do	60					
					do	E	do do	200000	sec do	60					
					Press-Ewing(LP)	Z	To 15 Tg 100	3000	for do	30					
Tocklai	26 45	94 46	Alluvium		do	N	do do	3000	TE-15 do	30					
					do	E	do do	3000 sec	do	30					
					Sprengnether	E	To 5.7 Tg 5.7	3600	Critical	30					
					Milne-Shaw	N	To 12.0	250	20:1	8					
Visakhapatnam	17 43	83 18			Wanner Accelerograph	Z,N,E	To 0.1	Nearly 50	10:1	600					
					Wood-Anderson	E-W	0.8	1000	Critical	60					
					Sprengnether	E	To Tg 7.0	5000	Critical	30					
					do	E	To 2.0	960	do	30					

DATE	STN	PHASE	G	M	T	Δ	DATE	STN	PHASE	G	M	T	Δ
01	PBA	iPg	04	49	30	20	01	NDI	iP	17	36	46	CSW 6330
		iSg		49	33			i			36	47	
								PP			39	00	
01	NDI	eP	05	23	54	C		iS, eS			44	56	
								Ss			49	02	
01	Epc. 6.8°S, 129.8°E in Banda Sea Region. H=12h 21m 53.4s. -h abou 96 kms (USCGS). Mag. 5.7 (CGS).							FBA	i	17	36	50	
							01	TOC	eP	17	37	03	
	SHL	iP	12	30	30	CNW	MDR	eP	17	37	37	7870	
	MDR	iP	12	31	04	E 5700	PcP				38	03	
		PP		33	00		PP				40	11	
		PPP		34	02		PPP				41	56	
		PcS)					iS				46	42	
		ScP)		36	13		PS				47	01	
		eS		38	23		PPS				47	14	
		PS		38	28		ScS/						
		PPS		38	35		SKS				47	29	
		ScS		40	44		SS				51	12	
		Lq		43	32		SSS				54	03	
		Lr		45	52		Lq				55	25	
	NDI	iP	12	32	04	C	BOM	iP	17	37	45	7730	
		i		32	05		PcP				38	10	
	DDI	iP	12	32	07	R	PP				40	21	
							PPP				42	25	
01	CHA	eP	14	49	09		eS				46	53	
							PS				47	12	
							e				47	31	
01	Epc. 45.4°N, 151.9°E. Kurile Islands. H=17h 26m 43.5s. -h about 45 kms (USCGS). Mag. 6 (Pal), 5.6 SD 0.3 (CGS). 44°N, 153°E. (Seismo. Shillong)							SKS1			47	45	
							e				47	57	
							e				48	17	
							e				49	23	
							SS				51	41	
	SHL	iP	17	35	46	CSW 5800	Lr				59	38	
		PP		37	50		M				18	15	03
		PcS		41	00								
		S		43	10		POO	eP	17	37	49	SW 7810	
		SS		47	03		iS				47	02	
		Lq		49	14		PS				47	25	
		M		55	20		PPS				47	40	
	CHA	iP	17	36	07	W 5990	SKS1				47	48	
		iS		43	41		e				50	07	
							SS				51	33	
	CAL	eP	17	36	18	6170	Lq				55	56	
		eS		44	03		Lr				59	11	
							M				18	05	=
	BOK	iP	17	36	25	W 6620	01	SHL	iP	20	11	59	C
		PPP		40	05								
		S		44	26		01	NDI	iP	20	13	28	RN
		PPS		44	40								
		ScS		46	14		01	DDI	iP	20	13	29	R
		SS		48	28								
	DDI	iP	17	36	36	CSE 6470	01	SHL	iP	21	13	31	C
		PcP		37	29								
		iS		44	37		01	NLI	P	21	14	30	
		PS		44	48								
		PPS		44	59		01	SHL	iP	22	51	29	C
		SSS		50	53								
		Lr		53	57		DDI	iP	22	52	20	R	
		M		58	53								
							NDI	eP	22	52	23	EC	
							i				52	29	

DATE	STN	PHASE	H	M	S	Δ
10	MDR	PP	05	03	19	
Contd.		PPP	04	46		
		eS	09	21		
		PS	09	38		
		PPS	09	44		
		ScS	10	57		
		SS	13	25		
		Lq	16	20		
		Lr	19	02		
		M	23	51		
POO	iP		05	01	13	CSW 6840
	eS		09	35		
BOM	iP		05	01	15	6940
	e		01	37		
	PcP		01	51		
	PP		03	33		
	eS		09	42		
	PS		10	03		
	e		10	21		
	e		10	35		
	SS		14	11		
	M		30	-		
10	KOD	S	05	10	29	
10	<i>Epic. 44.8°N, 149.6°E. in Kurile Island. H = 10h 52m 45.6s - h about 33 km (USCGS). Mag. 4.5 SD 0.2 (CGS).</i>					
	SHL	iP	11	01	39	C
	DDI	eP	11	02	32	
	NDI	iP	11	02	41	RSE
	i		02	52		
10	SHL	iP	12	05	30	C
10	CHA	iP	13	23	58	C
10	<i>Epic. 45.6°N, 150°E. in Kurile Islands. H = 16h 57m 26.5s - h about 50 km (USCGS). Mag. 5.4 SD 0.2 (CGS).</i>					
	SHL	iP	17	03	18	CSW 5440
	PcP		07	37		
	PP		08	20		
	PPP		09	19		
	S		13	22		
	PS		13	35		
	PPS		13	49		
	SSS		17	30		
	M		22	13		
	CHA	iP	17	03	39	C
	BOK	eP	17	03	58	6140
	PP		09	18		
	iS		14	41		
	DDI	iP	17	07	10	R
	NDI	iP	17	07	13	CS 6390
	eS		15	15		
10	MDR	eP	17	08	13	7330
	PcP		03	50		
	PP		10	42		
	eS		17	00		
	POO	iP	17	08	18	R
10	NDI	iPg	18	03	50.7	40
	eSg		03	55.5		
10	SHL	iP	18	31	21	
10	DDI	eP	19	07	52	870
	eS		09	23		
	NDI	P	19	08	07	980
	eS		09	48		
	SHL	iP	19	10	10	R
10	SHL	iP	19	17	25	C 170
	eSg		17	40		
	CHA	eP	19	17	55	470
	eS		18	45		
10	SHL	iP	19	29	39	C
	CHA	iP	19	30	15	R
	NDI	eP	19	31	19	
10	SHL	iP	19	45	32	
10	<i>Epic. 6.9°S, 129.9°E. in Banda Sea. H = 21h 52m 47.6s - h about 117 km (USCGS). Mag. 5.5 (CGS).</i>					
	SHL	iP	22	01	23	C
	CHA	iP	22	01	53	C
	NDI	P	22	02	53	
	DDI	eP	22	02	55	
11	NDI	eP	03	13	01	E
11	BOK	iP	07	53	22	
11	BOK	iP	08	34	25	
11	SHL	iP	08	38	51	C
11	<i>Epic. 11.4°S, 90.9°E. in Indian Ocean, about 600 km west of Cocos Island. H = 10h 23m 10.9s - h about 33 km (USCGS).</i>					
	PBA	eP	10	28	27	2450
	eS		32	23		
	MDR	eP	10	29	05	3030
	eS		33	44		
	SHL	iP	10	30	19	R
	NDI	iP	10	31	02	RSE

