

Geodætisk Institut

Proviantgården, Copenhagen, Denmark

Bulletin

of the seismological station

KØBENHAVN

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

Lithologic foundation: chalk

No. 58. Jan.—Dec. 1948.

Instruments:

Galitzin-Wilip seismographs.

Constants:

Component	l	A_1	T_1		μ^2	T	k
	cm	cm	sec			sec	
N	12.5	100	12.64		0.07	12.6	103
E	12.5	100	12.69	$\frac{1}{1} - \frac{20}{2}$	0	11	99
				$\frac{21}{4} - \frac{31}{12}$	0	12.4	98
Z	14.5	100	11.56	$\frac{1}{1} - \frac{10}{6}$	0	9.5	90
				$\frac{8}{10} - \frac{31}{12}$	0	9.5	85

From $\frac{10}{6}$ to $\frac{13}{8}$ Z was not recording.

Wiechert 1000 kg. horizontal seismograph.

Wiechert 1300 kg. vertical seismograph.

Constants:

Component	T	ν	ϱ	V
	sec		mm	
N	8.2	4.9	0.7	200
E	8.6	4.3	0.7	200
Z	5.6	$5\frac{1}{2}$	0.2	160

Milne-Shaw seismograph, E component, with the approximate constants $T = 12^s$ $\nu = 20$ $V = 300$.Benioff vertical seismograph, $T_1 = \frac{1}{4}^s$ $T = 1^s$. $V_{\max} = \text{ca } 30000$.
 UNION GÉODÉSIQUE ET GÉOPHYSIQUE
INTERNATIONALE
BUREAU CENTRAL DE SISMOLOGIE
38, BOULEVARD D'ANVERS
STRASBOURG

København

No.	Date	Hour	Forerunners				L	Δ	Remarks
			P or P'	S	m s	m s			
1	1948 Jan 4	9	i i 15 8-		17 26	18 17	h m	°	19 ^m 12 ^s , 21 ^m .6, 32 ^m 11 ^s . SS 36 ^m .5. Deep focus. Tonga Islands region.
2	6	17	e 36 11	46 47	38 45	39.6		86	49 ^m 34 ^s . SS 52 ^m .9. Possibly 2 earth- [quakes, the first one in Mexico.
3	9	15			i 0 10				Small preceding movement.
4	10	5			61.7				Aleutian Islands.
5	16	11	e 19 58	29 26			46	73	
6	17	2			34 11			37	
7	17	7	e 24 51		38 38				P small, uncertain. Marianne Islands region.
8	20	10			e 4 32				G records masked by microseims.
9	20	20			i 35 48				Large swings.
10	22	14	i i 14 48		e 15 25	i 15 30			Very large on BZ. Tonga Islands.
11	24	17	e 59 53		e 59 57	e 60 6			PP 63 ^m 15 ^s . SKS 70 ^m 25 ^s . PS 71 ^m 58 ^s . Philippine Islands. P(x, -2.3, +4.0; +2.5, +5.2, -9.7), per. 12 ^s .
12	26	14			27 41	34 22			34 ^m 41 ^s . PS 36 ^m 3 ^s . Aftershock.
13	27	12	i i 16 52		i 16 57	i 19 43			iPP 20 ^m 18 ^s . 22 ^m 23 ^s . 23 ^m 13 ^s . 23 ^m 27 ^s . 26 ^m 37 ^s . 33 ^m 25 ^s . Depth about 600 km. [Tonga Islands region.
14	27	12	i 27 53						
15	28	2	i 7 59						
16	28	4			5 55	14 17			16 ^m 2 ^s . 19 ^m .9.
17	28	15	i i 59 9	65 22	60 50	68 6		41	68 ^m 28 ^s . No GZ record. P possibly 2 ^s earlier on WZ. Turkestan.
18	30	8	e 52 32	59 29	i 52 39	59 44		48	Arabian Sea.
19	Febr. 4	3	i 20 11						
20	4	4	i 56 8						
21	6	23					.1		
22	9	13	i i 3 16	7 15	7 40			22	P(-7, +4 ¹ / ₂ , -6 ¹ / ₂ ; +26, -14, +24), per. (Z) 5 ^s . Strong microseisms. [Aegean Sea.
23	10	16			e 3 57			11	
24	11	15	e 52 8						
25	11	22	e 36 14						
26	12	22						39	Strong microseisms.
27	13	5	i e 6 0	13 30	i 6 6				Tibet.
28	15	18	e 59 56	64 2	e 59 58	64 26			Aegean Sea.
29	18	20	i i 35 41	40 29	40 16	40 41		28	Arctic Sea.
30	28	2	e e 9 5+	18 10	22 37			69	Queen Charlotte Islands region.
31	March 1	1	- e 26 40		30 19	31 16			
32	3	9	e e 22 21	32 42	i 22 23	i 32 48		83	PPP 33 ^m 23 ^s . SKS 37 ^m 21 ^s . PS 40 ^m 6 ^s . PPS 41 ^m 21 ^s . SS 46 ^m 9 ^s . Moluccas.
33	4	2	e 6 36						Luzon.
34	5	20	e 7 34						
35	6	20	e 17 49						
36	7	19	e e 1 15	10 18	i 1 17		25	69	Crete, Kamchatka.

