

SEISMIC DISTURBANCES, 1930.

Colaba Observatory.

$\phi=18^{\circ} 53' 36''$  N;  $\gamma=72^{\circ} 48' 54''$  E;  $h=6$  metres. Subsoil—Trap.

Apparatus.—(i) Milne-Shaw Seismograph (N.-S.):

(ii) Milne-Shaw Seismograph (E.-W.): from 5th November 1930.

... (In the underground constant temperature room.)



Component.	V	To	$\epsilon$	Damping ratio.
AN . .	250	12	2.6	20 : 1
AE . .	350	12	2.6	22 : 1

Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
1930.		H. M. S.				1930—contd.		H. M. S.			
Jan. 1	AN Pe S L M F	4 34 0 4 41 2 4 50 14 5 2 5 6 24 0	.. .. .. 20 ..	.. .. .. 5 ..	Slight shock.	Jan. 7	AN e f	0 55 0 1 17 0	.. ..	.. ..	Tremors.
" 4	AN P F	7 57 18 7 57 30	.. ..	.. ..	Very feeble local shock.	" "	AN P S Le F	17 32 14 17 36 8 17 39 45 18 3 0	.. .. .. ..	.. .. .. ..	Feeble shock.
" 5	AN P S L M F	1 30 48 1 39 47 1 55 16 1 58 22	.. .. .. 27	.. .. .. 37	Lost in shifting time.	" 12	AN P S L M F	11 14 25 11 19 38 11 23 57 11 27 6 12 3 0	.. .. .. 15 ..	.. .. .. 4 ..	
" "	AN P S L M F	19 3 10 19 12 8 19 27 26 19 31 53 20 5 0	.. .. .. 15 ..	.. .. .. 4 ..		" 14	AN Pe M F	22 25 23 23 17 48 23 55 0	.. 17 ..	.. 2 ..	Di tant feeble shock.
" 6	AN Pe S L r	23 33 59 23 35 23 23 35 54 23 40 0	.. .. .. ..	.. .. .. ..	Very feeble shock.	" 17	AN Pe S L M F	11 19 45 11 27 26 11 38 46 11 46 20 12 19 0	.. .. .. 13 ..	.. .. .. 2 ..	Slight shock.



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Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Jan. 18	AN										
	P	7 16 22	..	..		Feb. 12	AN				
	S	7 26 24	..	..			P	6 43 12	..	..	Feeble distant shock.
	L	7 45 43	..	..			S	6 50 35	..	..	
	M	7 54 28	23	7			L	7 1 5	..	..	
	F	9 57 0	..	..			M	7 30 52	18	6	
	AN						F	9 1 0	..	..	
" 20	Pe	7 24 29	..	..	Slight shock.	" 14	AN				
	S	7 34 42	..	..			P	8 14 39	..	..	Very feeble shock.
	F	8 37 0	..	..			F	8 17 0	..	..	
	AN						AN				
" 23	e	4 10 0	..	..	Tremors.	" 13	P	18 46 25	..	..	
	f	4 18 0	..	..			S	18 53 5	..	..	
	AN						L	19 1 19	..	..	
" 25	P	1 47 52	..	..			M	19 2 4	11	4	
	S	1 54 29	..	..			F	19 45 0	..	..	
	L	2 12 15	..	..			AN				
	M	2 10 50	15	4		" 14	Pe	21 0 11	..	..	Distant feeble shock.
	F	2 38 0	..	..			M	22 2 15	17	4	
	AN						F	23 15 0	..	..	
" "	P	10 30 3	..	..	Feeble shock.	" 15	AN				
	M	10 38 48	10	4			P	19 11 51	..	..	
	F	11 25 0	..	..			S	19 15 58	..	..	
	AN						L	19 18 48	..	..	
" 28	P	10 33 56	..	..	Very feeble local shock.		M	19 24 0	14	3	
	F	10 34 6	..	..			F	20 4 0	..	..	
	AN					" 18	AN				
Feb. 2	P	15 8 39	..	..			P	2 11 49	..	..	
	S	15 19 3	..	..			S	2 21 31	..	..	
	L	15 39 43	..	..			L	Lost in shifting time.			
	M	15 49 1	20	20			M	3 31 15	15	3	
	F	17 51 0	..	..			F	4 16 0	..	..	
	AN					" 23	AN				
" 7	e	13 5 0	..	..	Tremors.		P	18 27 51	..	..	
	f	13 17 0	..	..			S	18 34 51	..	..	
	AN						L	18 44 24	..	..	
" "	P	16 41 2	..	..			M	18 51 29	17	3	
	S	16 46 22	..	..			F	19 38 0	..	..	
	L	16 51 8	..	..		" 23	AN				
	M	16 51 54	15	4			Pe	23 50 52	..	..	
	F	18 9 0	..	..			Se	23 53 3	..	..	
	AN						L	23 53 52	..	..	
" 11	P	4 9 37	..	..	Very feeble local shock.		M	23 57 3	12	3	
	F	4 10 27	..	..		" 24	F	0 50 0	..	..	





Date.	Phase.	Time G. M. T.			Period (Sec.).	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.			Period (Sec.).	Ampli- tude ( $\mu$ ) An.	Remarks.		
1930—contd.							1930—contd.										
		H.	M.	S.					H.	M.	S.						
Feb.	24	AN						Mar.	12	AN							
		P	20	59	52	..	..			Pe	23	14	0	..	..	Very feeble shock.	
		S	21	6	54	..	..			F	23	41	0	..	..		
		L	21	15	52	..	..			AN							
		M	21	17	24	13	3		13	e	1	3	0	..	..	Tremors.	
		F	22	12	0	..	..			f	1	42	0	..	..		
		AN								AN							
	27	P	2	20	59	..	..			e	14	15	0	..	..	Tremors.	
		S	2	25	25	..	..			f	14	54	0	..	..		
		L	2	28	23	..	..			AN							
		M	Lost in shifting time.							14	e	18	57	0	..	..	Tremors.
		F	3	12	0	..	..			f	20	42	0	..	..		
		AN								AN							
	28	P	22	58	40	..	..			15	P	7	2	2	..	..	
		S	23	2	15	..	..			S	7	9	9	..	..		
		L	23	4	22	..	..			L	7	18	44	..	..		
		M	23	5	20	9	3			M	7	22	6	15	4		
		F	23	44	0	..	..			F	10	32	0	..	..		
Mar.	5	AN								AN							
		P	1	14	55	..	..			e	22	39	0	..	..	Tremors.	
		F	1	15	57	..	..			f	23	13	0	..	..		
		AN								AN							
	6	P	15	49	2	..	..			16	e	5	15	0	..	..	Tremors.
		S	16	1	58	..	..			f	6	2	0	..	..		
		L	16	34	7	..	..			AN							
		M	16	43	2	20	7			e	16	44	0	..	..	Tremors.	
		F	18	11	0	..	..			f	16	59	0	..	..		
		AN								AN							
	7	e	11	18	0	..	..			18	e	5	3	0	..	..	Tremors.
		f	11	35	0	..	..			f	5	14	0	..	..		
		AN								AN							
	9	P	8	57	29	..	..			AN							
		S	9	1	53	..	..			e	6	8	0	..	..	Tremors.	
		L	9	5	7	..	..			f	6	40	0	..	..		
		M	9	7	33	9	2			AN							
		F	11	14	0	..	..			e	9	9	0	..	..	Tremors.	
		AN								f	9	42	0	..	..		
	10	P	16	37	16	..	..			AN							
		S	16	45	11	..	..			P	17	36	43	..	..		
		L	16	57	6	..	..			S	17	37	5	..	..		
		M	16	59	16	11	2			L	17	37	11	..	..		
		F	17	44	0	..	..			F	17	54	0	..	..		
		AN								AN							
	12	Pe	15	34	43	..	..			P	19	34	1	..	..		
		Se	15	38	49	..	..			S	19	37	26	..	..		
		L	15	41	31	..	..			L	19	39	5	..	..		
		M	15	42	12	8	1			M	12	39	50	11	2		
		F	16	48	0	..	..			F	19	53	0	..	..		





Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Mar. 26	AN					April 2	AN				
	P	7 22 2	..	..			Pe	20 5 43	..	..	Feeble shock.
	S	7 30 9	..	..			S	20 11 43	..	..	
	L	7 42 30	..	..			L	20 18 3	..	..	
	M	7 46 54	20	63			F	21 11 0	..	..	
	F	10 50 0	..	..			AN				
" "	AN					" 3	e	6 44 0	..	..	Tremors.
	Pe	11 20 19	..	..			f	7 5 0	..	..	
	S	11 25 12	..	..			AN				
	L	11 28 59	..	..		" 4	e	9 40 0	..	..	Tremors.
	M	11 32 26	11	4			f	10 3 0	..	..	
	F	Mixed up with the following shock.					AN				
" "	AN					" 5	e	12 4 0	..	..	Tremors.
	P	11 42 9	..	..			f	12 27 0	..	..	
	S	11 50 12	..	..			AN				
	L	12 2 53	..	..		" 6	P	13 9 27	..	..	
	M	12 16 24	17	4			S	13 10 25	..	..	
	F	13 13 0	..	..			L	13 10 43	..	..	
" "	AN						M	13 11 2	10	2	
	P	20 25 43	..	..	Very feeble shock.	" 10	F	13 25 0	..	..	
	F	20 59 0	..	..			AN				
" 30	AN						P	14 28 43	..	..	
	e	8 45 24	..	..	Distant feeble shock.		S	14 32 57	..	..	
	M	9 37 25	16	3			L	14 35 43	..	..	
	F	12 6 0	..	..			M	14 38 16	9	10	
" "	AN					" 15	F	15 44 0	..	..	
	P	15 29 24	..	..			AN				
	S	15 37 28	..	..			P	10 0 54	..	..	Feeble shock.
	L	15 50 17	..	..			S	10 4 42	..	..	
	M	15 56 57	21	11			L	10 7 1	..	..	
	F	17 16 0	..	..		" 15	F	10 22 0	..	..	
" 31	AN						AN				
	P	12 42 19	..	..		" 17	P	10 42 22	..	..	
	S	12 49 23	..	..			S	10 50 42	..	..	
	L	12 59 0	..	..			L	11 4 7	..	..	
	M	13 16 20	16	3			M	11 11 9	20	3	
	F	14 42 0	..	..		" 17	F	11 53 0	..	..	
April 2	AN						AN				
	e	4 23 0	..	..	Tremors.		P	20 15 12	..	..	
	f	4 52 0	..	..			S	20 22 7	..	..	
" 2	AN						L	20 31 8	..	..	
	e	14 43 0	..	..	Tremors.	" 20	M	20 38 5	20	4	
	f	15 5 0	..	..			F	21 17 0	..	..	





Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) An.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
April 21	AN -e	10 30 14	..	..	Distant feeble shock.	April 27	AN P	10 4 24	..	..	
	M	11 6 6	19	4		S	10 10 34	..	..		
	F	11 29 0	..	..		L	10 17 23	..	..		
" 21	AN P	12 9 48	..	..		" "	M F	10 21 19 10 54 0	18	3	
	S	12 19 25	..	..			AN P	14 35 55	..	..	
	L	12 37 7	..	..			S	14 43 25	..	..	
	M	12 49 0	22	14			L	14 54 8	..	..	
	F	14 59 0	..	..			M	14 55 21	20	11	
" 23	AN P	22 0 4	..	..			F	16 14 0	..	..	
	S	22 9 6	..	..		" "	AN Pe	21 43 43	..	..	Feeble shock.
	L	22 24 24	..	..			S	21 49 55	..	..	
	M	22 36 15	19	17			L	21 56 43	..	..	
	F	23 57 0	..	..			F	22 27 0	..	..	
" 24	AN e	0 27 4	..	..	Feeble distant shock.	" 28	AN e	13 29 0	..	..	Tremors.
	M	1 11 14	18	4			f	13 55 0	..	..	
	F	1 37 0	..	..		" "	AN P	18 40 3	..	..	
" 25	AN P	3 48 53	..	..	Feeble shock.		S	18 44 32	..	..	
	S	3 52 23	..	..			L	18 47 48	..	..	
	L	3 54 19	..	..			M	18 48 16	9	48	
	F	4 8 0	..	..			F	20 23 0	..	..	
" "	AN e	12 15 0	..	..	Tremors.	" 30	AN Pe	16 25 36	..	..	Feeble shock.
	f	12 41 0	..	..			S	16 31 13	..	..	
" "	AN e	15 40 0	..	..	Tremors.		L	16 36 20	..	..	
	f	16 12 0	..	..			F	17 32 0	..	..	
" 26	AN P	16 30 52	..	..		May 1	AN P	1 7 42	..	..	
	S	16 41 23	..	..			S	1 16 32	..	..	
	L	17 2 34	..	..			L	1 31 20	..	..	
	M	17 11 21	21	38			M	1 38 4	20	6	
	F	Mixed up with the following Shock.					F	2 12 0	..	..	
" "	AN P	19 12 54	..	..		" 2	AN e	1 58 0	..	..	Tremors.
	S	19 13 24	..	..			f	3 11 0	..	..	
	L	19 13 34	..	..		" "	AN e	6 11 18	..	..	Distant feeble shock.
	F	19 21 0	..	..			M	7 12 29	14	2	
							F	8 15 0	..	..	









Date.	Phase.	Time G. M. T.			Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.			Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
		H.	M.	S.						H.	M.	S.			
1930—contd.								1930—contd.							
May 19	AN							June 4	AN						
	P	15	13	10	..	..			P	10	0	3	..	..	
	S	15	18	43	..	..			S	10	7	38	..	..	
	L	15	23	23	..	..			L	10	18	43	..	..	
	M	15	29	33	7	4			M	10	23	13	11	3	
	F	16	25	0	..	..		" 5	F	11	27	0	..	..	
	AN								AN						
" 20	P	11	27	37	..	..			P	12	1	36	..	..	
	S	11	38	3	..	..			S	12	8	59	..	..	
	L	11	58	58	..	..			L	12	19	7	..	..	
	M	12	8	26	20	17			M	12	20	28	15	3	
	F	13	57	0	..	..			F	13	53	0	..	..	
	AN								AN						
" 21	e	20	53	0	..	..	Tremors.	" "	P	16	36	42	..	..	
	f	21	13	0	..	..			S	16	40	22	..	..	
	AN								L	16	42	28	..	..	
" 23	e	9	59	40	..	..			M	16	43	58	10	3	
	M	10	10	5	15	2	Distant feeble shock.	" "	F	17	17	0	..	..	
	F	11	7	0	..	..			AN						
	AN							" 11	P	1	1	52	..	..	
" "	P	16	48	8	..	..			S	1	11	57	..	..	
	S	16	56	9	..	..			L	1	31	27	..	..	
	L	17	8	54	..	..			M	1	37	17	28	27	
	M	17	18	29	12	2			F	3	43	0	..	..	
	F	17	58	0	..	..			AN						
" 26	AN e	15	53	0	..	..	Tremors.	" 13	e	1	17	38	..	..	Distant feeble shock.
	f	16	23	0	..	..			M	1	51	19	15	3	
" 27	AN e	16	38	0	..	..	Tremors.		F	2	38	0	..	..	
	f	16	50	0	..	..		" 15	AN e	22	18	0	..	..	Tremors.
" 29	AN e	17	20	24	..	..	Feeble shock.		f	23	16	0	..	..	
	M	17	35	50	15	4			AN						
	F	18	28	0	..	..		" 17	Pe	20	26	31	..	..	
" 31	AN P	18	8	32	..	..			S	20	28	6	..	..	
	S	18	16	49	..	..			L	20	28	43	..	..	
	L	18	30	3	..	..			M	20	29	38	10	2	
	M	18	36	52	20	4			F	20	35	0	..	..	
	F	19	35	0	..	..			AN						
June 4	AN P	7	34	23	..	..		" 19	P	13	16	43	..	..	
	S	7	39	28	..	..			S	13	24	58	..	..	
	L	7	43	28	..	..			L	13	38	18	..	..	
	M	7	50	24	18	3			M	13	51	31	18	14	
	F	9	14	0	..	..			F	15	6	0	..	..	