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DATE	STN	PHASE	H	M	S	Δ
11	DDI	eP	10	31	14	
11	PBA	iP	18	02	27	R
11	SHL	eP	19	53	54	
11	PBA	eP	20	24	23	
11	<i>Epic. 8.6°S, 123.4° in Flores Sea. H = 22h 02m 03s - h about 70 km (USCGS). Mag. 5.5 (CGS).</i>					
	SHL	iP	22	10	23	C
	i		15	40		
	CHA	iP	22	10	51	C
	DDI	eP	22	11	54	
	NDI	eP	22	11	58	CS
11	NDI	iP	22	19	33	CNE
11	SHL	iPg	23	14	32	130
	eSg		14	48		
11	SHL	iP	23	30	51	C
12	SHL	iP	01	31	41	
12	NDI	iP	03	10	09	CNW
12	SHL	iP	05	57	50	
12	TOC	ePg	05	58	13	90
	P		58	14	5	
	eSg		58	24		
	SS		58	59		
12	CHA	iP	06	00	07	C
12	<i>Epic. 53.2°N, 166.3°W. in Fox Island, Alutian Island. H = 06h 00m 13.2s. - h about 33 km (USCGS).</i>					
	TOC	eP	03	11	47	
	SHL	iP	03	12	03	CSW
	CHA	iP	03	12	11	C 9000
	eS		22	20		
	DDI	iP	03	12	21	C
	e		23	18		
	BOK	iP	03	12	27	W 8930
	iS		22	23		
	NDI	iP	03	12	23	CSW 8980
	eS		22	34		
	PBA	iP	03	12	57	C
	e		24	15		
12	HYD	iP	03	13	13	SW 9720
	eS		23	54		
	M		48	31		
	BOM	iP	03	13	17	10110
	e		18	41		
	eS		24	14		
	e		24	39		
	M		57	-		
	POO	iP	03	13	19	C
12	MDR	eP	03	13	23	10220
	e		23	55		
	eSKS		24	17		
	eS		24	24		
12	SHL	iP	11	23	13	C
	NDI	eP	11	24	35	RE
	DDI	eP	11	24	36	
	PBA	iPg	12	44	33	50
	iSg		44	41		
12	<i>Epic. 31.5°N, 49.4°E. in Western Iran. Felt in Khouzestan. H = 12h 45m 51.1s. - h about 67 km (USCGS). Mag. 5.2 (CGS).</i>					
	NDI	iP	12	51	05	CSE 2790
	eS		55	28		
	BOM	iP	12	51	09	2850
	PP		51	21		
	e		53	35		
	eS		55	35		
	e		55	49		
	DDI	iP	12	51	12	C 2740
	i?		51	13		
	eS		55	32		
	POO	iP	12	51	18	C
	BOK	iP	12	52	24	
	MDR	eP	12	52	30	3830
	eS		57	58		
	Lq		13	00	18	
	M		04	52		
	CHA	iP	12	52	26	C
	SHL	iP	12	53	05	C
12	MDR	Pg	13	25	38	90
	Sg		25	49		
12	POO	eP	13	27	20	
12	BOK	eP	13	29	43	

DATE	STN	PHASE	H	M	S	Δ
18	MDR	PcP	12	14	13	
Cont'd.		PPP		14	19	
		iS		13	23	
		Lq		21	30	
		ScS		22	19	
		Lr		23	27	
		M		23	40	
SEH	iP		12	12	12	4540
	PP			13	51	
	iS			18	24	
POO	iP		12	12	46	CSW 5030
	PcP			14	24	
	PP			14	32	
	PPP			15	17	
	iS			19	27	
	PPS			19	35	
	ScS			22	20	
	SS			22	41	
	Lq			23	33	
	SSS			23	45	
	Lr			25	03	
	M			29	00	
BOM	iP		12	12	52	4900
	PP			14	35	
	PcP			14	42	
	PPP			15	12	
	i			15	23	
	eS			19	24	
	FS			19	29	
	PPS			19	39	
	e			20	39	
	SS			22	32	
	ScS			22	50	
	Sa?			23	09	
	SSS			23	28	
	M			33	01	
18	NDI	eP	12	40	17	
18	SHL	eP	13	11	58	
18	SHL	eP	13	48	42	
18	NDI	iP	16	56	02	CW
18	SHL	iP	17	43	32	C
18	MDR	eP	18	23	09	2350
	PP			23	34	
	PP			23	43	
	eS			32	00	
	Lr			33	20	
	M			34	55	
	NDI	eP	18	29	24	R
18	NDI	iPg	20	31	05	CS
	iSg			31	10	
18	SHL	iP	20	58	04	C
18	DDI	eP	22	55	03	

DATE	STN	PHASE	H	M	S	Δ
18	NDI	iP	22	55	04	R
	SHL	iP	22	55	22	C
18	NDI	eP	23	13	51	CE
	i			15	53	
18	NDI	eP	23	44	50	
19	SHL	iP	07	08	55	C
19	NDI	eP	07	09	53	
19	NDI	eP	07	12	43	
19	<i>Epc. 26.9°N, 54°E. in Near Coast of Southern Iran. H = 09h 13m 53.5s - h about 33 km (USCGS) Mag. 5.6 SD 0.5 (CGS)</i>					
	BOM	iP	09	18	15	2150
	PP			18	42	
	PPP			18	43	
	eS			21	43	
	e			21	54	
	SS			22	08	
	e			23	02	
	FOO	iP	09	18	23	C
	NDI	iP	09	18	33	RSE 2350
	eP			18	34	
	iS			22	24	
	DDI	iP	09	18	43	C 2490
	i			18	48	
	PP			19	07	
	iS			22	45	
	M			23	03	
	KOD	eP	09	19	43	
	MDR	eP	09	19	46	3250
	PP			20	40	
	eS			24	39	
	Lq			23	02	
	Lr			27	27	
	M			29	44	
	BOK	iP	09	19	53	
	SHL	iP	09	20	35	C
	CHA	eP	09	21	22	
19	SHL	iP	10	22	08	
	TOC	ePg	10	22	27	120
	iSg			22	41	
19	SHL	iP	12	04	57	R
19	NDI	eP	12	06	20	



DATE	STN	PHASE	H	M	S	Δ	DATE	STN	PHASE	H	M	S	Δ
19	PBA	ePg	14	23	55	90	20	BOK	iP	17	21	35	E 10390
		iSg		27	05				i		22	12	
									SKS		31	33	
19	SHL	iP	13	18	24	R			iS		32	29	
									PS		33	21	
19	DDI	P	16	23	35				PPS		33	46	
		i		29	20				SS		33	03	
	NDI	P	16	23	47				CHA	eP	17	21	36 R
19	NDI	P	17	20	20		20	TOC	eP	17	21	42	
19	SHL	iP	18	55	33	C			i		31	54	
19	PBA	ePg	19	25	10	20		MDR	iP	17	21	44	W 10490
		eSg		25	13				pP		22	15	
									PP		25	05	
19	NDI	iP	23	15	30	RNE			PPP		27	02	
									SKS1		32	04	
20	SHL	3h 5'	04	53	03	C			S		32	44	
	NDI	iP	04	55	48	R			PS		33	13	
20	BOK	iP	08	13	57				PPS		33	38	
		e		09	25	38			e		34	57	
20	BOK	e	09	25	38				e		39	04	
20	BOK	iP	11	13	25				e		40	12	
									Lq		43	44	
20	SHL	iP	13	13	52	R			Lr		48	03	
20	SHL	eP	15	12	03				M		54	38	
20	SHL	iP	15	45	15	R		NDI	iP	17	22	15	R 10590
	CHA	e	15	45	54				i		22	49	
20	SHL	iP	15	48	28	RSE			iSKS		32	40	
20	CHA	iP	15	49	22	R 620			PPS		35	22	
		eS		50	28				i		36	10	
20	SHL	iP	15	59	44	C			e		38	20	
20	<i>Epc. 20.7°S, 169.9°E. in Loyalty Island Region. H = 17h 08m 37.4s. - h about 141 km (USCGS) Mag. 6¼ (Pas), 6.1 (CGS)</i>							DDI	eP	17	22	16	10300
	PBA	iP	17	20	45	RS 9000			SKS		32	40	
		eS		30	41			BOM	eP	17	22	13	10930
	SHL	iP	17	21	16	RSE 9910			pP		22	53	
		i		21	50				iS		32	41	
		i		22	12				e		33	22	
		PP		24	13				e		33	43	
		PPP		25	53				e		53	11	
		SKS		31	30			20	SHL	iP	18	29	14 C
		S/ScS		31	52				CHA	eP	19	39	13 170
		Lq		44	43				iS		39	37	
		M		51	20			20	CHA	iP	19	43	37 230
									iS		44	10	
	CAL	iP	17	21	24	10110		20	<i>Epc. 18.8°N, 120.7°E. Near North Coast of Luzon, Philippine Island. H = 20h 38m 16.5s. - h about 53 km (USCGS). Mag. 4.8 (CGS).</i>				
		SKS		31	42				SHL	iP	20	44	00 C
		iS		32	07				CHA	iP	20	44	39 R
									DDI	eP	20	45	51