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No.	Date	Hour	Forerunners				L	Δ	Remarks
			P or P'	S	m s	m s			
37	1948 March 8	16					h m	°	
38	9	19					1.1		
39	10	11			17 20	18 31		40	SS 23 ^m .5. SSS 27 ^m 45 ^s . New Guinea.
40	13	20			52.9	68.0			Strong microseisms.
					28.2	29 30			Strong microseisms.
41	14	21	e 25 41		i 25 43		.7		
42	14	22			21 30				
43	15	2					17		
44	15	2	i 27 50						
45	15	2	i 51 24						
46	15	11	e 35 52	45 50	i 35 55	38 52		79	Japan
47	15	19	i 3 56				.6		
48	15	21					46		
49	16	2	e e 53 5	63 26	e 53 12		84	83	Luzon.
50	17	20					.5		
51	18	23	i e 22 19				.6		Tonga Islands.
52	21	22							
53	23	18	e e 22 19		i 22 41				Deep focus. Masked by microseisms.
54	24	5	e e 33 9+		37 4	43 41			PS 44 ^m 54 ^s . Sumatra.
55	24	22					.7		
56	26	3	e 5 58				11		
57	26	13			41 9	47 44			PS 50 ^m 2 ^s . Celebes.
58	29	2	i e 37 52	41 54				23	Turkey.
59	29	3	e 8 30						
60	29	10	i 27 32	31 22	i 27 35	i 27 39		21	31 ^m 30 ^s . 31 ^m 40 ^s Off Crete.
61	29	12	i i 10 14				53		
62	April 4	5					4		
63	9	15					.4		
64	12	6			37 51	39 10		67	39 ^m 21 ^s . Off Guatemala.
65	12	9			9 35				Recording interrupted 9 ^h 11 ^m -15 ^h 41 ^m .
66	15	19			i 53 37		1.5		
67	17	16	i i 23 36	i 33 34	26 34	28 34		79	SS 38 ^m 49 ^s . 40 ^m 59 ^s . 42 ^m 38 ^s . No GZ record. P(-6.0, -5.0, x; +9.0, +9.1, x) per. 8 ^s . Japan.
68	18	12			39 14	46 54			48 ^m 43 ^s . 49 ^m 40 ^s . No GZ record. New [Guinea.
69	20	4	i 48 54						
70	21	15			44 0				
71	21	20	i i 33 20	i 42 26	35 50	39 26		69	ScS 43 ^m 23 ^s . eP 33 ^m 15 ^s quite small. iP(x, -2.2, -1.9; x, +6.0, +7.0) per. 6 ^s . Near northeast coast of Dominican [Republic.
72	21	21	i 10 29						Aftershock.
73	22	0	e 39 33	i 48 41	i 39 36	49 32		69	Small preceding movement.
74	22	5					.3		Greece.
75	22	10	e e 46 53+	50 8	48 9	i 50 21		18	Greece.
76	22	15					43		Greece.
77	22	16					5		Greece.
78	22	17					8		Greece.