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Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
June 25	AN						AN				
	P	0 50 58	..	..		July 3	Pe	11 55 12	..	..	
	S	0 52 57	..	..			Se	11 58 23	..	..	
	L	0 53 40	..	..			L	11 59 58	..	..	
	M	0 54 32	9	2			M	12 0 20	6	3	
	F	1 9 0	..	..			F	12 3 0	..	..	
	AN						AN				
" "	e	11 22 36	..	..		" "	AN				
	M	11 46 59	20	5		" "	Pe	21 51 10	..	..	Very feeble shock.
	F	12 36 0	..	..			Se	21 54 23	..	..	
	AN						L	21 56 4	..	..	
" 25	e	21 42 0	..	..	Tremors.		F	22 0 0	..	..	
	f	22 38 0	..	..			AN				
	AN					" "	e	22 50 0	..	..	Do.
" "	P	22 38 31	..	..			Fe	22 54 0	..	..	
	S	22 43 57	..	..		" 4	AN				
	L	22 48 35	..	..			Pe	18 58 44	..	..	
	M	22 53 30	19	8			Se	19 2 0	..	..	
	F	23 33 0	..	..			L	19 3 32	..	..	
	AN						M	19 4 1	7	4	
" 29	Pe	9 36 30	..	..			F	19 7 0	..	..	
	S	9 42 53	..	..		" "	AN				
	L	9 50 19	..	..		" "	Pe	21 38 14	..	..	
	M	9 50 52	6	3			Se	21 41 25	..	..	
	F	10 40 0	..	..			L	21 43 4	..	..	
	AN						M	21 43 14	7	4	
July 1	e	4 9 0	..	..	Tremors.		Fe	21 48 0	..	..	
	f	4 16 0	..	..		" 5	AN				
	AN						Pe	1 33 13	..	..	
" 2	P	21 7 56	..	..			Se	1 36 24	..	..	
	S	21 11 11	..	..			L	1 38 3	..	..	
	L	21 12 42	..	..			M	1 38 24	6	4	
	M	21 14 42	..	..			Fe	1 45 0	..	..	
	F	Mixed up with the following shock.				" 5	AN				
	AN						Pe	1 48 55	..	..	
" 3	Pe	0 23 7	..	..	From Colaba Seis- mograph No. 2 (An.)		Se	1 52 9	..	..	
	S	0 26 20	..	..			L	1 53 44	..	..	
	L	Trace lost owing to quick movements.					M	1 54 14	7.5	3	
	Fe	1 6 0	..	..			F	2 0 0	..	..	
	AN					" "	AN				
" "	Pe	11 27 53	..	..			Pe	2 41 6	..	..	
	Se	11 31 6	..	..			Se	2 44 19	..	..	
	L	11 32 43	..	..			L	2 45 51	..	..	
	M	11 33 13	7	3			M	2 46 34	7.5	9	
	F	11 34 0	..	..			Fe	2 56 0	..	..	





Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.
1930—contd.		H. M. S.				1930—contd.		H. M. S.				1930—
July 5	AN Pe	8 58 43	..	..		July 11	AN P	7 11 3	..	..		July
	Se	9 1 54	..	..			S	7 14 26	..	..		
	L	9 3 33	..	..			L	7 16 1	..	..		
	M	9 3 56	5	5			M	7 17 40	6	4		
	Fe	9 8 0	..	..			F	7 42 0	..	..		
"	AN Pe	18 24 5	..	..		"	AN Pe	17 35 22	..	..	Feeble shock.	"
	Se	18 27 19	..	..			Se	17 38 32	..	..		
	L	18 28 48	..	..			L	17 40 8	..	..		
	Fe	18 32 0	..	..			M	17 41 4	7	2		
"	AN P	21 58 30	..	..	Feeble shock.	"	AN Fe	17 45 0	..	..		
	S	22 1 40	..	..		"	AN P	6 15 44	..	..	Very feeble local shock.	"
	L	22 3 15	..	..			F	6 16 14	..	..		
	F	22 10 0	..	..			AN P	10 38 9	..	..	Do.	"
"	AN P	23 6 43	..	..		"	F	10 38 36	..	..		"
	S	23 9 56	..	..			AN e	11 20 0	..	..	Tremors.	"
	L	23 11 32	..	..		"	f	11 42 0	..	..		"
	M	23 12 9	6	3		"	AN Pe	13 26 3	..	..	Feeble shock.	"
	Fe	23 20 0	..	..			Se	13 29 9	..	..		
"	AN P	4 39 34	..	..		"	L	13 30 49	..	..		"
	S	4 41 4	..	..			F	13 34 0	..	..		"
	L	4 41 34	..	..		"	AN e	15 25 0	..	..	Tremors.	"
	M	4 41 42	7	14		"	f	15 32 0	..	..		"
	F	4 54 0	..	..		"	AN Pe	23 43 33	..	..	Feeble shock.	"
"	AN P	9 50 10	..	..		"	Se	23 46 46	..	..		"
	S	9 51 40	..	..			L	23 48 22	..	..		"
	L	9 52 12	..	..		"	M	23 49 4	9	2		"
	M	9 52 30	8	26		"	F	23 53 0	..	..		"
	F	10 12 0	..	..		"	AN e	1 34 0	..	..	Tremors.	"
"	AN e	15 27 0	..	..	Tremors.	"	f	2 8 0	..	..		"
	f	15 33 0	..	..		"	AN e	2 14 0	..	..	Do.	"
"	AN Pe	21 50 28	..	..		"	f	3 7 0	..	..		"
	Se	21 53 38	..	..		"	AN P	14 7 14	..	..		"
	L	21 55 18	..	..		"	S	14 8 47	..	..		"
	M	21 55 36	7	2		"	L	14 9 17	..	..		"
	F	22 4 0	..	..		"	M	14 9 45	4	10		"
						"	F	14 35 0	..	..		"





Date.	Phase.	Time G. M. T.			Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Times G. M. T.			Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
1930—contd.		H.	M.	S.				1930—contd.		H.	M.	S.			
July 13	AN							July 23	P	0	17	30	..	..	
	P	19	33	21	..	..		S	0	25	34	..	..		
	S	19	38	24	..	..		L	0	38	15	..	..		
	L	19	42	53	..	..		M	0	45	14	20	10		
	M	19	44	49	9	36		Fo	1	45	0	..	..		
	Fo	21	26	0	..	..		AN							
	AN							e	19	8	43	..	..	Very feeble shock.	
"	P	23	52	1	..	..		M	19	13	38	9	3		
	S	23	55	13	..	..		F	19	22	0	..	..		
	L	23	56	47	..	..		AN							
	M	23	57	31	5	1		e	12	30	0	..	..	Tremors.	
"	F	0	7	0	..	..		f	12	36	0	..	..		
"	AN							AN							
"	e	11	17	0	..	..	Tremors.	e	4	39	0	..	..	Do.	
"	f	11	41	0	..	..		f	5	7	0	..	..		
"	AN							AN							
"	e	12	1	36	..	..	Very feeble shock.	e	5	17	0	..	..	Do.	
"	f	12	4	0	..	..		f	5	38	0	..	..		
"	AN							AN							
"	e	4	45	42	..	..	Do.	e	16	57	43	..	..	Distant feeble shock.	
"	M	4	46	35	7	3		M	17	24	8	21	7		
"	Fo	4	48	0	..	..		F	18	21	0	..	..		
"	AN							AN							
"	P	14	40	1	..	..		P	1	53	53	..	..		
"	S	14	42	59	..	..		S	1	57	3	..	..		
"	L	14	44	16	..	..		L	1	58	39	..	..		
"	M	14	46	33	6.5	4		M	1	59	14	4	5		
"	Fo	15	29	0	..	..		F	2	8	0	..	..		
"	AN							AN							
"	P	13	37	1	..	..		P	10	18	6	..	..		
"	S	13	38	3	..	..		S	10	21	17	..	..		
"	L	13	38	20	..	..		L	10	22	53	..	..		
"	F	13	52	0	..	..		M	10	23	12	7	2		
"	AN							F	10	31	0	..	..		
"	P	19	22	35	..	..	Very feeble shock.	AN							
"	F	19	25	0	..	..		P	7	38	27	..	..		
"	AN							S	7	41	37	..	..		
"	e	1	40	0	..	..	Tremors.	L	7	43	14	..	..		
"	f	1	58	0	..	..		M	7	47	59	8	2		
"	AN							F	8	1	0	..	..		
"	P	19	36	35	..	..		AN							
"	S	19	44	41	..	..		P	23	45	43	..	..		
"	L	19	57	31	..	..		S	22	49	43	..	..		
"	M	20	1	29	13	7		L	22	52	9	..	..		
"	Fo	21	20	0	..	..		M	22	54	14	9	2		
								F	23	28	0	..	..		





Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time. G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.
1930—contd.		H. M. S.				1930—contd.		H. M. S.				1930—co
August 10	AN P S L M F AN	22 16 53 22 20 6 22 21 42 22 22 1 22 31 0	.. .. .. 5 ..	.. .. .. 3 ..		August 19	AN P S L M F AN	6 10 10 6 13 23 6 14 58 6 15 22 6 21 0	.. .. .. 7 ..	.. .. .. 2 ..		Aug.
" 12	e f AN	0 0 0 0 11 0	.. ..	.. ..	Tremors.	" 20	e f AN	5 19 0 5 57 0	.. ..	.. ..	Tremors.	"
" 13	e f AN	19 21 0 20 11 0	.. ..	.. ..	Do.	" 21	P S L M F AN	21 2 36 21 9 20 21 17 43 21 21 14 23 15 0	.. .. .. 16 ..	.. .. .. 36 ..		"
" 14	e f AN	23 33 0	..	..	Do.	" 22	P S L M F AN	9 50 30 9 55 11 9 58 41 10 2 2 10 42 0	.. .. .. 12 ..	.. .. .. 4 ..		"
" 15	e f AN	15 21 0 15 50 0	.. ..	.. ..	Tremors.	" 23	P S L M F AN	10 57 34 11 1 29 11 2 53 11 9 15 13 10 0	.. .. .. 15 ..	.. .. .. 17 ..		Sept
" 16	e f AN	0 26 0 0 41 0	.. ..	.. ..	Do.	" 24	Pe S L M F AN	15 7 13 15 11 55 15 15 23 15 19 49 16 15 0	.. .. .. 13 ..	.. .. .. 4 ..		"
" 17	e f AN	15 32 0 15 44 0	.. ..	.. ..	Do.	" 27	AN Pe F AN P S L M F AN	9 21 28 10 33 0 11 1 59 11 5 55 11 8 9 11 8 33 11 38 0 23 23 0 23 35 0	.. .. .. .. 11 .. .. .. ..	.. .. .. .. 5 .. ..	Feeble shock.	"
" 18	P S L M F AN	12 33 43 12 37 33 12 39 49 12 47 34 13 44 0 10 12 8 10 20 43 10 35 3 10 53 22 13 0 0	.. .. .. 11 .. .. .. .. 18 ..	.. .. .. 3 .. .. .. 12 ..							Tremors.	"



Seismic Disturbances, 1930—contd.



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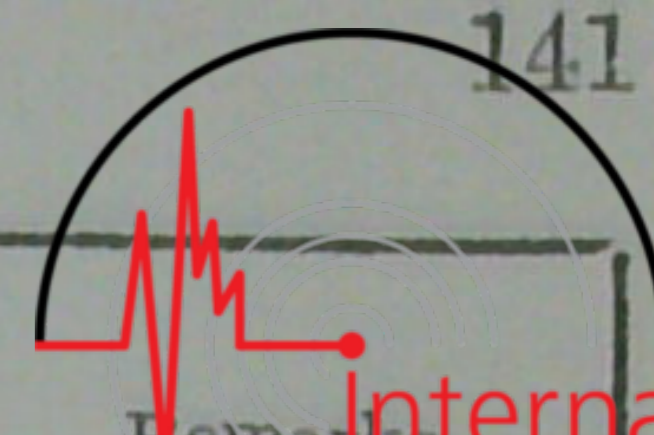
Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) An.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Aug. 28	AN e	3 58 0	..	..	Tremors.	Sept. 5	AN Pe	16 24 51	..	..	Very feeble shock.
	f	4 32 0	..	..			M	16 35 25	17	3	
	AN						F	16 58 0	..	..	
" "	e	4 50 0	..	..	Tremors.		AN				
	f	5 10 0	..	..		" 8	e	8 44 14	..	..	Distant feeble shock.
" 29	AN e	21 12 0	..	..	Tremors.		f	10 22 0	..	..	
	f	21 24 0	..	..		" 9	AN e	23 10 0	..	..	Tremors.
" 30	AN P	10 9 37	..	..			f	Lost in Shifting time.			
	S	10 14 28	..	..		" 10	AN e	9 21 14	..	..	Very feeble shock.
	L	10 18 18	..	..			M	9 40 32	12	3	
	M	10 25 11	10	5			F	10 57 0	..	..	
	F	11 27 0	..	..		" 11	AN e	4 0 0	..	..	Tremors.
" 30	AN P	13 29 21	..	..			f	4 20 0	..	..	
	S	13 30 33	..	..		" "	AN P	12 44 29	..	..	Slight shock.
	L	13 30 55	..	..			S	12 50 53	..	..	
	M	13 31 22	7	2			L	12 58 17	..	..	
	F	13 37 0	..	..		" "	M	13 5 33	17	5	
" 31	AN e	3 50 0	..	..	Tremors.		F	13 31 0	..	..	
	f	4 6 0	..	..		" "	AN P	17 24 2	..	..	Feeble shock.
Sept. 1	AN P	5 23 23	..	..			S	17 27 13	..	..	
	S	5 27 45	..	..		" "	L	17 28 50	..	..	
	L	5 31 5	..	..		" 12	F	17 46 0	..	..	
	M	5 31 33	7	4			AN				
	F	6 8 0	..	..		" "	e	2 13 0	..	..	Tremors.
" "	AN P	17 47 20	..	..			f	2 25 0	..	..	
	S	17 50 50	..	..		" "	AN e	19 14 41	..	..	Distant feeble shock.
	L	17 52 56	..	..			F	20 20 0	..	..	
	M	17 54 12	10	29		" 13	AN P	18 8 40	..	..	
	F	19 3 0	..	..			S	18 12 20	..	..	
" 2	AN P	19 3 47	..	..		" "	L	18 14 26	..	..	
	S	19 8 3	..	..			F	18 39 0	..	..	
	L	19 10 53	..	..		" 14	AN e	0 16 0	..	..	Tremors.
	M	19 19 54	9	3			f	0 41 0	..	..	
	F	19 52 0	..	..							
" 5	AN P	10 18 11	..	..							
	S	10 21 41	..	..							
	L	10 23 37	..	..							
	M	10 26 0	8	2							
	F	10 58 0	..	..							





Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Sept. 14	AN P	3 25 37	..	..		Sepr. 22	AN P	4 59 52	..	..	
	Se	3 32 57	..	..			S	5 4 36	..	..	
	L	3 43 9	..	..			L	5 8 2	..	..	
	M	3 53 10	19	8			M	5 8 14	7	7	
	F	4 37 0	..	..			F	5 54 0	..	..	
	AN						AN				
" 14	e	9 32 5	..	..	Distant Shock. feeble	" 22	P	7 20 58	..	..	
	f	11 12 0	..	..			S	7 24 37	..	..	
	AN						L	7 28 54	..	..	
" 14	e	17 33 0	..	..	Tremors.		M	7 28 36	8	2	
	f	17 59 0	..	..			F	7 50 0	..	..	
	AN					" 22	AN				
" 16	e	0 7 0	..	..	Do.		P	14 23 49	..	..	
	f	0 20 0	..	..			S	14 27 30	..	..	
	AN						L	14 29 41	..	..	
" 16	e	0 40 0	..	..	Do.	" 22	F	16 0 0	..	..	
	f	0 51 0	..	..			AN				
	AN					" 22	P	16 31 11	..	..	
" 16	e	11 8 5	..	..	Very shock. feeble		S	16 34 55	..	..	
	M	11 19 5	9	2			L	16 36 58	..	..	
	F	11 34 0	..	..			M	16 37 50	6	4	
	AN						F	17 24 0	..	..	
" 20	e	4 19 0	..	..	Tremors.	" 23	AN				
	f	4 33 0	..	..			Pe	5 47 15	..	..	
	AN						S	5 51 15	..	..	
" 20	P	13 5 39	..	..	Feeble shock.		L	5 53 38	..	..	
	S	13 9 8	..	..			M	5 54 4	5	2	
	L	13 11 6	..	..		" 23	F	6 4 0	..	..	
	M	13 11 17	12	2			AN				
	F	13 32 0	..	..		" 23	P	10 19 28	..	..	Feeble shock.
	AN						S	10 23 7	..	..	
" 21	P	23 9 39	..	..		" 23	L	10 25 23	..	..	
	S	23 14 2	..	..			F	10 44 0	..	..	
	L	23 17 16	..	..		" 23	AN				
	M	23 17 44	6	12			P	12 14 59	..	..	
" 22	F	1 46 0	..	..		" 23	S	12 18 40	..	..	
	AN						L	12 20 50	..	..	
" 22	Pe	1 51 12	..	..	Slight shock.	" 24	M	12 23 58	7	2	
	S	2 0 42	..	..			F	12 53 0	..	..	
	L	Lost in Shifting time.				" 24	AN				
	M	2 47 12	18	12			P	3 29 19	..	..	
	F	4 44 0	..	..			S	3 31 48	..	..	
							L	3 33 7	..	..	
							M	3 35 27	10	3	
							F	3 53 0	..	..	





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Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Sept. 24	AN					Sept. 30	AN				
	P	12 15 21	..	..			P	13 10 1	..	..	Feeble shock.
	S	12 23 44	..	..			S	13 14 17	..	..	
	L	12 37 25	..	..			L	13 17 12	..	..	
	M	12 41 1	18	5			F	13 47 0	..	..	
	F	13 30 0	..	..			AN				
" 24	AN					" 30	P	21 32 38	..	..	
	P	14 45 50	..	..			S	21 42 26	..	..	
	S	14 46 50	..	..			L	22 0 58	..	..	
	L	14 47 7	..	..			M	22 10 49	19	7	
	M	14 47 20	7	2			F	23 32 0	..	..	
	F	14 59 0	..	..			AN				
" 25	AN					October 1	P	3 1 14	..	..	Do.
	P	13 47 20	..	..			S	3 8 32	..	..	
	S	13 51 12	..	..			L	3 18 14	..	..	
	L	13 53 16	..	..			F	3 45 0	..	..	
	M	13 53 55	8	2			AN				
	F	14 6 0	..	..		" 2	P	0 52 32	..	..	Do.
" 25	AN						S	1 1 52	..	..	
	e	17 15 0	..	..	Tremors.		L	1 19 16	..	..	
	f	17 25 0	..	..			F	1 47 0	..	..	
" 25	AN					" 2	AN				
	e	18 30 0	..	..	Do.		P	15 38 31	..	..	
	f	lost in following shock.					S	15 43 7	..	..	
" 25	AN						L	15 46 7	..	..	
	P	18 33 59	..	..		" 5	M	15 50 18	15	4	
	S	18 43 30	..	..			F	16 18 0	..	..	
	L	18 46 47	..	..			AN				
	M	18 47 2	8	14			P	5 32 0	..	..	Very feeble shock.
	F	20 18 0	..	..			F	5 47 0	..	..	
" 26	AN						AN				
	e	8 50 0	..	..	Do.		e	19 34 0	..	..	Tremors.
	f	9 17 0	..	..			f	19 56 0	..	..	
" 29	AN					" 7	AN				
	P	10 8 44	..	..	Feeble shock.		e	18 13 4	..	..	Feeble shock.
	S	10 11 48	..	..			M	18 16 20	14	3	
	L	10 13 10	..	..			F	18 29 0	..	..	
	F	10 31 0	..	..		" 7	P	2 36 47	..	..	Do.
" 29	AN						S	2 41 27	..	..	
	P	13 31 21	..	..			Le	2 44 51	..	..	
	S	13 34 29	..	..		" 7	F	3 1 0	..	..	
	L	13 35 55	..	..			AN				
	M	13 36 50	8	6			P	20 58 25	..	..	Do.
	F	14 16 0	..	..			Se	21 2 58	..	..	
							Le	21 7 38	..	..	
							F	21 32 0	..	..	