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DATE	STN	PHASE	H	M	S	Δ	DATE	STN	PHASE	H	M	S	Δ
20	NDI	eP	20	45	53	R	22	CHA	iP iS	13	00	29 01 48	RSE 760
20	CHA	eP eS	21	27	31 28 12	380	PBA	eP PP PPP Lq iS SS SSS M	16	01	14 01 25 01 33 02 52 03 05 03 17 03 38 04 12	1080	
20	SHL	iPg Sg	21	43	47 27 00	110	SEH	eP PP PPP Lq iS SS Lr M	16	02	13 02 25 02 32 04 47 04 53 05 09 05 34 06 43	1590	
20	NDI	ePg iSg	23	11	38 11 42	30	MDR	iP PP PPP Lq iS SS SSS r	16	02	20 02 31 02 38 04 55 05 02 05 19 05 31 05 39	1610	
21	KOD	e	02	22	02		NDI	iP i PP PPP i Lq iS SS SSS Lr i	16	02	23 02 24 02 34 02 42 03 04 05 02 05 05 05 21 05 36 05 40 05 57	1610	
21	SHL	iSg	03	29	20		DDI	iP PP PPP Lq iS SS SSS Lr M	16	02	25 02 39 02 45 05 04 05 09 05 25 05 38 05 45 06 58	1620	
21	NDI	iP	03	49	11	RS	BOM	eP e FP e eS Lq M	16	03	11 03 22 03 29 03 34 03 46 07 01 11 16	2170	
21	SHL	eP	12	23	45		KOD	iP iS	16	03	13 03 42	W 2110	
21	NDI	iP	12	54	24								
21	NDI	iPg iSg	13	40	24 40 29	RNW 20							
21	SHL	eP	13	29	05								
21	Epc. 10.6°N, 125.3°E. in Near Coast of Leyte, Philippine H = 22h 18m 13s. - h about 53 km (USCGS). Mag. 5.2 (CGS).												
	SHL	iP	22	25	00	C							
	CHA	iP	22	25	40	R							
	NDI	iP	22	23	50	C							
	DDI	eP	22	23	50								
22	BOK	iP i e	00	12	23 22 51 23 03	E							
22	NDI	ePg iSg	00	23	14 23 136	20							
22	NDI	i	02	08	39								
22	SHL	iP	09	21	09	C							
22	Epc. 22.4°N, 93.6°E. in Burma H = 15h 58m 43.5s. - h about 88 km (USCGS). Mag. 6.1 SD 0.2 (CGS). Epc. 22°N, 93°E. H = 15h 58m 45s (Shillong)												
	SHL	iP eS Sg	15	59	38 13 00 17 00 33	RSE 230							
	CAL	iP iS	15	59	58 13 00 49	480							
	BOK	iP iS	16	00	27 01 42	W 720							

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DATE	STN	PHASE	H	M	S	Δ	DATE	STN	PHASE	H	M	S	Δ
22	TOC	e	17	00	41	W	22	NDI	iP Conto. i e	00	13	05 22 41 23 17	R
22	SHL	iP	18	07	15	R	BOM	eP SKS e eS e PS PPS SS e M	00	13	18 23 52 24 05 24 42 25 15 26 12 27 02 31 48 33 36 01 04 -	10890	
22	CHA	eP	18	07	47		23	NDI	i	05	19	42	
22	SHL	iP	18	28	48	C	23	NDI	iP	05	25	50	
22	SHL	iPn eSn	18	37	10 37 41	C 270	23	SHL	iPg eSg	10	13	35 16 49	CNW 120
22	CHA	iP eS	18	38	05 39 25	C 770	23	NDI	iP	11	50	23	
22	SHL	iP	18	55	35		23	SHL	iP	13	51	03	R
22	Epc. 13.7°S, 165.9°E. in New Hebrides Island. H = 23h 59m 43.6s. - h about 33 km (USCGS). Mag. 8.0 SD 0.3 (CGS).												
	PBA	eP	00	11	39		NDI	eP	13	52	32	CSW	
	SHL	iP PoP PP PPP eS ScS PPS SS M	00	12	02 12 12 15 03 16 46 22 13 23 03 27 13 39 06	RSE 9110	23	SHL	iP	13	51	03	R
	CAL	iP iS	00	12	15 22 37	9290	23	DDI	ePn i PP PPP P* Pg Lq iSn Lr SSS S* Sg,M	15	21	35 21 37 21 42 21 49 21 55 22 16 22 59 23 10 23 24 23 32 23 40 24 04	930
	CHA	iP	00	12	25	R	NDI	iP iS SS	15	21	47 23 25 23 47	RS 950	
	MDR	eP e PP PPP SKS SKKS iS ScS PS PFS SS SSS Lq Lr M	00	12	40 15 40 13 20 18 20 23 09 23 20 23 33 23 40 24 43 25 15 29 30 33 15 37 24 41 28 49 18	10020	CHA	eP eS	15	23	22 26 15	1720	
	KOD	iP iSKS	00	12	48 23 22	W 10450	BOK	eP	15	23	41		
	DDI	eP PP eSKS	00	13	04 16 54 23 42	10890	SHL	iP PP PPP eS	15	24	12 24 30 24 39 27 49	RNW 2190	