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No.	Date	Hour	Forerunners				L	△	Remarks
			P or P'	S	m s	m s			
79	1948 April 23	5					51	Greece.	
80	23	12	e e 1 33-	10 40	11 36	15 14	.4	69 Near northeast coast of Dominican Republic.	
81	23	20	e 22 40	26 44				23	
82	24	12	e 32 36		i 32 43			41	
83	26	7						40	
84	26	9						46	
85	26	9	e e 38 10						
86	30	14	e e 56 10	60 7					
87	May 1	2					12	Small preceding movement.	
88	2	12					41		
89	3	12					.9		
90	3	14			1.9	9 5	.6	PS 11 ^m 19 ^s . SS 16 ^m 9 South Atlantic.	
91	6	3	i 10 45		i 10 50				
92	6	9	i 0 20						
93	7	18	i 46 12		i 46 18				
94	8	2	i i 57 59	67 24				83	
95	9	2	e e 21 5	31 3	21 17	24 6	47	79 Felt in Denmark. Deeper than normal. Kurile Islands. i 31 ^m 22 ^s . SS 36 ^m 16 ^s . Japan.	
96	9	8	e i 35 49						
97	11	9	i i 9 27 +		i 9 44	13 14			
98	12	1	- i 8 54 +	i 18 44	11 48	19 2	33	77 SKS 20 ^m 5 ^s . 21 ^m 3 ^s . 22 ^m 26 ^s . 22 ^m 54 ^s . Depth about 70 km. Peru. SS 23 ^m 36 ^s . No GZ or BZ records. Japan.	
99	12	12			9 18		13		
100	12	14					.9		
101	13	21	e 2 25				32		
102	14	0	e e 8 21		9 36	i 14 27			
103	14	13	i e 31 5	40 56	34 2	45.8	1.0	78 16 ^m 15 ^s . Deeper than normal. Moluccas. Japan.	
104	14	18	e e 51 16	60 46	i 51 19		74	Pacific Ocean.	
105	14	19	i 10 4		i 10 15				
106	14	22	i i 42 57 +	i 52 5	47 14	52 57		70	
107	14	23	e 10 58						
108	15	0	e 43 28						
109	15	2	i i 52 56 +		i 53 14				
110	15	18					51		
111	16	21	i e 28 32	38 24	e 28 41		57	78 Japan.	
112	17	17	i e 59 42	68 49	i 59 45	i 60 0		70 69 ^m 12 ^s . South of Alaska.	
113	19	7	i 47 33						
114	19	17	e 57 39				1.1		
115	20	7	e 17 56		i 17 59		23		
116	22	5	i 12 50				19		
117	22	20					.5		
118	23	4			34 12	i 34 51		Masked by microseisms. 35 ^m 54 ^s . 37 ^m 16 ^s . New Hebrides Islands region.	
119	23	9					51	Small preceding movement.	
120	25	7	e 22 2	30 47	i 22 19	i 22 23		66 PP 24 ^m 45 ^s . PPP 26 ^m 2 ^s . SS 35 ^m 36 ^s . SSS 38 ^m 4 ^s . China.	