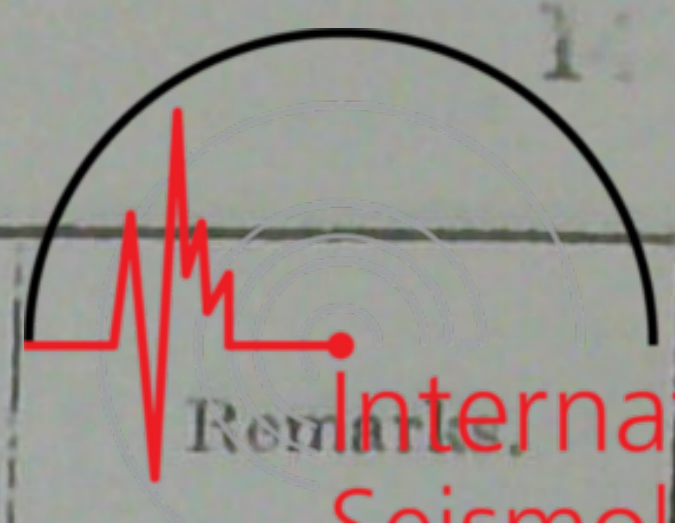




Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
October 8	AN					October 23	AN				
	P	10 33 26	..	..			e	9 57 0	..	..	Tremors.
	S	10 43 44	..	..			f	10 52 0	..	..	
	L	11 3 57	..	..			AN				
	M	11 28 56	18	10		.. 24	Pe	1 13 40	..	..	Very feeble
	F	13 9 0	..	..			F	1 19 0	..	..	shock.
	AN						AN				
.. 9	P	21 35 23	..	..		.. 24	P	10 54 28	..	..	
	S	21 39 46	..	..			S	10 58 33	..	..	
	L	21 42 42	..	..			L	11 1 17	..	..	
	M	21 43 12	S	4			M	11 2 34	14	5	
	F	22 12 0	..	..			F	11 44 0	..	..	
	AN					.. 24	P	20 26 17	..	..	
.. 10	P	0 42 33	..	..			S	20 34 47	..	..	
	S	0 46 55	..	..			L	20 51 13	..	..	
	L	0 50 17	..	..			M	20 56 21	19	31	
	M	0 50 47	7	10			F	23 57 0	..	..	
	F	1 35 0	..	..			AN				
	AN					.. 25	P	4 23 59	..	..	
.. 11	e	3 44 0	..	..	Tremors.		S	4 26 44	..	..	
	f	4 6 0	..	..			L	4 27 47	..	..	
	AN						M	4 27 59	10	2	
.. 12	P	15 11 24	..	..	Feeble shock.		F	4 42 0	..	..	
	S	15 15 22	..	..			AN				
	Le	15 17 57	..	..		.. 25	P	12 16 19	..	..	
	F	15 33 0	..	..			S	12 26 43	..	..	
	AN						Le	12 50 16	..	..	
.. 12	e	20 4 0	..	..	Tremors.		M	13 1 43	15	4	
	f	20 22 0	..	..			F	13 30 0	..	..	
	AN					.. 25	AN				
.. 13	Pe	8 19 5	..	..	Feeble shock.		e	16 40 0	..	..	Tremors.
	F	8 36 0	..	..			f	17 13 0	..	..	
	AN					.. 25	AN				
.. 15	P	11 19 24	..	..	Do.		e	17 53 0	..	..	Do.
	S	11 22 44	..	..			f	18 21 0	..	..	
	L	11 24 19	..	..		.. 25	AN				
	F	11 36 0	..	..			P	23 40 42	..	..	
	AN						S	23 45 50	..	..	
.. 16	e	21 54 0	..	..	Tremors.		L	23 49 55	..	..	
	f	22 25 0	..	..		.. 26	M	23 53 52	20	5	
	AN						F	0 13 0	..	..	
.. 17	P	9 6 19	..	..		.. 27	AN				
	S	9 19 42	..	..			P	23 34 45	..	..	
	L	9 55 42	..	..			S	23 39 27	..	..	
	M	10 5 57	20	6			L	23 43 1	..	..	
	F	10 51 0	..	..		.. 28	M	23 43 48	10	3	
							F	0 13 0	..	..	



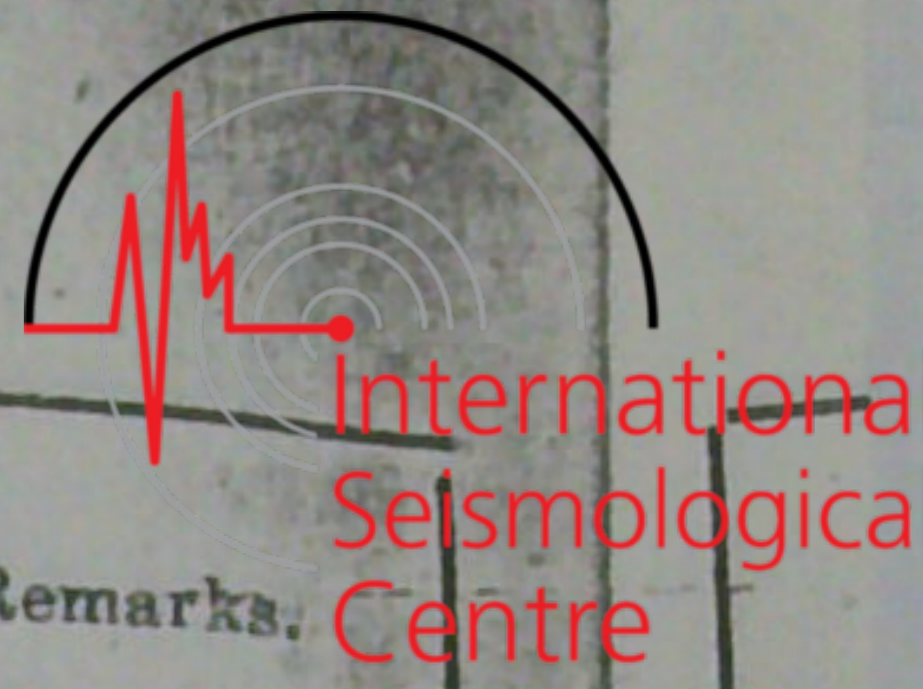
Seismic Disturbances, 1930— contd.



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Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude (μ) AN AE.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude (μ) AN AE.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Oct. 28	AN P	21 30 33	..	..		Nov. 9	AN P	19 18 53	..	..	
	S	21 36 6	..	..			S	19 27 9	..	..	
	L	21 41 12	..	..			L	19 40 33	..	..	
	M	21 55 23	20	9			M	19 45 12	24	95	
	F	22 37 0	..	..			F	21 45 0	..	..	
	AN						AE				
" 30	P	7 22 49	..	..		" "	P	19 18 53	..	..	
	S	7 30 29	..	..			S	19 27 9	..	..	
	L	7 42 8	..	..			L	19 40 33	..	..	
	M	7 46 4	20	5			M	19 42 28	22	66	
	F	8 9 0	..	..			F	22 19 0	..	..	
	AN						AN				
" 31	e	10 38 31	..	..	Feeble Distant Shock.	" 10	P	13 55 12	..	..	
	M	11 31 1	20	6			S	14 4 8	..	..	
	F	12 54 0	..	..			L	14 19 8	..	..	
	AN						M	14 24 1	9	3	
" 31	e	13 44 0	..	..	Tremors.		F	16 6 0	..	..	
	f	13 58 0	..	..		" 10	AE P	13 55 12	..	..	
	AN						S	14 4 8	..	..	
Nov. 3	P	18 48 59	..	..	Feeble Shock.		L	14 19 8	..	..	
	S	18 58 49	..	..			M	14 24 40	19	8	
	L	19 16 59	..	..			F	16 6 0	..	..	
	F	19 55 0	..	..		" 11	AN P	8 38 26	..	..	
	AN						S	8 44 36	..	..	
" 4	P	7 19 23	..	..	Very feeble Shock.		L	8 51 36	..	..	
	F	7 29 0	..	..			M	8 55 15	9	3	
	AN						F	9 29 0	..	..	
" 4	P	15 43 24	..	..		" 11	AE P	8 38 26	..	..	
	S	15 47 56	..	..			S	8 44 36	..	..	
	L	15 51 14	..	..			L	8 51 36	..	..	
	M	15 51 26	7	11			M	8 56 45	10	2	
	F	16 38 0	..	..			F	9 29 0	..	..	
	AN					" 12	AN P	19 23 24	..	..	
" 8	P	3 30 44	..	..			S	19 34 12	..	..	
	S	3 37 8	..	..			L	19 56 6	..	..	
	L	3 44 25	..	..			M	20 4 21	21	7	
	M	3 51 44	10	2			F	21 11 0	..	..	
	F	4 21 0	..	..		" 12	AE P	19 23 24	..	..	
	AE						S	19 34 12	..	..	
" 8	P	3 30 44	..	..			L	19 56 6	..	..	
	S	3 37 8	..	..			M	20 4 12	21	5	
	L	3 44 25	..	..			F	21 11 0	..	..	
	M	3 45 50	8	2							
	F	4 31 0	..	..							





