

No. 40.

1936.

Geodætisk Institut

Proviantgaarden, Copenhagen, Denmark.

Bulletin of the seismological station

KØBENHAVN

$\varphi = 55^{\circ}41' N.$ $\lambda = 12^{\circ}27' E.$ $h = 13$ m.

Lithologic foundation: chalk.

No. 40. Oct.—Dec. 1936.

Instruments:

Galitzin-Wilip seismographs.

Constants:

Component	l	A_1	T_1		μ^2	T	k
	cm	cm	sec			sec	
N	12.5	100	12.61		0.0	12.4	102
E	12.5	100	12.65		0.05	12.1	104
Z	14.5	100	11.55	$1/9-20/10$	0.35	10	95
				$20/10-29/12$	0.25	10	95
				$29/12-31/12$	0.1	9	95

Wiechert 1000 kg. horizontal seismograph.

Wiechert 1300 kg. vertical seismograph.

Constants:

Component	T	ν	ρ	V
	sec		mm	
N	9.4	4.1	0.7	210
E	9.5	4.2	0.6	195
Z	5.7	4.0	0.3	160

Milne-Shaw seismograph, N and E components, with the approximate constants $T = 12^s$ $\nu = 20$ $V = 300$.

Wood-Anderson torsion seismometer, E component (until Nov. 16), $T = 2^s.7$.

Benioff seismograph, Z component (from Dec. 3), $T = 1^s$; $T_1 = 1/4^s$.

København.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks				
			P		S									
			m	s	h	m	s	m	s	h	m	h	m	°
	1936 Oct.													
1*	3*	15			52	29	52	46		53				Austria.
2*	3*	22	4	2			14	33	15	29	39			East of Mindanao.
3	4	7									57			
4*	5*	0					13	25	17.3		1.1			Pacific Ocean.
5	5	6					33.0		39.4		1.0			
6	5	7									.9			
7*	5*	9	58	14	69	57					92			East of Mindanao.
8	7	3									45			
9	8	4									15			
10	9	18									.6			
11	9	19										.9		
12	10	2									8			
13	10	3					32	33	40.4		1.0			
14	12	8										26		
15	13	7									.5			
16	14	23									.6			
17	15	22									.2			
18	16	12									.9			
19*	18*	3	12	26							15			Italy.
20	18	17									.0			
21	19	6									54			
22	19	7									11			
23	19	7									33			
24*	19*	12			22	55	29	11	.9					Moluccas.
25	20	22			24	28					33			
26	21	2			16	29	19.9		.5					
27	21	6							.4					Faint.
28	21	14									45			
29	22	4			17	43			.5					
30	22	11							.0					
31	22	23	53	44	57	14	57	36			58			S quite small, uncertain. Iceland.
32	23	0	4	32	8	2	8	23			9			Superposed on preceding shock.
33	23	3					56.1		1.0					[S not certain. Iceland.
34*	23*	6	i 34	43	43	9					55	62		Alaska.
35	23	17							.0					
36	23	20					11.6		.8					
37	24	14	10	54	14	43					18	21		Creete.
38	24	16							.8					
39	25	15	42	26					1.2					P small, uncertain, masked by
40	26	19					55.7	56.7	1.3					[microseisms.
41*	26*	23	i 9	44	13	3					14	18		Jan Mayen.
42	29	6					16.5		.5					
43	29	18			64	1	56	58	62	56	1.4			PS 65 ^m .5. SS 71 ^m .1. Marianne Islands.
	Nov.													
44	1	17									10			
45	2	9							.7					Disturbed.
46	2	15	i 9	15	18	35	27.0				32	72		P+. Kurile Islands.

No. 40.

— 3 —

1936.

København.

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			P		S								
			m	s	m	s	h	m	h	m	°		
47*	1936 Nov. 2*	20	57	48	67	32	i60	41	72.3	79		76	Japan.
48	3	5							.3				
49	4	20							.1				Faint.
50	9	6							.9				
51	10	13							.4				
52	10	17							.2				
53	10	17							.8				
54	11	1								20			
55	11	17					26.0			35			
56	12	2							1.1				Small preceding movement.
57	12	5							.2				
58	12	9								20			
59	12	20	i15	59	25	10	25	55	.7			70	
60	13	0							.4				
61*	13*	12	42	16*	51	13*	44	46	55.7	58		68	Pacific Ocean off Kamchatka.
62	14	1							.7				
63	14	5							.6				Faint.
64	14	10							.1				Masked by microseisms.
65	14	14	40	31					1.1				P quite small.
66	14	19	39	15*					1.0				P quite small. No Galitzin records.
67	15	22					i8	57					
68	15	22	32	1					1.0				P small, uncertain.
69	18	2								11			
70	18	15	54	45	58	32	58	47		61		21	Asia Minor.
71*	19*	21	23	0	33	29	26	17	39.1	47			Guatemala.
72	21	22							.5				Faint.
73	22	18	32.0		42.5		48.1		1.0				Guatemala. Strong microseisms.
74	24	14							.0				
75	25	11	55.2		64	43			1.4				Kurile Isl. P quite small, uncertain.
76	26	2	24	38			35	10	35	51			Costa Rica. No Galitzin E record.
77	28	12							.1				
78	29	4								37			
79	29	7								15			
80	29	9							.5				Disturbed.
81	29	23								33			
	Dec.												
82	1	0					4.6		.7				Strong microseisms.
83	1	6			30.3				.9				» » Japan.
84	7	22							.2				Faint.
85	8	10							.4				
86	8	11							.2				
87	13	21					48.5	57		81			SS 63 ^m .2. Marianne Islands.
88	14	4							.8				Preceding movement masked by
89	20	3							.4				Strong microseisms. [microseisms.
90	21	19							.7				Very strong microseisms.
91	21	20							.1				Very strong microseisms.
92	25	20							.8				

No. 40.