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No.	Date	Hour	Forerunners				L	△	Remarks
			P or P'	S	m s	m s			
121	1948 May 25	15					.9		
122	25	16				34 40			
123	25	18				40.1			
124	26	3					15		
125	26	9	i 54 2	62 39				68 P possibly 4 ^s earlier than read. China.	
126	26	16				e 27 55		South of Alaska.	
127	27	7	i 37 6	i 36 54		31.9		34 Near Crete.	
128	28	14	e 56 47			40 55		82 Japan.	
129	29	4	i i 51 58-	54 22	i 52 6			39 Rumania. Deep.	
130	29	14							
131	31	15				9 7			
132	31	22					45	Small preceding movement.	
133	June 1	3							
134	1	19	e 8 25	42 11				80 Indian Ocean. North of Sumatra.	
135	1	20	i 27 20	18 30	e 8 32	19 15			
136	2	13	e 51 45						
137	7	7				62 15		19 Off Guatemala. Rhine valley.	
138	8	3				e 17 42		1.0	
139	13	6				44.1			
140	14	21	i 55 13			39.7		Italy. No E and Z Galitzin records.	
141	15	10					5		
142	15	11	i e 56 46-	66 40	59 43	72.0	.9	78 i i 56 ^m 48 ^s . Japan.	
143	15	21	i 14 28	24.7			45	82	
144	16	0	i 24 20		i 24 31		.9		
145	17	6	e e 56 52	60 33			63	20 Greece.	
146	17	14	- e 14 52	19 50				29 Iran.	
147	18	0					2		
148	18	1	i 12 47			14 23	1.3		
149	18	8				19 47	2		
150	18	11					.2		
151	18	18	i 51 32	57 8			1.1	35 Iran.	
152	19	17					34		
153	19	23				8 50	12	Azores.	
154	20	0	i 44 39						
155	20	15		8 17			14	Turkey. Celebes Sea.	
156	21	12				23 16	29 47		
157	22	3					.9		
158	23	23	i 31 56						
159	24	0					.1		
160	24	2					16		
161	27	0				28 12			
162	27	13	- e 0 30-	10 32	32 17	3 34		80 China. Off north coast of Honduras.	
163	27	15	i 54 1						
164	27	21	i e 50 24	59 25				69 South of Alaska.	
165	28	7	e e 25 22	35 10	i 25 24	i 25 39	47	77 i 25 ^m 51 ^s . i _N 35 ^m 39 ^s . e _N 37 ^m 56 ^s . [Japan. Disturbed.	
166	28	8	e e 37 36						

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No.	Date	Hour	Forerunners				L	△	Remarks
			P or P'	S					
			m s	m s	m s	m s	h m	°	
167	1948 June	29 10	e 47.9		50 53	i 51 40	20	26	54 ^m 6 ^s . SS 69 ^m .2. Samoa Islands region.
168	29 16	- i 11 59		i 16 30	i 16 45		30	18	Caucasus region.
169	30 12	e i 25 21 +		28 37	28 46				Ionian Sea.
170	30 19					.8			
171	July	2 3					14		Small preceding movement.
172	3 15					.9			Disturbed.
173	4 23			9.6					
174	5 14	- e 1 2*		7 12	2 41	7 35	41	41	9 ^m .6. 10 ^m 48 ^s . Persia.
175	7 2	i i 31 19 +		41 18	46 31		61	79	Japan.
176	8 12	e 38 36		41 41	i 38 39		43	17	Greenland Sea.
177	11 16						35		
178	14 22			48.9	59 21		82		65 ^m .4. New Guinea.
179	15 11			26 12	28 16		45		SS 33 ^m 23 ^s . Pacific Ocean.
180	16 3						32		
181	16 7			35 29					Near coast of Guatemala.
182	16 7	e e 32 13		42 37	42 45				SS 48 ^m .3. Near coast of Guatemala.
183	18 6								Near Celebes. No time-marks.
184	18 20						57		
185	18 23						.4		Some preceding movement.
186	19 18						16		Italy.
187	19 18						32		Italy.
188	20 1						37		Some preceding movement. No distinct phases.
189	20 11			26 46	27 47		36		28 ^m 13 ^s . No GN or BZ records. Off coast of Peru.
190	22 18						13		Disturbed.
191	23 12			41.3	50.5		77		New Guinea.
192	23 21	e e 10 0		19 22					P small, uncertain.
193	24 6	i i 8 10 +		i 12 14					P and S very large. Deeper than normal.
194	24 14	i 41 45							[Near southwest coast of Crete.
195	25 3	i 36 56							
196	25 21	i 55 28							
197	26 11	e 31 26					41		
198	27 6						7		
199	28 8						24		
200	28 14			45 18					
201	28 15			29 5*					
202	29 0	i 44 41		i 44 44			1.2		Japan.
203	29 0	i 48 29		i 48 36					Japan.
204	29 8	i 59 47							
205	29 17	i 34 5							Seismic?
206	30 2	i 55 50							Japan.
207	30 3	e e 37 7		42 38			45	34	Persian Gulf.
208	30 22						2		
209	31 19			27 37			43		
210	Aug. 4 23			40 33			1.1		