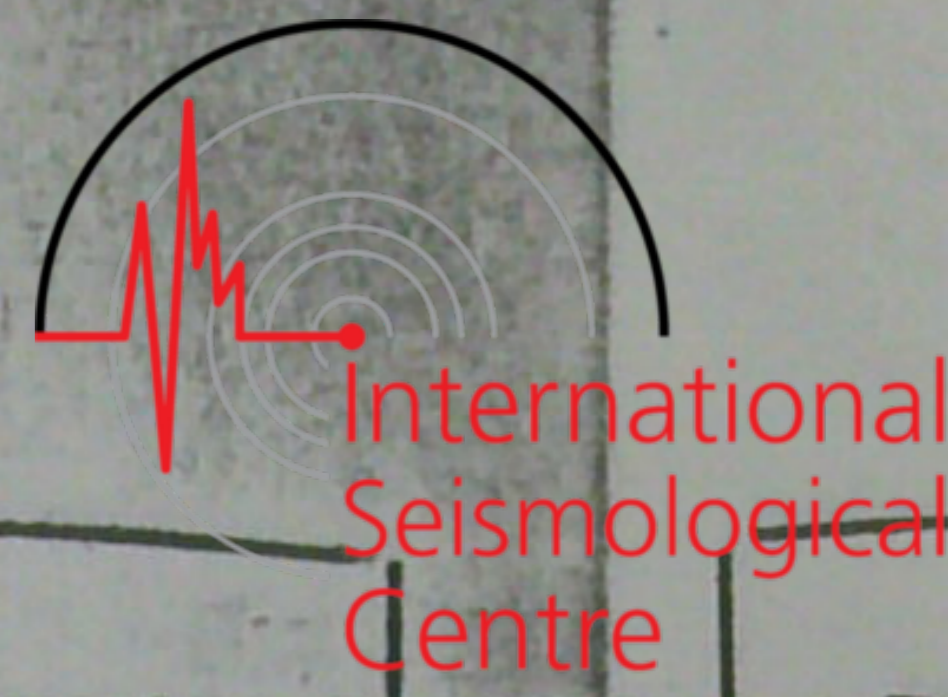
Date.	Phase	Time			Period (Sec.)	Amplitude (μ)		Remarks.	Date.	Phase	Time			Period (Sec.)	Amplitude (μ)		Remarks.	
		G.	M.	S.		AN	AE.				G.	M.	S.		AN	AE.		
1930—contd.		H.	M.	S.					1930—contd.		H.	M.	S.					
Nov. 13	AN								Nov. 21	AN								
	e	23	18	0	..	..		Tremors.		P	3	26	56	..	..		Very feeble	
	f	23	49	0	..	..				F	3	46	0	..	..		shock.	
	AE									AE								
" 13	e	23	18	0	..	..		Do.	" 21	P	3	26	56	..	..		Do.	
	f	23	49	0	..	..				F	3	46	0	..	..			
	AN									AN								
" 16	P	3	27	23	..	..			" 22	P	14	21	6	..	..			
	S	3	30	42	..	..				S	14	31	43	..	..			
	L	3	32	27	..	..				L	14	53	13	..	..			
	F	3	56	0	..	..				M	15	11	2	20	9			
	AE									F	16	13	0	..	..			
" 16	P	3	27	23	..	..			" 22	AE								
	S	3	30	42	..	..				P	14	21	6	..	..			
	L	3	32	27	..	..				S	14	31	43	..	..			
	F	3	56	0	..	..				L	14	53	13	..	..			
	AE									M	15	14	25	16	4			
" 16	P	3	27	23	..	..		Do.		F	16	28	0	..	..			
	S	3	30	42	..	..			" 23	AN								
	L	3	32	27	..	..				P	16	0	27	..	..			
	F	3	56	0	..	..				S	16	6	1	..	..			
	AE									L	16	11	1	..	..			
" 16	e	16	31	0	..	..		Do.		M	16	15	33	12	2			
	f	16	50	0	..	..			" 23	F	17	8	0	..	..			
	AN									AE								
" 16	e	16	31	0	..	..		Do.	" 23	P	16	0	27	..	..			
	f	16	50	0	..	..				S	16	6	1	..	..			
	AE									L	16	11	1	..	..			
" 16	e	16	31	0	..	..		Do.		M	16	17	0	12	1			
	f	16	50	0	..	..			" 23	F	17	8	0	..	..			
	AN									AN								
" 17	P	12	18	53	..	..			" 24	e	3	50	0	..	..		Tremors.	
	S	12	27	31	..	..				f	4	8	0	..	..			
	L	12	41	41	..	..				AE								
	M	12	48	8	27	9			" 24	e	3	50	0	..	..		Do.	
	F	13	36	0	..	..				f	4	8	0	..	..			
	AE								" 24	AN								
" 17	P	12	18	53	..	..			" 24	P	6	23	31	..	..		Feeble shock.	
	S	12	27	31	..	..				S	6	26	20	..	..			
	L	12	41	41	..	..				L	6	27	40	..	..			
	M	12	44	46	29	7			" 24	F	6	39	0	..	..			
	F	13	36	0	..	..			" 24	AE								
	AE									P	6	23	31	..	..		Do.	
" 21	P	2	11	24	..	..				S	6	26	20	..	..			
	S	2	16	32	..	..				L	6	27	40	..	..			
	L	Lost in shifting time.							" 24	F	6	39	0	..	..			
	M	2	36	30	16	4				AE								
	F	3	15	0	..	..			" 24	P	6	23	31	..	..		Do.	
	AE									S	6	26	20	..	..			
" 21	P	2	11	24	..	..				L	6	27	40	..	..			
	S	2	16	32	..	..			" 24	F	6	39	0	..	..			
	L	Lost in shifting time.								AE								
	M	2	33	28	24	5			" 24	P	6	23	31	..	..		Do.	
	F	3	15	0	..	..				S	6	26	20	..	..			
	AE									L	6	27	40	..	..			
	P	2	11	24	..	..			" 24	F	6	39	0	..	..			
	S	2	16	32	..	..				AE								
	L	Lost in shifting time.								P	6	23	31	..	..		Do.	
	M	2	33	28	24	5				S	6	26	20	..	..			
	F	3	15	0	..	..			" 24	L	6	27	40	..	..			
	AE									F	6	39	0	..	..			

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No









Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) AN AE.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) AN AE.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Dec. 3	S	19 0 48	..	..		Dec. 7	AN				
	L	19 3 30	..	..			P	23 51 16	..	..	Feeble shock.
	M	19 11 1	10	270			S	23 54 40	..	..	
	F	23 0 0	..	..			L	23 56 10	..	..	
	AE						F	0 17 0	..	..	
" 3	P	18 56 41	..	..		" 8	AE				
	S	19 0 48	..	..		" 7	P	23 51 16	..	..	Do.
	L	19 3 30	..	..			S	23 54 40	..	..	
	M	19 12 15	12	310			L	23 56 10	..	..	
	F	23 7 0	..	..		" 8	F	0 17 0	..	..	
	AN						AN				
" 4	P	6 23 40	..	..		" 8	e	6 34 40	..	..	Do.
	S	6 27 48	..	..			M	6 51 50	10	2	
	L	6 30 28	..	..			F	7 14 0	..	..	
	M	6 32 31	10	4			AE				
	F	7 6 0	..	..		" 8	e	6 34 40	..	..	Do.
	AE						M	6 48 10	12	2	
" 4	P	6 23 40	..	..			F	7 14 0	..	..	
	S	6 27 48	..	..		" 8	AN				
	L	6 30 28	..	..		" 8	P	8 9 10	..	..	
	M	6 35 12	12	3			S	8 16 0	..	..	
	F	7 6 0	..	..			L	8 24 18	..	..	
	AN						M	8 29 16	11	4	
" 6	P	7 16 19	..	..		" 8	F	9 16 0	..	..	
	S	7 26 44	..	..			AE				
	L	7 47 49	..	..		" 8	P	8 9 10	..	..	
	M	8 0 24	18	5			S	8 16 0	..	..	
	F	8 46 0	..	..			L	8 24 18	..	..	
	AE						M	8 29 14	13	4	
" 6	P	7 16 19	..	..		" 8	F	9 16 0	..	..	
	S	7 26 44	..	..			AN				
	L	7 47 49	..	..		" 8	Pe	17 41 27	..	..	
	M	8 0 0	21	7			S	17 52 29	..	..	
	F	8 46 0	..	..			L	18 15 17	..	..	
	AN						M	18 31 49	19	5	
" 6	P	9 26 43	..	..	Very feeble shock.	" 8	F	19 48 0	..	..	
	F	9 48 0	..	..			AE				
	AE					" 8	Pe	17 41 27	..	..	
" 6	P	9 26 43	..	..	Do.		S	17 52 29	..	..	
	F	9 48 0	..	..			L	18 15 17	..	..	
	AN						M	18 33 55	20	4	
" 7	e	22 15 0	..	..	Tremors.	" 8	F	19 48 0	..	..	
	f	22 23 0	..	..							
	AE										
" 7	e	22 15 0	..	..	Do.						
	f	22 23 0	..	..							