DATE	STN	PHASE	H	M	S	Δ
23	SHL	SS	15	23	13	
Contd.		SSS		23	27	
	SEH	eP	15	25	22	
		i		25	37	
		i		27	07	
	BOM	e	15	27	37	
	CAL	i	15	28	04	
	MDR	e	15	29	33	
23	<i>Epc. 11.5°N, 122.5°E. in Panay Island, Philippine Island. H = 16h 08m 55.5s - h about 47 km (USCGS). Mag. 4.5 (CGS).</i>					
	SHL	iP	16	15	17	C
	CHA	iP	16	15	57	C
	NDI	eP	16	17	09	
23	SHL	eP	17	08	34	270
		eSg		09	08	
23	SHL	eP	19	59	59	
23	NDI	iP	20	37	24	C
23	SHL	iP	21	43	16	C 270
		eSg		43	48	
24	PBA	e	03	17	50	
		i		18	43	
		i		20	14	
24	NLI	eP	04	04	37	R
24	DDI	eP	03	50	03	
	NDI	iP	03	50	13	C
24	BOK	iP	03	37	51	
24	NDI	P	09	03	55	
24	<i>Epc. 35.6°N, 74.4°E. in Hindu Kush Region. H = 10h 00m 47s. - h about 215 km (USCGS).</i>					
	DDI	eP	10	02	25	
	NDI	eP	10	02	42	N 830
		iS		04	13	
24	NLI	iP	10	59	03	RNW
24	NDI	iP	13	43	45	CS 990
		iS		48	27	
24	CHA	eP	13	43	20	
24	<i>Epc. 38.7°N, 129.1°E. in Near East Coast of Korea. H = 17h 17m 45.5s. - h about 542 km (USCGS). Mag. 5.3 SD 0.3 (CGS).</i>					
	SHL	iP	17	23	47	RNE 3790
		PP		24	39	
		PPP		24	53	
		sP		25	34	
		sS		28	31	
		SsS		32	53	
	CHA	iP	17	24	13	C 3890
		eS		29	09	
	BOK	iP	17	24	33	4310
		PP		23	22	
		eS		29	54	
		i		33	29	
	PBA	eP	17	24	54	
	DDI	iP	17	24	57	RE 4680
		PPP		26	51	
		eS		30	39	
		i		30	35	
	NDI	iP	17	25	07	4730
		iS		30	52	
	MDR	eP	17	25	55	5400
		PP		27	37	
		PPP		29	12	
		eS		32	16	
		e		34	41	
		Lq		35	33	
		Lr		37	54	
		M		41	17	
	BOM	eP	17	23	10	5970
		eS		33	03	
24	PBA	iP	17	30	33	CSW
		i		33	47	
24	KOD	i	17	33	17	E
24	PBA	i	17	45	50	
24	SHL	iPg	20	43	04	C 330
		eSg		43	44	
24	CHA	iP	20	44	01	R 800
		eS		45	24	
24	NDI	iP	21	10	02	C
24	<i>Epc. 44.5°N, 150.3°E. in Kurile Island. H = 21h 31m 24.2s. - h about 33 km. Mag. 4.7 SD 0.3 (CGS).</i>					

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DATE	STN	PHASE	H	M	S	Δ	
24	SHL	iP	21	40	21	CSW	
Contd.							
	CHA	eP	21	40	42	C	
	DLI	iP	21	41	12	C	
24	NDI	iP	21	49	23	RNE	
24	<i>Epc. 7.1°S, 106°E. in Off South Coast of Java. H = 22h 44m 01s. - h about 94 km (USCGS). Mag. 5.5 (CGS).</i>						
	SHL	iP	22	50	46	CNW	
	CHA	iP	22	51	13	C	
	NDI	iP	22	52	07	CS 4910	
		i		52	08		
		eS		58	41		
	DDI	iP	22	52	13	C	
	CHA	iP	22	53	29	C	
25	<i>Epc. 28.5°N, 86.3°E. in Tibet H = 07h 13m 30.8s. - h about 44 km (USCGS). Mag. 4.5 (CGS).</i>						
	<i>Epc. 27.7°N, 85.8°E. H = 07h 13m 35s (Shillong).</i>						
	CHA	iPg	07	14	02	RNW 160	
		iSg		14	22		
	BOK	ePn	07	14	44	E	
		iSn		15	34		
	SHL	iP	07	14	51	CE 540	
		p*		15	03		
		Pg		15	14		
		eS		15	49		
		S*		16	03		
		Sg		16	14		
	DDI	iPn	07	15	26	C 320	
		PP		15	33		
		PPP		15	40		
		p*		15	43		
		Pg		16	02		
		Lq		16	40		
		iSn		17	51		
		Lr		17	01		
		SS		17	02		
		SSS		17	13		
		S*		17	16		
		Sg,M		17	37		
	HYD	eP	07	15	50		
		i		18	53		
		M		20	41		
	NDI	iP	07	15	31	CNW	
		iS		17	00		
21	2E	CAL	eP	07	16	03	1750
Contd.							
	MDR	eP	07	17	16	1750	
		PP		17	30		
		Lq		20	08		
		eS		20	12		
		SS		20	29		
		SSS		20	39		
		Lr		20	52		
		M		22	15		
	SEH	iP	07	17	40	1590	
		PP		17	50		
		PPP		18	01		
		Lq		20	10		
		iS		20	20		
	BOM	eP	07	19	52	1340	
		e		22	04		
		eS		22	38		
25	SHL	iP	15	20	05	R	
	NDI	eP	15	21	22	C	
25	PBA	iPg	19	49	04	C 50	
		iSg		49	09		
		PP		49	17		
		S		49	20		
		PPP		49	24		
		SS		49	30		
		SSS		49	40		
25	NDI	eP	20	33	31	280	
		eS		34	02		
25	CHA	iPg	20	40	24	C 100	
		iSg		40	33		
25	SHL	eP	20	41	23		
	NDI	eP	20	42	17	CE 900	
		iS		43	50		
25	SHL	iP	22	19	51	R	
	NDI	eP	22	21	08		
26	SHL	iP	07	49	16	R	
26	<i>Epc. 16.3°S, 71.7°W. in Southern Peru. 6 injured, slight damage at Arequipa. H = 09h 09m 33.9s - h about 116 km (USCGS). Mag. 6.1 SD 0.3 (CGS).</i>						
	BOM	iPKP	09	29	04		
	NDI	PKP	09	29	07	RN	
		i		32	40		
		e		39	17		
	DDI	iPKP	09	29	08	R	
		i		29	19		

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DATE	STN	PHASE	H	M	S	Δ	DATE	STN	PHASE	H	M	S	Δ	
26	DDI	i	09	32	42		27	CHA	eP	05	31	41	1000	
	Contd.i			39	24				iS			33	24	
	KOD	PKP	09	29	12			DDI	eP	05	33	18		
		i		29	22			NLI	eP	05	33	28	C	
	MDR	ePKP	09	29	20				eS			33	32	
	BOK	iPKP	09	29	21	W	27	NDI	P	06	00	16		
		PP		29	53		27	SHL	eP	08	40	52		
		e		33	31		27	SHL	iP	20	11	29	C	
		Lq		34	00			CHA	iP	20	11	54	R	
		ScS		40	11			NDI	iP	20	12	45		
	CHA	PKP	09	29	21		27	NDI	eP	21	44	53		
		i		33	30		27	NDI	iP	22	12	52	CW	
		i		40	09		28	SHL	eP	00	33	43		
	SHL	PKP	09	29	25	RNE			i			44	46	
		i		30	12		28	SHL	iP	05	53	51	C	
		i		32	43			NDI	iP	05	55	13	R	
		i		33	44		28	NDI	iPg	06	45	47.1	RN	
		i		40	31				i			45	50	
	PBA	PKP	09	29	27	R			iSg			45	51.2	
		i		34	14		28	NDI	iP	06	53	07	C	
		i		35	55		28	SHL	iP	09	06	34		
		i		40	44		28	PBA	e	09	31	51		
26	SHL	iP	10	07	43	C			i			31	57	
	NLI	eP	10	09	41		28	SHL	iP	10	52	04	230	
26	NDI	P	10	51	33				Pg			52	11	
26	SHL	iP	12	13	41	C			S			52	33	
	NDI	P	12	14	54				Sg			52	45	
26	SHL	iP	14	01	55	R	28	DDI	iP	14	11	16	N	
26	CHA	eP	14	02	47	720	28	<i>Epc. 36.5°N, 70.9°E in Hindu Kush Felt. Northwestern Pakistan. H = 14h 09m 17.1s. - h about 207 km (USCGS). Mag. 6.1 SD 0.4 (CGS). Epc. 37°N, 70.6°E. H = 14h 09m 15 s. (CSO, Shillong)</i>						
		eS		04	02			NDI	iP	14	11	26	RN	
26	SHL	iP	22	25	41	220			i			11	29	
		Sg		26	12				PP			11	33	
26	SHL	iP	23	50	50				i			11	33	
27	NDI	eP	01	25	43				PPP			11	44	
27	NDI	eP	04	30	45				i			12	42	
27	BOK	eP	04	34	17				Lq			12	57	
27	<i>Epc. 29.2°N, 97.2°E. in Southern Tibet. H = 05h 29m 27s. - h about 33 km (USCGS). Mag. 4.9 (CGS)</i>									iS			13	09
	SHL	iP	05	30	55	C	630							
		eS		32	02									
	TOC	ePn	05	31	32	290								
		eSn		32	05									

