

No. 54.

1944.

Geodætisk Institut

Proviantgaarden, Copenhagen, Denmark.

Bulletin

of the seismological station

KØBENHAVN

$\varphi = 55^{\circ}41' N.$ $\lambda = 12^{\circ}26' E.$ $h = 13$ m

Lithologic foundation: chalk

Instruments:

Galitzin-Wilip seismographs.

Constants:

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Component	<i>l</i>	<i>A</i> ₁	<i>T</i> ₁		μ^2	<i>T</i>	<i>k</i>
	cm	cm	sec			sec	
<i>N</i>	12.5	100	12.59		0	12 ¹ / ₂	105
<i>E</i>	12.5	100	12.60		0	13	105
<i>Z</i>	14.5	100	11.52	¹ / ₁ — ¹⁶ / ₃	—0.1	10	90
				¹⁶ / ₃ — ³¹ / ₁₂	0.1	7	90

Wiechert 1000 kg. horizontal seismograph.

Wiechert 1300 kg. vertical seismograph.

Constants:

Component	<i>T</i>	ν	ϱ	<i>V</i>
	sec		mm	
<i>N</i>	9.0	5	0.8	185
<i>Z</i>	6			

E and *Z* were not in good working order and repairs could not be made. ¹/₁—¹⁰/₃ *E* did not record, and on November 24th recording of both *N* and *E* was stopped.

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

Benioff vertical seismograph, $T_1 = \frac{1}{4}^s$ $T = 1^s$.

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			P or P'	S					
	1944		m s	m s	m s	m s	h m	°	
1	Jan. 2	11	e 4 38	8 20				21	
2	5	5	i e 10 0						
3	5	5	e 10 43	14 12				19	
4	5	7	i i 48 58	52 59					
5	5	21	e 25 49	36 46	e 25 51	29 35		91	Deeper than normal.
6	10	20	e 22 47	33 45	26 12	33 35		91	31 ^m 23 ^s . 36 ^m 22 ^s . 38 ^m 23 ^s . Off Sumatra.
7	16	0			8 40	15 42			Mexico.
									18 ^m 4 ^s . 23 ^m .5. Destructive in Argentina.
8	Febr. 1	3	e e 27 3	i 30 50	i 27 9	i 27 15		21	27 ^m 20 ^s . Turkey.
9	1	5	e e 27 46						Japan.
10	2	3	e 37 40				44		
11	3	12	i 25 23						Canada.
12	3	20	i 47 24						
13	4	23	i 49 21				55		
14	5	17	e 32 19	42 30	35 26			81	Formosa.
15	10	12	i 9 53	13 42				21	Turkey.
16	11	9	i 49 15						
17	15	5	i e 45 4	49 37				26	North Atlantic.
18	18	9	i - 30 48						
19	18	19	i 29 51						
20	19	11	e e 40 30	44 20	44 30			21	North Atlantic.
21	19	13					57		
22	20	19	e 36 43				42		
23	20	19	i 40 50						
24	21	15	e e 31 11				36		
25	21	17	e 38 25	42 18			44	22	
26	23	1	e e 33 58	37 52			39	22	
27	23	12	e 36 38						
28	29	3	i - 55 14	i 66 26	59 44	64 15			i 65 ^m 35 ^s . 67 ^m 45 ^s . 73 ^m 16 ^s . Depth 200 km.
29	29	16	i i 39 47	i 49 22	40 30	42 40		75	Peru. No G. Z record.
									43 ^m 21 ^s . 49 ^m 43 ^s . 54 ^m .2. Indian Ocean.
									No G. E and Z records.
30	March 5	17	i 29 16				63		
31	6	20			30 41		40		
32	6	23			38 0		48		
33	7	5	i 1 8						
34	8	23			20 25		86		
35	9	22	e e 12 5 +	18 51	i 12 7	14 7		46	Turkistan.
36	9	22	e i 21 10 —		i 21 12	i 23 5			e i 23 ^m 21 ^s . Superposed on preceding shock. Turkistan.
37	10	6	- i 51 40 +	61 17	54 27	61 41	1.3	75	Off Japan.
38	15	5	- i 11 50	18 13	13 26			43	
39	15	9	- i 8 57 —						
40	21	22	e e 21 33 +		24 21				Japan.