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			P or P'	S					
			m s	m s	m s	m s	h m	°	
211	1949 Aug.	7 14	e 52 28	62 25					Japan. P small, the reading uncertain.
212	8 17						.9		Disturbed.
213	10 13		i i 31 41	35 39			38	22	Turkey.
214	11 10		i e 48 52	59 16	52 8	59 3	68	84	60 ^m 11 ^s . SS 64 ^m 36 ^s . Southern Mexico.
215	12 4				35 13		39		
216	12 22				45 2	52 4	1.4		
217	14 2						.4		
218	17 5						.5		
219	17 17		e 21 29	31 0			51		P small, uncertain. Japan.
220	17 19						44		
221	18 19		e 11 35	16 1			25	25	Anatolia.
222	18 21		e e 16 1		18 58		14		Adriatic Sea. Lg 20 ^m 29 ^s . (ca. 4 ^s per.).
223	19 14		i e 0 56	i 9 7	5 4	9 38			10 ^m 35 ^s . Deeper than normal. Alaska.
224	19 20		i e 11 58	22 47	22 29	24 0	38		Deeper than normal. South of Panama.
225	20 19				4.0	10 21	.6		12 ^m 39 ^s . East of Mindanao.
226	21 3						34		
227	21 8				51 53			14	Lg 52 ^m 49 ^s . (ca. 4 ^s per.). Adriatic Sea.
228	22 23								Lg 24 ^m 27 ^s . (ca. 4 ^s per.). Some preceding movement. Adriatic Sea.
229	23 11		i e 54 44	58 8			60	19	Arctic Sea, north of Norway.
230	24 6						.5		
231	24 8						.8		
232	25 6		- i 23 25 -		27 38	34 5			35 ^m .4. PS 36 ^m 45 ^s . SS 42 ^m .4. Argentina.
233	27 10		e 47 36 -	50 22			51	15	Albania.
234	27 11						32		Albania.
235	27 17				12 52	13 45			15 ^m 57 ^s . Argentina.
236	28 2		e 38 49	i 47 36	51.9		63	66	Kamchatka.
237	28 12		e i 44 2 +						Tonga Islands.
238	29 15						.4		
239	29 16						50		
240	29 17		e 57 19		60 15	61 0			67 ^m 24 ^s . Samoa Islands region.
241	29 23		e e 41 50	51 54	52 29	57.1	70	80	South of Japan.
242	30 1		e 42 29	46 2			47	20	North of Iceland.
243	30 7						.7		
244	30 21		i 47 41				58		
245	31 10						.2		
246	Sept. 1 20						.0		
247	1 20				16 42		.6		
248	2 23		i i 48 12 +	59 34	52 4	52 52	80	97	SKS 58 ^m 45 ^s . PS 60 ^m 53 ^s . e _E 63 ^m .4. SS 66 ^m .1. Off Mindanao.
249	4 15				34 13				Disturbed. Indian Ocean.
250	4 17						57		
251	5 10		i i 12 3						
252	6 8				28.8	35 8	60		36 ^m 21 ^s . PS 38 ^m 5 ^s . Chile.
253	6 9						50		
254	6 16				58 16		1.3		Off Guatemala.