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DATE	STN	PHASE	H	M	S	Δ	DATE	STN	PHASE	H	M	S	Δ	
28	SEH	iP	14	12	27	1530	28	NDI	iP	15	44	48	R	
		PP		12	33									
		eS		14	59									
		e		17	43									
		e		21	12									
	CHA	iP	14	13	00	RN	1840	SHL	iP	16	33	49	R	
		PP		13	28			CHA	iP	16	34	19		
		i		13	47			NDI	iP	16	35	17	R	
		sP		14	00			28	SHL	iP	17	55	12	C
		iS		15	53									
		SS		16	12									
		M		17	58									
	BOM	iP	14	13	12	1970	28	NDI	iP	17	56	13	R	
		PP		13	28			23	CHA	eP	20	47	13	230
		iS		13	22									
		eS		16	32									
	BOK	iP	14	13	15	N	1940	28	SHL	iP	22	09	35	C
		eS		16	23			29	NDI	eP	05	50	17	
		PcS		21	23			29	NDI	eP	03	16	07	
		ScS		25	09			29	SHL	iP	08	54	49	C
	HYD	iP	14	13	41	2240	29	SHL	iP	08	54	49	C	
		e		13	48									
		PPP		14	00									
		iS		17	15									
		M		19	51			29	SHL	iP	09	13	31	RNW
	CAL	iP	14	13	43	2230		CHA	eP	09	20	29	830	
		iS		17	19									
	SHL	iP	14	13	46	RN	2390	29	NDI	eP	09	25	16	
		PP		14	10			29	NDI	eP	13	03	10	RE
		sP		14	53			29	SHL	iP	13	16	40	C
		i		15	44			29	DDI	e?	13	13	10	
		eS		17	25			29	NDI	iP	17	10	50	RNE
		Lr		13	03			29	SHL	iP	21	07	31	R
		M		18	43			29	NDI	eP	22	36	32	C
	MDR	iP	14	14	22	E	2770	29	<i>Epc. 41.7°N, 141.9°E. in Near South Coast of Hokkaido, Japan. H = 22h 32m 20.9s. - h about 56 km (USCGS). Mag. 4.5 (CGS).</i>					
		PP		15	00									
		sP		15	23									
		iS		18	23									
		SS		19	24									
		Lq		21	39									
	KOD	eP	14	14	41	2920								
		PP		15	15									
		PPP		15	39									
		eS		19	02									
		Lq		19	51									
		M		23	03									
	TOC	eP	14	14	57									
	PBA	iP	14	15	24	RNW	3510	NDI	iP	22	41	36	CN	
		i		16	04									
		PP		16	35			30	SHL	eP	00	08	45	
		i		18	29			30	SHL	iP	01	51	51	C
		i		19	46									
		eS		20	22									
		i		21	29			30	NDI	eP	03	35	44	

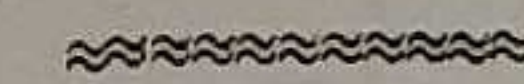
DATE	STN	PHASE	H	M	S	Δ
30	NDI	iP	08	52	26	
30	SHL	iP	09	12	23	C
30	NDI	iP	12	23	39	RW
30	Epc. 1.7°N, 99.6°E. in Northern Sumatra. H = 12h 39m 23.8s - h about 133 km (USCGS). Mag. 5.4 (CGS).					
	MDR	eP	12	44	14	2370
		e		45	12	
		eS		43	07	
	SHL	iP	12	44	33	C
	NDI	iP	12	45	59	RSW
30	NDI	P	12	51	11	
30	SHL	iP	17	28	43	C
	DDI	e?	17	30	06	
30	Epc. 37.3°N, 29.9°E. in Near Southwest Coast of Turkey. H = 17h 45m 54.6s. - h about 41 km (USCGS). Mag. 5.3 SD 0.2 (CGS).					
	NDI	iP	17	53	29	4390
		PP		55	09	
	DDI	eP	17	53	31	
	BOM	e	17	53	43	4750
		e		53	24	
		e		59	29	
		eS	18	00	03	
		SS		03	02	
		e		03	18	
		e		13	14	
	BOK	eP	17	54	42	
	MDR	eP	17	54	47	5340
		eS	18	02	03	
		PS		02	12	
		PPS		02	20	
		Lq		07	17	
		Lr		09	57	
	SHL	iP	17	55	10	C
30	SHL	iP	18	04	47	R
30	DDI	eP	18	07	39	
	NDI	eP	18	07	44	C
30	SHL	ePn	20	43	39	290
		eSg		44	21	



Earthquake Reports
(Non-Instrumental Reports)

Following is the list of earthquakes that were reported by Voluntary Observers from different stations during the month of January 1964.

Station	Date in G.M.T.	Time in G.M.T. h. m.	No. of shocks	Duration in secs.	Intensity in R.F. Scale	Remarks
Shillong	20	15 49	I	5	V	-
Shillong	22	16 02	I	35	V	
Bhuntar	28	14 13	I	5	V	Appears to come from North-North West.
Amritsar	28	14 10	I	10	VIII	-
Qazigund	28	14 10	I	4	V	Appears to come from West
Srinagar	28	14 10	I	10	VII	Appears to come from North.
Dharamsala	28	14 15	I	20	V	
Shillong	30	01 50	I	3	V	



DATE	STN	PHASE	H	M	S	Δ
30	SHL	iP	22	09	19	C
31	Epc. 36.3°N, 71.4°E. in North-eastern Afghanistan. H = 00h 14m 58.4s. - h about 127 km (USCGS). Mag. 4.2 (CGS).					
	DDI	eP	00	16	55	870
		iS		18	25	
	NDI	eP	00	17	06	910
		iS		18	40	
	SHL	iP	00	19	29	C
31	DDI	eP	01	19	37	
	NDI	iP	01	19	48	930
		iS		21	24	
	SHL	iP	01	22	13	R
31	SHL	iP	02	54	23	C 500
		eS		55	17	
31	NDI	eP	04	01	51	
31	PBA	eP	07	04	08	
		i		04	15	
31	MDR	eP	08	15	25	
		e		18	50	
		e		20	21	
31	SHL	iP	08	18	04	C
31	SHL	iP	12	36	09	C
31	PBA	iPh	16	56	50	C 220
		PP		56	57	
		PPP		57	04	
		iSn		57	16	
		SSS		57	35	
31	SHL	eP	16	59	34	
	CHA	eP	17	00	07	
	NDI	iP	17	01	15	CSE
		i		01	16	
	DDI	eP	17	01	32	
31	CHA	iP	18	09	19	C 590
		iS		10	21	
	NDI	iP	18	09	21	R
		i		09	51	
31	CHA	eP	22	06	21	