Date.	Phase.	Time. G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) AN AE.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.)	Ampli- tude ( $\mu$ ) AN AE.	Remarks.
1930—contd.		H. M. S.				1930—contd.		H. M. S.			
Dec. 9	AN					Dec. 12	AE				
	P	0 37 32	..	..			P	11 53 7	..	..	Feeble local shock.
	S	0 41 30	..	..			S	11 54 35	..	..	
	L	0 42 44	..	..			L	Lost in hourly break.			
	M	0 43 12	10	2			F	12 3 0	..	..	
	F	0 59 0	..	..			AN				
	AE										
" 9	P	0 37 32	..	..		" 13	e	3 21 0	..	..	Tremors.
	S	0 41 30	..	..			f	3 54 0	..	..	
	L	0 42 44	..	..			AN				
	M	0 45 43	7	1		" 13	e	14 31 0	..	..	Do.
	F	0 59 0	..	..			f	15 20 0	..	..	
	AN						AE				
" 10	P	10 38 28	..	..		" 13	e	14 31 0	..	..	Do.
	S	10 44 10	..	..			f	15 20 0	..	..	
	L	10 49 28	..	..			AN				
	M	10 54 8	15	4		" 13	P	16 33 34	..	..	
	F	11 45 0	..	..			S	16 37 46	..	..	
	AE						L	16 40 33	..	..	
" 10	P	10 38 28	..	..			M	16 50 33	10	2	
	S	10 44 10	..	..			F	19 22 0	..	..	
	L	10 49 28	..	..			AE				
	M	10 54 35	16	7		" 13	P	16 33 34	..	..	
	F	11 45 0	..	..			S	16 37 46	..	..	
	AN						L	16 40 33	..	..	
" 12	P	2 58 44	..	..			M	16 43 14	22	6	
	S	3 3 16	..	..			F	17 28 0	..	..	
	L	3 6 40	..	..			AN				
	M	3 6 45	7	3		" 15	P	16 13 54	..	..	Feeble shock.
	F	3 29 0	..	..			F	16 55 0	..	..	
	AE						AE				
" 12	P	2 58 44	..	..		" 15	P	16 13 54	..	..	Do.
	S	3 3 16	..	..			F	16 55 0	..	..	
	L	3 6 40	..	..			AN				
	M	3 11 29	8	1		" 16	P	8 23 24	..	..	Do.
	F	3 29 0	..	..			S	8 26 48	..	..	
	AN						L	8 28 47	..	..	
" 12	e	6 58 0	..	..	Tremors.		F	8 46 0	..	..	
	f	7 11 0	..	..			AE				
" 12	AE				Do.	" 16	P	8 23 24	..	..	Do.
	e	6 58 0	..	..			S	8 26 48	..	..	
	f	7 11 0	..	..			L	8 28 47	..	..	
" 12	AN				Feeble local shock.		F	8 46 0	..	..	
	P	11 53 7	..	..							
	S	11 54 35	..	..							
	L	Lost in hourly break.									
	F	12 3 0	..	..							







Date.	Phase	Time			Period (Sec.)	Ampli- tude ( $\mu$ )		Remarks.	Date.	Phase.	Time			Period (Sec.)	Ampli- tude ( $\mu$ )		Remarks.
		G.	M.	S.		AN	AE.				G.	M.	S.		AN	AE.	
1930—contd.		H.	M.	S.					1930—contd.		H.	M.	S.				
Dec. 20	AN e f	14	30	0	..	..		Tremors.	Dec. 23	AN P S L F	21	47	3	..	..		Feeble shock.
" 20	AE e f	14	30	0	..	..		Do.	" 23	AE P S L F	21	47	3	..	..		Do.
" 21	AN e f	3	47	0	..	..		Do.	" 25	AN P S L M F	13	24	13	..	..		
" 21	AE e f	3	47	0	..	..		Do.	" 25	AN P S L M F	13	34	5	..	..		
" 21	AN e f	12	32	0	..	..		Do.	" 25	AN P S L M F	13	53	8	..	..		
" 21	AE e f	12	32	0	..	..		Do.	" 25	AN P S L M F	14	1	23	19	7		
" 21	AN P S L M F	14	59	42	..	..			" 25	AN P S L M F	15	1	0	..	..		
" 21	AE No E-W record due to failure of shutter.								" 25	AN P S L M F	15	1	0	..	..		
" 21	AN P S L M F	15	6	12	..	..			" 25	AN P S L M F	13	24	13	..	..		
" 21	AN P S L M F	15	13	55	..	..			" 25	AN P S L M F	13	34	5	..	..		
" 21	AN P S L M F	15	19	17	20	15			" 25	AN P S L M F	13	53	8	..	..		
" 21	AN P S L M F	16	13	0	..	..			" 25	AN P S L M F	14	2	7	22	8		
" 22	AN P S L M F	0	6	22	..	..			" 25	AN P S L M F	15	1	0	..	..		
" 22	AN P S L M F	0	15	17	..	..			" 25	AN P S L M F	13	24	13	..	..		
" 22	AN P S L M F	0	31	42	..	..			" 25	AN P S L M F	13	34	5	..	..		
" 22	AN P S L M F	0	40	54	14	6			" 25	AN P S L M F	13	53	8	..	..		
" 22	AN P S L M F	1	28	0	..	..			" 25	AN P S L M F	14	2	7	22	8		
" 22	AN P S L M F							No E-W record due to failure of shutter.	" 25	AN P S L M F	15	1	0	..	..		
" 22	AN P S L M F	4	28	4	..	..			" 25	AN P S L M F	13	24	13	..	..		
" 22	AN P S L M F	4	34	42	..	..			" 25	AN P S L M F	13	34	5	..	..		
" 22	AN P S L M F	4	42	52	..	..			" 25	AN P S L M F	13	53	8	..	..		
" 22	AN P S L M F	4	48	47	8	2			" 25	AN P S L M F	14	1	23	19	7		
" 22	AN P S L M F	5	21	0	..	..			" 25	AN P S L M F	15	1	0	..	..		
" 22	AN P S L M F	4	28	4	..	..			" 25	AN P S L M F	15	1	0	..	..		
" 22	AN P S L M F	4	34	42	..	..			" 25	AN P S L M F	13	24	13	..	..		
" 22	AN P S L M F	4	42	52	..	..			" 25	AN P S L M F	13	34	5	..	..		
" 22	AN P S L M F	4	48	2	11	2			" 25	AN P S L M F	13	53	8	..	..		
" 22	AN P S L M F	5	21	0	..	..			" 25	AN P S L M F	14	2	7	22	8		
" 22	AN P S L M F							No E-W record due to failure of shutter.	" 25	AN P S L M F	15	1	0	..	..		
" 22	AN P S L M F	4	28	4	..	..			" 25	AN P S L M F	13	24	13	..	..		
" 22	AN P S L M F	4	34	42	..	..			" 25	AN P S L M F	13	34	5	..	..		
" 22	AN P S L M F	4	42	52	..	..			" 25	AN P S L M F	13	53	8	..	..		
" 22	AN P S L M F	4	48	2	11	2			" 25	AN P S L M F	14	1	23	19	7		
" 22	AN P S L M F	5	21	0	..	..			" 25	AN P S L M F	15	1	0	..	..		



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Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN. AE.	Remarks.	Date.	Phase.	Time G. M. T.	Period (Sec.).	Ampli- tude ( $\mu$ ) AN. AE.	Remarks.
1930—cont'd.						1930—cont'd.					
Dec. 30	AE					Dec. 31	AE				
	P	8 59 29	..	..	Feeble Shock		e	4 26 0	..	..	Tremors.
	S	9 2 59	..	..			f	4 35 0	..	..	
	L	9 5 7	..	..			AN				
	F	9 18 0	..	..		„ 31	e	20 36 0	..	..	Do.
							f	20 50 0	..	..	
	AN						AE				
„ 31	e	4 26 0	..	..	Tremors.	„ 31	e	20 36 0	..	..	Do.
	f	4 35 0	..	..			f	20 50 0	..	..	