— 4 —

1936.

København.

No.	Date	Hour	Forerunners				L	Un-defined	△	Remarks			
			P		S								
			m	s	m	s	h	m	h	m	°		
	1936 Dec.												
93*	26*	23					i 12	22	16	16	1.0		Kermadec Islands.
94	27	0	26	50							.9		Japan. Superposed on preceding
95	27	2									.9		[shock.
96	28	18									.1		
97	29	14								45			
98	29	15				8.0		17.7			.7		SS 24 ^m .4. East Indies. Disturbed.
99	30	4									.9		

No. 40.

— 5 —

1936.

København.

NOTES

- No. 1. Oct. 3. 15^h. Austria. First forerunner quite small, the beginning not certain. eS_E 52^m29^s. e_N 52^m46^s. L 53^m.4.
- No. 2. Oct. 3. 22^h. East of Mindanao; $\Delta = \text{ca. } 100^\circ$. P quite small, masked by microseisms; the reading not certain. PP 8^m10^s. SKS 14^m33^s. ($SKKS$) 15^m29^s. PS 16^m53^s. e_N 18^m.1. SS 22^m.6.
- No. 4. Oct. 5. 0^h. Pacific Ocean; $\Delta = \text{ca. } 155^\circ$. P'_Z 13^m25^s; 13^m52^s; 14^m17^s. PP 17^m.3. $SKSP$ 27^m.4. e_E 32^m.6. SS 37^m.1.
- No. 7. Oct. 5. 9^h. East of Mindanao; $\Delta = \text{ca. } 100^\circ$. P_Z 58^m14^s, condensation. PP 62^m9^s; 62^m28^s larger. SKS 68^m52^s. S 69^m57^s. PS_E 71^m21^s; PPS_E 72^m30^s. e_N 74^m.7. e_N 76^m.4. SS_E 77^m.2. SSS_E 80^m.8. L_E 92^m.
- No. 19. Oct. 18. 3^h. Belluno, Italy. P_Z small, 12^m26^s. e_N 13^m57^s; e_E 14^m10^s. (S) $_{N,E}$ 14^m35^s, clearly marked. L 15^m.0.
- No. 24. Oct. 19. 12^h. Moluccas; $\Delta = \text{ca. } 105^\circ$. PP 22^m55^s. SKS 29^m11^s. PS 32^m3^s; PPS 33^m8^s. SS_N 37^m.8.
- No. 34. Oct. 23. 6^h. Alaska. iP , condensation. PP 37^m4^s; PPP 38^m.6. eS_N 43^m9^s; S_E 43^m15^s. e 44^m.6; i_E 44^m57^s large. SS 47^m.6; SSS 50^m.3.
- No. 41. Oct. 26. 23^h. Jan Mayen. iP 9^m44^s, first movement quite small. eS_E 13^m3^s, not very clearly marked. eS_N 13^m11^s well defined.
- No. 47. Nov. 2. 20^h. Japan. iP (-7.2, -4.0, +13.0). e 58^m8^s. iPP 60^m41^s; PPP 62^m26^s. S 67^m32^s; followed by several oscillations; phases not clearly separated. SS 72^m.3. SSS 76^m.0.
- No. 61. Nov. 13. 12^h. Pacific Ocean off Kamchatka. P , seemingly at end of time-break, 42^m16^s (-3.5, -1.1, +4.8; +8.2, +2.7, -12.8). e (P_cP) 42^m40^s. PP 44^m46^s; PPP 46^m24^s. (P_cS) 46^m51^s large on N . S_E 51^m13^s and S_N 51^m21^s large. PS 51^m40^s. (S_cS) $_E$ 52^m24^s. e_N 53^m12^s; e_E 54^m35^s. SS 55^m.7 large on N .
- No. 71. Nov. 19. 21^h. Guatemala; $\Delta = \text{ca. } 85^\circ$. P 23^m0^s, condensation. PP 26^m17^s; 26^m36^s. e 33^m19^s. SKS or S 33^m29^s. SS 39^m.1; SSS 43^m.3.
- No. 93. Dec. 26. 23^h. Kermadec Islands; $\Delta = \text{ca. } 160^\circ$. No Galitzin Z record. iP'_Z 12^m22^s. PP 16^m16^s. e_N 21^m26^s. e_E 23^m.2. e_N 25^m.6, 32^m.3. SS 35^m.5.