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			P or P'	S					
255	1948 Sept. 7	8	m s i i 23 5 +	m s i 29 19	m s i 23 48	m s 24 9	h m	43	24 ^m 49 ^s , 25 ^m 42 ^s . sS 30 ^m 32 ^s . SS 32 ^m 28 ^s . 32 ^m 52 ^s . Depth about 200 km. Hindu Kush.
256	8	15	i i 28 50 +		32 2	35 25			35 ^m 36 ^s . 36 ^m .0. 39 ^m .0. 39 ^m 20 ^s . 40 ^m 42 ^s . 42 ^m 16 ^s . 43 ^m 8 ^s . 44 ^m .6. 51 ^m .0. P' exceptionally large. Tonga Islands.
257	8	16	i 22 45						Repetition.
258	8	16	e 32 4						Repetition.
259	8	16	i 48 10						Repetition.
260	8	17	e 6 52						Repetition.
261	8	19	e 45 52						Repetition.
262	8	20	i 19 21						Repetition.
263	9	6	i 28 48						Repetition.
264	9	14					1.4		Repetition.
265	10	12	i 10 25	16 36				41	Turkestan.
266	10	14	i i 0 9	9 38	5 58	10 32		74	SS 14 ^m 36 ^s . Japan.
267	11	8	i e 57 6	60 39	i 57 35				Deep focus. Gulf of Corinth.
268	12	3	i i 39 23				1.5		Tonga Islands.
269	12	14					7		
270	13	21			31 9		.9		
271	15	4					50		
272	16	8					52		
273	19	6					51		
274	20	18					.2		Strong microseisms.
275	21	17	i 45 59	56 4	i 46 12	57 7			
276	21	17	i e 58 30 -	62 17			64	21	Greece.
277	23	1	e e 4 19	13.9			31	75	Japan.
278	23	15	e 22 58				52		Disturbed. Strong microseisms. P uncertain.
279	24	21			1 34	11.1	37		[certain.
280	24	23	e 40 28		50.9		70		Philippines.
281	25	4					.0		
282	26	1	e 18 14		20 8	20 35	1.0		P' small, the reading not certain.
283	26	8					28		[Solomon Islands.
284	28	21	i e 47 35 +	i 56 23	i 47 38	i 47 42			57 ^m 1 ^s . SS 60 ^m .6. SSS 64 ^m .0. Burma. Deeper than normal.
285	Oct. 1	3					54		
286	4	6	e 9 39				37		
287	5	20	i i 19 3 -	24 35	i 19 7			35	Iran.
288	5	22	i 47 45						Iran.
289	6	1	i e 31 43	37 19					Iran.
290	7	1	e 29 54				57		
291	7	19	i 1 37						
292	8	9	i 18 28		i 18 41				No Galitzin records.
293	8	19	i 13 2	22 8			37	69	China.
294	10	2	e 17 46				42		P possibly earlier than read, no clear onset.
295	10	17	i i 47 57 -	51 53	i 48 0	52 10	54	22	NW of Crete.