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			P or P'	S					
			<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>h m</i>	°	
41	1944 March 22	0	<i>ee</i> 61 47		57 21	62 49	97		65 ^m 10 ^s . 67 ^m .8. 68 ^m 39 ^s . 69 ^m 13 ^s . 70 ^m 28 ^s . 70 ^m 58 ^s . 71 ^m 24 ^s . 71 ^m 59 ^s . Phases clearly marked. Depth about 220 km. Flores Sea.
42	31	3			10 50	17 43	.8		19 ^m 57 ^s . 26 ^m 14 ^s .
43	31	20			59 14				
44	April 5	4	<i>ee</i> 45 5	48 46	<i>i</i> 45 8		51	20	Turkey.
45	5	6	<i>ee</i> 56 35						
46	7	13	<i>ee</i> 45 56		55 30	57 16			
47	16	9	<i>i</i> 57 9						
48	16	10	<i>i</i> 37 31						
49	26	2	<i>ee</i> 12 7		8 38	13 6	44		19 ^m 16 ^s . 22 ^m 25 ^s . 28 ^m 41 ^s . North of New Guinea.
50	27	14	<i>e</i> 52 35		57 0	63 14	82		64 ^m 13 ^s . 64 ^m 38 ^s . 66 ^m 20 ^s . 72 ^m .3. 76 ^m .2. North of New Guinea.
51	May 6	0	<i>ee</i> 23 6	30 41			37	54	
52	14	9	<i>i</i> 10 13						
53	18	5	<i>e</i> 3 22		3.8	13.6			19 ^m 35 ^s .
54	19	0	<i>e</i> 39.4		39.8	47 3			49 ^m .2. 55 ^m 36 ^s .
55	20	22	<i>i</i> 41 7				49		
56	20	23	<i>ee</i> 35 54				44		
57	21	0	<i>ii</i> 19 53	23 25			25	20	
58	21	0	<i>e</i> 42 22						
59	21	2	<i>e</i> 41 18				57		
60	21	4	<i>e</i> 52 27				70		
61	25	1	<i>ii</i> 25 4—		27.4	28 21			31 ^m 39 ^s . 46 ^m .5. South of Fiji Islands. Deep focus.
62	25	13	<i>ie</i> 17.5		18 10	18 37	48		<i>eP</i> quite small. 13 ^m .7. SKS 24 ^m 16 ^s . 25 ^m 14 ^s . PS 28 ^m 7 ^s . 30 ^m .5. 33 ^m .5. SS 34 ^m 23 ^s . 36 ^m .2. 37 ^m .8.
63	27	23	<i>ee</i> 57 19	61 19	61 28		64	22	Asia Minor.
64	29	15	<i>i</i> 46 58						
65	30	10	<i>ie</i> 7 35		<i>i</i> 7 57	17 3			
66	June 2	2	- <i>e</i> 38 12		38 27				
67	3	4	- <i>e</i> 22 12	<i>i</i> 31 55					Region of Guam. Deep.
68	4	13	<i>ee</i> 36 51	46.0			64	70	
69	4	17	<i>e</i> 27 20				.9		
70	4	19	<i>ee</i> 47 39				1.2		
71	4	20	<i>i</i> 5 26						
72	5	0	<i>e</i> 55 54				83		
73	6	11	<i>i</i> 59 44		<i>i</i> 59 59		1.4		
74	7	10	<i>ii</i> 26 50	36 35				76	
75	9	20			54 22	70 25			
76	10	14			43 8		52		