MICROSEISMIC TABULATION

DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec	DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec
<i>Station: Bokaro</i>					<i>Station: Bokaro</i>				
01	00	2	0.2	5.0	12	00	2	0.2	4.2
	06	...	-	-		06	2	0.2	4.7
	12	...	-	-		12	2	0.2	4.3
	18	...	-	-		18	2	0.3	5.5
02	00	2	0.3	5.2	13	00	2	0.4	6.0
	06	2	0.3	5.2		06	2	0.4	3.5
	12	2	0.2	5.0		12	2	0.4	6.3
	18	2	0.2	5.4		18	2	0.5	6.3
03	00	2	0.2	5.0	14	00	2	0.5	7.0
	06	...	-	-		06	2	0.4	6.3
	12	2	0.2	4.4		12	2	0.4	5.9
	18	2	0.2	4.6		18	2	0.4	5.9
04	00	2	0.1	3.6	15	00	2	0.3	6.2
	06	2	0.2	4.8		06	2	0.3	5.0
	12	2	0.2	4.6		12	2	0.3	4.9
	18	2	0.2	5.0		18	2	0.3	5.0
05	00	2	0.4	6.4	16	00	2	0.2	4.6
	06	2	0.3	6.4		06	2	0.3	4.7
	12	2	0.3	5.2		12	2	0.3	5.2
	18	2	0.3	5.5		18	2	0.2	5.0
06	00	...	-	-	17	00	2	0.2	5.4
	06	2	0.1	4.2		06	2	0.2	4.6
	12	2	0.1	4.5		12	2	0.2	4.4
	18	2	0.1	4.5		18	2	0.2	4.7
07	00	...	-	-	18	00	2	0.2	4.7
	06	2	0.1	4.0		06	2	0.2	4.0
	12	2	0.2	4.7		12	2	0.3	4.9
	18	2	0.2	5.0		18	2	0.2	5.0
08	00	2	0.2	4.3	19	00	2	0.2	4.5
	06	2	0.2	4.5		06	2	0.3	5.0
	12	2	0.2	4.8		12	2	0.3	5.0
	18	2	0.2	5.0		18	2	0.2	5.1
09	00	2	0.2	4.7	20	00	2	0.2	5.0
	06	1	0.2	5.0		06	2	0.2	5.0
	12	2	0.2	5.0		12	2	0.2	4.7
	18	2	0.2	5.0		18	...	-	-
10	00	2	0.2	5.1	21	00	2	0.2	4.7
	06	2	0.3	5.3		06	2	0.2	4.5
	12	2	0.2	5.2		12	2	0.3	5.2
	18	2	0.2	5.0		18	2	0.2	5.5
11	00	2	0.2	5.0	22	00	2	0.3	4.9
	06	2	0.2	5.0		06	2	0.2	5.4
	12	2	0.2	5.0		12	2	0.2	5.0
	18	2	0.2	4.5		18	2	0.2	4.4



DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec	DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec	
<i>Station: Bokaro</i>					<i>Station: Madras</i>					
23	00	2	0.2	5.0	03	00	2	0.2	2.9	
	06	2	0.2	5.0		06	2	0.2	2.9	
	12	2	0.2	4.5		06	2	0.2	2.8	
	18	2	0.3	4.4		12	2	0.2	2.9	
24	00	2	0.2	5.4		18	2	0.2	2.7	
	06	2	0.2	5.5	04	00	2	0.2	2.8	
	12	2	0.2	5.0		06	2	0.1	1.4	
	18	2	0.2	5.0		09	2	0.2	2.7	
25	00	2	0.3	4.9		03	2	0.2	2.7	
	06	2	0.3	4.5		12	2	0.1	1.4	
	12	2	0.2	4.4		18	2	0.2	3.1	
	18	2	0.3	4.2		03	2	0.1	1.6	
26	00	2	0.2	2.2		18	2	0.2	3.2	
	06	0,0	-	-		03	2	0.1	1.7	
	12	2	0.2	4.1	05	00	2	0.4	3.4	
	18	2	0.2	4.3		06	2	0.3	2.7	
27	00	2	0.2	4.3		09	2	0.1	1.7	
	06	2	0.2	4.2		12	2	0.2	2.9	
	12	2	0.2	4.5		18	2	0.2	2.1	
	18	2	0.2	4.5		03	2	0.3	2.8	
28	00	2	0.2	4.0		06	2	0.2	2.0	
	06	2	0.2	4.1		12	2	0.2	2.0	
	12	2	0.2	4.0		18	2	0.2	2.0	
	18	2	0.2	4.2		03	2	0.4	3.1	
29	00	2	0.2	4.3		06	2	0.2	1.9	
	06	...	-	-	03	00	2	0.2	2.9	
	12	2	0.2	4.5		06	2	0.1	1.7	
	18	2	0.3	4.5		09	2	0.3	2.9	
30	00	2	0.2	4.8		12	2	0.2	1.3	
	06	2	0.2	4.3		06	2	0.3	2.8	
	12	2	0.2	5.0		12	2	0.2	1.8	
	18	2	0.2	4.6		18	2	0.2	2.8	
31	00	2	0.2	4.6	07	00	2	0.2	2.8	
	06	2	0.2	4.2		06	2	0.1	1.4	
	12	2	0.2	4.0		09	2	0.4	2.8	
	18	2	0.2	4.9		12	2	0.1	1.5	
<i>Station: Madras</i>						03	2	0.2	2.7	
						12	2	0.1	1.8	
						18	2	0.1	1.3	
						03	2	0.2	2.8	
						12	2	0.2	2.8	
						18	2	0.2	1.9	
						03	2	0.1	1.3	
						06	2	0.3	3.3	
						12	2	0.1	1.4	
						18	2	0.2	2.9	
						03	00	2	0.4	3.5
						06	2	0.2	2.8	
						09	2	0.1	1.3	
						12	2	0.3	3.5	
						18	2	0.2	2.8	
						03	2	0.2	3.5	
						12	2	0.2	2.8	
						18	2	0.2	2.9	

DATE	HOUR GMT	K	MEAN Amplitude in mm	MEAN Period in sec
Station: Madras				
08	12	3	0.5	3.7
		3	0.2	2.8
	18	3	0.3	3.7
		3	0.2	2.6
		3	0.1	1.4
09	00	3	0.2	3.7
		3	0.2	2.5
	03	3	0.3	3.7
		3	0.1	1.5
	03	3	0.3	3.8
		3	0.1	1.4
	12	3	0.3	3.8
		3	0.2	2.4
	18	3	0.3	4.2
		3	0.2	2.3
10	00	3	0.2	4.2
		3	0.2	2.4
	03	3	0.3	4.5
		3	0.1	2.3
	03	...	Earthquake	
	12	3	0.3	4.4
		3	0.1	2.4
	18	3	0.3	4.5
		3	0.2	2.3
11	00	3	0.3	4.4
		3	0.2	2.7
	03	3	0.3	4.1
		3	0.2	2.7
	03	3	0.3	4.1
		3	0.2	2.6
	12	3	0.3	3.7
		3	0.2	2.7
	18	3	0.3	3.5
12	00	3	0.3	3.4
		3	0.3	2.3
	03	...	Earthquake	
	12	3	0.2	2.2
	13	3	0.4	5.5
		3	0.3	2.9
13	00	2	0.5	6.2
		2	0.3	3.0
	03	2	0.5	6.3
		2	0.2	2.9
	03	2	0.4	6.4
		2	0.3	3.1
	12	2	0.5	6.4
		2	0.3	3.3
	18	2	0.6	6.5
		2	0.2	2.2
14	00	2	0.7	6.7
		2	0.2	2.2
	03	2	0.6	3.7
		2	0.3	2.2