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No.	Date	Hour	Forerunners				L	Δ	Remarks
			P or P'	S					
296	1948 Oct. 13	14	m s	m s	m s	m s	h m	°	
297	14	22	i 1 3				31		
298	15	23							
299	18	9	i e 4 55 +	9 0	4.1	13.7	34		SS 20 ^m .5. South Sandwich Islands. Dodecanese.
300	21	5	e 2 40		9.5		13	23	P not clearly marked, the reading uncertain. No GZ record. Coast of Nicaragua.
301	21	5			22 25		59		Solomon Islands region.
302	23	5					.5		Masked by strong microseisms.
303	26	20					36		
304	28	20	i i 57 26	i 67 19	i 57 42	i 67 44	84		60 ^m 23 ^s . 62 ^m 14 ^s . Deeper than normal. Japan.
305	Nov. 1	12	i i 16 42 +	25 38	26 0		37	67	Kamchatka.
306	2	10					.5		
307	3	5	e 38 12				79		P' quite small, the reading uncertain. Later phases not clearly marked. Loyalty Islands.
308	4	13	i 28 52				1.0		Aleutian Islands.
309	8	18	i 10 1		i 12 43				
310	9	2	i 44 16						
311	13	4	e 49 10		i 49 28	i 49 33	54		e 49 ^m 42 ^s . The earliest reading uncertain. No GE record. Turkey.
312	13	23	8.5				1.1		South Pacific.
313	14	6	e 27 26	37 17	27 36	37 41	56	78	Japan.
314	15	5	i 1 13						
315	16	22	i 9 5						
316	19	1	e e 16 59		27 27	28.8	.7		Off Costa Rica.
317	20	10	e 21 16						
318	21	19	e e 29 29		32 43				Strong microseisms. New Hebrides.
319	22	9	i 18 26				44		P uncertain. Aleutian Islands.
320	22	23	e 38 42				48		North of Spitsbergen.
321	25	2	e 53 51						Seismic?
322	26	5	e 55 19		56 29	66 4		31	72 ^m .3. New Guinea.
323	27	17							
324	28	21	e 53 54	62.0	e 54 0	69.8			P uncertain, possibly several seconds earlier. Burma.
325	Dec. 4	0	e e 35 37		39 1	46 21			Strong microseisms. Off Mexico.
326	4	20	i 31 30		e 31 55				Seismic?
327	5	0					23		Strong microseisms.
328	5	6			70.8	77.1	1.5		Strong microseisms.
329	10	9	i 53 0				1.3		Kamchatka.
330	12	13					.9		Strong microseisms.
331	13	14					38		
332	14	16					53		
333	15	19	i e 24 11		i 24 25	34 21	56		34 ^m 45 ^s . 36 ^m 1 ^s . 40 ^m .6. Deep. Bonin Islands.

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No.	Date	Hour	Forerunners				L	Δ	Remarks
			P or P'	S					
	1948		m s	m s	m s	m s	h m	°	
	Dec								
334	16	7					85		
335	23	8	e i 52 7	61 2	65 20		75	67	Kamchatka.
336	23	16					7		
337	24	9					37		
338	26	7			38 43	45 51	57		Chile.
339	27	7	i 32 17						
340	30	23					1.4		Strong microseisms.

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Seismometric readings: Notation

p— normal first preliminary tremors, longitudinal waves.
p + — first wave, as recorded on Galitzin or Wiechert instruments, condensational (away from the epicentre).
p — — first wave, as recorded on Galitzin or Wiechert instruments, dilatational (towards the epicentre).
P (± *a*, ± *b*, ± *c*) — *a*, *b* and *c* are trace amplitudes in mm. of first swing on NS, EW and vertical component Galitzin records respectively. + indicates ground motion directed to N, to E or up, — indicates ground motion to S, to W or down. When a second set of amplitudes is given it refers to the second swing. If an amplitude is not measurable the number is replaced by *x*.
pp . . . — longitudinal waves reflected at the earth's surface.
S — normal second preliminary tremors, transverse waves.
SS . . . — transverse waves reflected at the earth's surface.
PS; *PPS*; . . . — waves reflected at the earth's surface which travel partly as longitudinal, partly as transverse waves.
SKS — waves which traverse the mantle as transverse waves but are refracted through the core with longitudinal oscillation.
PKS — waves which pass the mantle on one side of the core as longitudinal waves, on the other side as transverse waves and are refracted through the core with longitudinal oscillation.
SKKS — waves which traverse the mantle as transverse waves, are refracted through the core with longitudinal vibration and are reflected on its inner boundary.
L — long, or surface, waves; main phase.
i, *i* — sharply defined beginning of a phase as recorded on Benioff seismograph and other seismographs respectively.
e, *e* — gradual beginning of a phase as recorded on Benioff seismograph and other seismographs respectively.
Δ — arcual distance from the station to the epicentre.
* affixed to time of phase indicates that the beginning is in a time-mark.