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			P or P'	S					
	1944		<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>h m</i>	°	
77	June 15	1			26.1		29		
78	16	4	- <i>i</i> 29 12 +	39.0			56	77	Japan.
79	16	22	- <i>e</i> 4 30		7 57	15.1			16 ^m .4. Mexico.
80	18	2	<i>i</i> 0 28						
81	19	19	<i>e</i> 39 19	49 28			70	81	
82	20	12	<i>i i</i> 28 8 —				53		
83	21	11	<i>e</i> 17.9		20 53	30.0	62		Loyalty Islands region.
84	25	4	<i>e i</i> 20 55	24 39	<i>i</i> 20 58		26	21	Turkey.
85	25	7	<i>e e</i> 2 23	6 11			8	21	»
86	25	14	<i>e</i> 37.0		40 11	45 1	80		Loyalty Islands region.
87	25	17	<i>e i</i> 52 44	61.3	54 2	55 5		64	62 ^m 51 ^s . Atlantic Ocean.
88	27	12	<i>i e</i> 31 29						
89	28	8	<i>e e</i> 11 38 +	22 24	22 3	28.3	35	88	31 ^m .9. Central America.
	July								
90	5	10			22 41				149 ^h –549 ^h no records.
91	10	6	<i>e</i> 26 4	30.0			32	22	
92	10	12	<i>i</i> 42 50						
93	10	13	<i>e</i> 44 9		47 32	48 49			
94	10	16	<i>e</i> 7 32		<i>e</i> 7 44	11 26			
95	11	19	<i>i i</i> 50 30						
96	13	10	<i>e</i> 57.8	67 53				80	
97	16	10	<i>i e</i> 37 50		<i>i</i> 40 50				
98	17	10	<i>i e</i> 59 46	64 37	61 10	61 38		28	62 ^m 27 ^s .
99	19	10	<i>e</i> 33 45	43 41			1.1	78	<i>P</i> small, uncertain. Japan.
100	20	10	<i>i e</i> 42 18	46 24			49	23	Asia Minor.
101	20	20	<i>i e</i> 19 31	29 41			.8	81	
102	21	19	<i>i</i> 3 6	13 17			33	81	
103	23	12	<i>i i</i> 5 29		7 2	11 51			
104	23	12	<i>i</i> 9 20						
105	23	13	<i>i</i> 48 55						Seismic?
106	27	0	<i>i i</i> 15 35	24 42	15 53	25 30	38	71	Aleutian Islands. Depth about 70 km.
107	27	0	<i>i</i> 43 29						[<i>P</i> (+ 1.9, <i>x</i> , — 2.1; — 2.7, <i>x</i> , + 3.9).
108	27	8	<i>e e</i> 30 21 —	39 53				74	Bay of Bengal.
109	29	22	<i>i</i> 44 47				1.1		
110	30	4	<i>i i</i> 5 11	8 53	5 27	9 34	11	21	<i>P</i> (— 1.2, 0.5, — 1.0; 4.5, — 2.0, 3.0).
	Aug.								
111	2	23			5 6	13 59			
112	7	3	<i>e e</i> 39 16 +	50 56	43 21	49 57			<i>e_E</i> 52 ^m .5. Off Peru.
113	8	8			52 50	62 21			
114	9	17	<i>e e</i> 41.4	45.8			48		
115	10	2	<i>e e</i> 4 5	13 15	13 22		26	70	Off British Columbia.
116	14	11		26 39	27 47				North of Kodiak Island.
117	14	14			45.0	45 15	1.1		
118	15	1			42.8		1.1		
119	15	12	<i>e</i> 1 15		4 27	5 9			11 ^m 42 ^s . Mariana Islands.

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			P or P'	S					
120	1944 Aug. 18	10	<i>m s</i> <i>i i</i> 44 56	<i>m s</i> <i>i</i> 54 30	<i>m s</i> <i>i</i> 45 29	<i>m s</i> 47 50	<i>h m</i> 1.2	° 77	48 ^m 18 ^s . 54 ^m 55 ^s . 55 ^m 26 ^s . 59 ^m .3. Depth ca. 140 km. Japan.
121	21	20	<i>i e</i> 25 6	33 42				64	Atlantic Ocean.
122	22	19			29 21		65		
123	23	21	<i>e</i> 34 31					24	
124	24	16	<i>e</i> 3 56	8 9	<i>i</i> 4 2			84	Off Mexico. Depth ca. 90 km.
125	24	23	<i>e</i> 50 24	60 42	50 48	54 5			
126	30	1			37.0				
127	Sept. 3	19			31 44				
128	3	23	<i>i</i> 5 5	8 55			12	21	
129	11	9	<i>e</i> 59 24		63 39	65 52			SKS 70 ^m 0 ^s . 70 ^m 43 ^s . 71 ^m .0. PS 72 ^m 32 ^s . P small, uncertain. Molucca Islands.
130	14	6			56.9	71.2	1.5		
131	19	13	<i>e e</i> 17 6		<i>e</i> 38 28		41		
132	20	18			34 1	34 35	43	69	Off Kamchatka.
133	23	12	<i>e i</i> 24 19	33 21	<i>i</i> 6 49			69	»
134	24	11	<i>i i</i> 6 46	15 50				69	»
135	25	16	<i>- e</i> 26 41	35 48				45	<i>e_E</i> 39 ^m 54 ^s . 42 ^m 57 ^s .
136	27	16	<i>e</i> 33 9	39 45	<i>i</i> 33 13	34 59	46		Aftershock.
137	27	17	<i>e</i> 1 5				16		
138	30	4	<i>- e</i> 18 9	21 50				20	P small, uncertain; possibly earlier than read.
139	Oct. 2	17	<i>i e</i> 34 21		<i>i</i> 34 59	35 17			44 ^m 41 ^s . 45 ^m 45 ^s . Depth ca. 150 km. Guatemala.
140	2	20	<i>- i</i> 41 19	50 49	<i>i</i> 41 35	<i>i</i> 44 7		75	51 ^m 21 ^s . 51 ^m 43 ^s . 55 ^m 39 ^s . Depth ca. 70 km. Japan.
141	5	17			<i>e</i> 16 15				
142	5	17	<i>e i</i> 47 49		51 4	51 31	89	19	Southeast of Loyalty Islands.
143	6	2	<i>e e</i> 39 4	<i>i</i> 42 28	<i>i</i> 39 9	39 50			Western Turkey.
144	7	15	<i>i</i> 38 26						
145	7	21	<i>e e</i> 38 43	42 12			44	19	
146	14	2			48 5		75		Some preceding movement.
147	14	6			14 5				
148	14	20			40 50		1.1		
149	17	18	<i>i e</i> 46 20 —	53 53	<i>i</i> 46 22	48 14	62	54	55 ^m .0. 57 ^m 42 ^s . Western China.
150	18	12	<i>e e</i> 58 41						
151	22	18	<i>i i</i> 58 27						
152	23	23	<i>e</i> 53 11		56 45	63 43			64 ^m 8 ^s . 65 ^m 21 ^s . Ecuador.
153	24	17			49 36				
154	29	0	<i>i e</i> 20 59	28 32	23 3	24 10	37	54	29 ^m .0. 30 ^m 53 ^s . 32 ^m 52 ^s .
155	30	18			32 35		37		
156	31	14	<i>i i</i> 47 48	51 50	52 10		55	23	