DATE	HOUR GMT	K	MEAN Amplitude in mm	MEAN Period in sec
Station: Madras				
14	06	2	0.6	6.8
		2	0.3	3.1
	12	2	0.5	6.6
		2	0.3	3.1
	18	2	0.5	6.3
		2	0.4	3.2
15	00	2	0.4	5.6
		2	0.4	3.2
	03	2	0.4	5.2
		2	0.4	3.4
	03	2	0.4	3.5
	12	2	0.4	3.6
	18	2	0.4	3.9
16	00	2	0.4	3.8
		2	0.4	3.8
	03	2	0.3	3.8
		2	0.4	3.8
	13	2	0.3	3.9
17	00	2	0.3	3.9
		...	No record	
	03	...	No record	
	12	2	0.3	4.0
	18	2	0.3	4.2
18	00	2	0.3	4.3
		2	0.4	4.4
	03	2	0.2	2.3
		2	0.3	4.4
	12	2	0.2	2.2
		2	0.3	4.5
	13	2	0.2	4.4
		2	0.2	2.3
19	00	2	0.4	4.3
		2	0.2	2.5
	03	2	0.3	4.4
		2	0.1	2.0
	03	2	0.3	4.3
		2	0.2	2.3
	12	2	0.4	4.5
		2	0.2	2.5
	18	2	0.4	4.6
		2	0.2	2.6
20	00	2	0.4	4.7
		2	0.3	2.7
	03	2	0.4	5.2
		2	0.2	2.5
	03	2	0.4	4.7
		2	0.3	2.7
	12	2	0.4	5.1
		2	0.3	2.7
	18	...	Earthquake	
21	00	2	0.3	5.0
		2	0.3	2.9
	03	2	0.3	4.3
		2	0.3	2.7

DATE	HOUR GMT	K	MEAN Amplitude in mm	MEAN Period in sec
Station: Madras				
21	06	2	0.4	4.3
		2	0.3	2.7
	12	2	0.4	4.1
		2	0.3	2.7
	18	2	0.4	4.0
		2	0.3	2.7
22	00	2	0.4	3.9
		2	0.3	2.6
	03	2	0.1	4.1
		2	0.3	2.6
	03	2	0.4	4.2
		2	0.3	2.6
	12	2	0.4	4.2
		2	0.2	2.5
	18	2	0.5	4.3
		2	0.2	2.7
23	00	2	0.5	4.2
		2	0.5	2.7
	03	2	0.5	4.1
		2	0.5	4.4
	03	2	0.5	4.4
		2	0.5	4.5
	18	2	0.5	4.5
		2	0.1	1.5
24	00	2	0.6	4.8
		2	0.2	1.8
	03	2	0.7	4.4
		2	0.1	1.2
	03	2	0.3	4.3
		2	0.6	4.2
	18	2	0.6	4.0
25	00	2	0.5	4.0
		2	0.5	4.1
	03	2	0.5	3.8
		2	0.5	3.8
	12	2	0.5	3.8
		2	0.5	2.6
26	00	2	0.4	3.5
		2	0.5	3.6
	03	2	0.4	3.5
		2	0.4	3.4
	12	2	0.4	3.4
		2	0.4	4.3
	18	2	0.4	3.4
		2	0.3	3.4
27	00	2	0.4	4.4
		2	0.2	2.2
	03	2	0.2	2.2
		2	0.2	2.2
	03	2	0.2	2.2
		2	0.2	2.2
	12	2	0.2	2.2
		2	0.3	3.2
28	00	2	0.3	3.2
		2	0.2	3.1
	03	2	0.3	3.1
		2	0.3	3.1
	12	2	0.3	3.1
		2	0.3	3.2
29	00	2	0.3	3.2

DATE	HOUR GMT	K	MEAN Amplitude in mm	MEAN Period in sec
Station: Madras				
29	03	2	0.3	3.5
		2	0.3	2.9
	06	2	0.2	3.9
		2	0.3	3.2
	12	2	0.4	4.1
		2	0.3	2.3
	18	2	0.4	4.1
		2	0.3	2.2
30	00	2	0.4	4.1
		2	0.3	3.3
	03	2	0.2	3.5
		2	0.4	3.5
	12	2	0.3	3.6
		2	0.4	3.6
31	00	2	0.4	3.7
		2	0.4	4.2
	03	2	0.4	3.6
		2	0.4	3.9
	03	2	0.4	3.4
		2	0.4	4.3
	12	2	0.4	2.3
		2	0.4	4.5
	18	2	0.4	2.3
		2	0.4	2.3

Station.	Port Blair	Compt. E-W		
01	00	3	0.4	7
		3	0.4	2
		3	0.2	7
	12	3	0.4	2
		3	0.4	7
	18	...	-	-
02	00	3	0.4	3
		3	0.4	7
	03	3	0.4	3
		3	0.4	2
	12	3	0.4	2
		3	0.4	2
03	00	3	0.4	2
		1	0.4	2
	12	1	0.4	3
		1	0.4	2
04	00	1	0.4	2
		1	0.4	2
	12	1	0.4	2
		1	0.4	2
05	00	1	0.2	2
		1	0.2	2
	03	1	0.2	2
		1	0.2	2
	12	1	0.2	2
		1	0.2	2

DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec	DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec
<i>Station: Shillong Compt. E-W.</i>					<i>Station: Shillong Compt. E-W.</i>				
19	03	1	0.4	4.2	21	06	3	0.4	4.6
	12	1	0.4	4.0		12	3	0.4	4.6
	18	3	0.4	4.0		18	3	0.4	4.6
<i>Station: Shillong Compt. E-W.</i>					<i>Station: Bombay (Colaba).</i>				
20	00	3	0.4	3.9	01	00	3	0.5	3.0
	03	3	0.4	3.8		03	3	0.6	5.7
	12	3	0.4	4.0		03	3	0.4	2.9
	18	...	-	-		12	3	0.5	5.0
21	00	...	-	-		12	3	0.5	1.5
	03	3	0.4	5.0		18	...	-	-
	12	...	-	-		18	...	-	-
	18	...	-	-		18	...	-	-
22	00	3	0.4	4.6		18	...	-	-
	03	3	0.4	5.0		21	1	0.6	2.0
	12	...	-	-	02	00	1	0.3	2.0
	18	3	0.4	5.2		03	1	0.5	2.0
23	00	3	0.4	5.0		03	1	0.5	2.1
	03	3	0.4	5.0		09	1	0.4	2.0
	12	...	-	-		12	1	0.4	2.2
	18	...	-	-		15	1	0.4	2.1
24	00	...	-	-		18	1	0.5	2.0
	03	3	0.4	5.8		21	1	0.5	2.2
	12	...	-	-	03	00	1	0.5	2.4
	18	...	-	-		03	1	0.5	2.4
25	00	...	-	-		03	1	0.4	2.2
	03	3	0.4	5.2		09	1	0.5	2.0
	12	...	-	-		12	1	0.5	2.0
	18	3	0.4	5.0		15	1	0.5	2.0
26	00	3	0.4	4.8		18	1	0.5	2.1
	03	3	0.4	4.8		21	1	0.5	2.2
	12	3	0.4	5.0	04	00	1	0.5	2.0
	18	3	0.4	5.4		03	3	0.5	1.4
27	00	3	0.4	5.6		12	3	0.5	2.6
	03	3	0.4	5.4		12	3	0.5	1.7
	12	3	0.4	5.2		18	3	0.4	5.0
	18	3	0.4	5.0		18	3	0.4	2.0
28	00	3	0.4	4.9		18	3	0.5	4.0
	03	3	0.4	4.3	05	00	3	0.5	3.0
	12	...	-	-		03	3	0.5	6.1
	18	3	0.4	4.4		06	3	0.5	2.4
29	00	3	0.4	4.4		12	3	0.5	6.6
	03	3	0.4	4.3		12	3	0.5	2.4
	12	3	0.4	4.8		18	3	0.5	6.1
	18	3	0.4	5.0		18	3	0.4	1.5
30	00	3	0.4	4.4		18	3	0.5	4.5
	03	3	0.4	4.6	06	00	...	-	-
	12	3	0.4	4.8		03	3	0.4	1.6
	18	3	0.4	4.6		12	3	0.4	1.7
31	00	3	0.4	4.4		18	3	0.4	4.0
						18	3	0.4	1.5
						18	3	0.4	3.9

DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec	DATE	HOUR	K	MEAN Amplitude in mm	MEAN Period in sec
<i>Station: Bombay (Colaba).</i>					<i>Station: Bombay (Colaba).</i>				
07	00	...	-	-	13	18	3	0.5	2.0
	03	3	0.5	4.0		18	3	0.8	3.0
			0.4	2.0				0.8	7.0
	12	3	0.6	4.0	14	00	3	0.8	2.0
			0.4	2.0		06	3	1.0	7.0
	18	3	0.6	4.0		06	3	0.9	2.5
			0.5	3.0				1.1	7.0
08	00	3	0.5	4.0		12	3	0.7	2.3
			0.4	2.0				1.0	7.0
	03	3	0.5	4.0		18	3	0.6	3.0
			0.4	3.3				1.0	7.0
	12	3	0.3	4.8	15	00	1	0.9	2.9
			0.3	2.0		03	1	1.0	2.8
	18	3	0.5	5.0		03	1	1.0	3.0
			0.3	1.3		09	1	0.9	3.0
			0.3	2.0		12	1	1.0	3.1
09	00	3	0.5	3.8		15	1	0.9	3.0
			0.4	1.5		18	1	1.0	3.0
	03	3	0.3	3.0		21	1	1.0	2.7
			0.3	4.0	16	00	1	0.9	2.8
	12	1	0.6	2.0		03	1	1.0	2.8
			0.4	2.0		03	3	0.7	2.5
	15	1	0.4	2.0		03	3	0.9	3.8
	18	1	0.5	2.2		12	3	0.6	2.8
	21	1	0.5	2.4				0.7	4.7
10	00	3	0.5	2.5		18	3	0.6	2.2
			0.4	1.8				0.6	4.8
	03	1	0.5	2.2	17	00	1	1.1	2.9
	09	1	0.5	2.5		03	1	1.0	2.9
	12	1	0.5	2.6		03	1	1.0	3.0
	15	1	0.5	2.9		03	1	1.0	3.0
	18	1	0.5	2.2		12	3	0.8	2.9
	21	1	0.5	2.7				0.5	2.0
11	00	3	0.5	2.9		15	1	0.9	2.6
			0.4	2.0		18	3	0.7	2.7
	03	1	0.5	2.3				0.5	2.0
	03	1	0.6	2.5		21	1	1.0	2.3
	09	1	0.7	2.6	18	00	1	1.1	3.0
	12	1	0.6	2.6		03	1	1.0	2.8
	15	1	0.5	2.5		03	1	0.8	2.8
	18	1	0.5	2.3		12	3	0.4	1.9
	21	1	0.5	2.3				0.5	3.0
12	00	1	0.5	2.2		18	3	0.5	2.0
	03	3	0.4	2.0				0.5	4.4
			0.5	3.0	19	00	3	0.5	1.9
	09	1	0.4	2.0		06	3	0.6	4.3
	12	1	0.5	2.0				0.5	2.3
	15	1	0.5	2.2		12	3	0.5	3.0
	18	1	0.5	2.5				0.4	1.9
	21	1	0.5	2.5		18	3	0.4	2.0
13	00	3	0.3	1.9				0.5	4.8
	03	1	0.6	3.0		12	3	0.5	3.0
			0.6	2.7				0.4	1.9
	03	3	0.5	5.2		18	3	0.4	2.0
			0.5	5.2				0.5	4.8
	12	3	0.5	2.7				0.5	3.3
			0.7	3.3					



DATE HOUR K MEAN Amplitude in mm MEAN Period in sec

DATE HOUR K MEAN Amplitude in mm MEAN Period in sec

Station. Bombay (Colaba)

Station. Bombay (Colaba).

20	00	3	0.5	2.0
			0.6	5.1
	03	.	.	.
	12	3	0.6	5.4
			0.3	3.0
	18	.	.	.
21	00	3	0.3	1.2
			0.5	5.9
			0.6	4.0
	03	3	0.4	2.0
			0.6	4.4
	12	3	0.5	2.0
			0.8	4.0
	18	3	0.4	2.0
			0.9	4.0
22	00	3	0.9	2.3
			0.9	3.9
	03	1	0.9	2.7
	09	1	0.9	2.7
	12	1	0.9	2.8
	18	3	0.7	2.5
			1.0	3.7
23	00	1	1.0	2.5
	03	1	1.4	3.0
	03	1	1.5	3.0
	09	1	1.2	3.0
	12	1	1.3	3.0
	15	1	1.0	2.3
	18	1	1.4	2.9
	21	1	1.4	2.8
24	00	1	1.4	3.0
	03	1	1.5	3.0
	03	1	1.1	3.0
	09	1	1.0	3.0
	12	1	0.9	3.0
	15	1	0.9	3.0
	18	1	1.0	3.0
	21	1	1.0	2.8
25	00	1	1.1	2.9
	03	1	1.4	3.0
	03	1	1.1	3.0
	09	1	1.0	2.9
	12	1	0.6	2.8
	15	1	0.6	2.8
	18	3	0.5	2.0
			0.6	3.0
26	00	3	0.5	2.2
			1.0	3.0
	03	1	1.1	3.0
	03	1	1.1	3.0

26	09	1	1.0	3.0
	12	1	0.6	2.4
	18	3	0.5	2.0
			0.6	3.0
27	00	1	0.9	2.6
	03	1	1.0	3.0
	03	1	1.0	3.0
	09	1	1.0	3.0
	12	1	0.7	3.0
	15	1	0.7	2.9
	18	1	0.8	2.8
	21	1	0.8	2.8
28	00	1	0.9	3.0
	03	1	1.0	3.0
	03	1	0.7	3.0
	09	1	0.5	2.6
	12	1	0.6	2.7
	18	1	0.7	2.7
	21	1	0.7	2.8
29	00	1	0.9	2.8
	03	1	0.6	2.5
	03	3	0.6	3.2
			0.2	1.2
	12	3	0.4	1.5
			0.5	3.0
	18	3	0.5	2.0
			0.3	2.9
			0.6	5.0
	21	1	0.9	2.7
30	00	1	1.0	2.7
	03	1	0.3	2.5
	03	1	0.7	2.5
	09	1	0.7	2.9
	12	1	0.7	3.0
	15	1	0.3	2.7
	18	.	.	.
	21	1	0.6	2.2
31	00	1	0.6	2.3
	03	1	0.9	2.5
	03	1	0.9	2.8
	09	1	1.0	2.9
	12	1	0.9	2.9
	15	1	0.9	2.9
	18	1	0.7	3.0
	21	1	0.9	2.7