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			P or P'	S					
	1944		<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>m s</i>	<i>h m</i>	°	
157	Nov. 6	5	<i>ee</i> 58 32	66 11				55	
158	10	13			36 57				
159	14	23	<i>ee</i> 25 50		28 34	32 3			33 ^m 18 ^s . 35 ^m 20 ^s .
160	15	21	<i>i</i> 0 53		4 54	11 29			12 ^m 23 ^s . 13 ^m 41 ^s . Off Mindanao.
161	16	12	<i>e</i> 30 13		32 35	33 45	70		35 ^m 42 ^s . 37 ^m 37 ^s . 42 ^m 45 ^s . 44 ^m 22 ^s .
162	24	5	<i>ee</i> 8 8		8 14	<i>i</i> 8 53			Queen Charlotte Islands region.
163	30	2	<i>i</i> 5 14						<i>i</i> 11 ^m 35 ^s . 11 ^m 50 ^s . 12 ^m 35 ^s . 23 ^m 53 ^s . 29 ^m .4.
	Dec.								Depth ca. 170 km. New Hebrides Islands region.
164	1	4	<i>ii</i> 18 56						
165	7	4	<i>-e</i> 47 41 +	<i>i</i> 57 59	<i>i</i> 47 58	50 59		83	53 ^m 0 ^s . 54 ^m 11 ^s . Destructive in Japan.
166	8	6			58 10	61 32			
167	8	18			43 10	43 22	62		Japan.
168	10	5	<i>ei</i> 24 35		28 18	35 3			35 ^m 33 ^s . 36 ^m 45 ^s . 41 ^m 30 ^s . Indian Ocean.
169	10	16	<i>ee</i> 44 20		47 5	47 58			60 ^m 42 ^s . 65 ^m 21 ^s . New Hebrides Islands.
170	12	4	<i>-i</i> 28 39 +	38 3	33 5			73	Aleutian Islands.
171	12	10	<i>ee</i> 37 14	47 14			1.1	79	
172	17	7			40 54		1.0		
173	19	14	<i>ee</i> 20 3	29 5	<i>i</i> 20 6	36 48	43	69	Seismic?
174	19	20			<i>i</i> 48 48				
175	20	0					40		
176	20	21	<i>ie</i> 4 58						
177	21	20	<i>ee</i> 33 35		58.0	67 30			
178	21	22	<i>ie</i> 47 39						
179	22	16	<i>ie</i> 8 23						
180	22	22			57 1	57 50			59 ^m 43 ^s . 60 ^m 2 ^s . Chile.
181	24	14	<i>i</i> 57 18						
182	29	11	<i>i</i> 14 36						
183	30	0	<i>i</i> 37 35						