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SEISMOLOGICAL BULLETIN

OF THE

METEOROLOGICAL OBSERVATORY

OF THE

GOVERNMENT OF KARAFUTO

1933

PUBLISHED BY THE METEOROLOGICAL OBSERVATORY,

OOTOMARI.

Symbols and Notations

0 = No Feeling I = Slight II = Moderate
III = Rather strong IV = Strong V = Very strong
VI = Disastrous

1. Phase of the Seismogram : —

P = 1st Preliminary tremors.

S = 2nd " " "

L = Principal Phase, Long waves.

M = Max. Amplitude in principal phase.

C = Prominent waves among after tremors.

F = End of perceptible movement

2. Nature of Motion : —

i = abrupt commencement, clearly defined.

e = gradual commencement not clear defined.

A_E = E—W component of A , and takes as positive eastward.

A_N = N—S component of A , and takes as positive northward.

3. Distance of epicenter.

Δ is calculated by the Omori's Formula.

SEISMIC BULLETIN

FOR 1933

OF THE METEOROLOGICAL OBSERVATORY OF OOTOMARI,
KARAFUTO, JAPAN.

$\varphi = 40^{\circ}39' N$

$\lambda = 142^{\circ}46' E Gr.$

Instrument: Omori's Seismograph

(Horizontal Pendulum)

$h = 35.7 m$

Underground: Tertiary

Wiechert Seismograph

	T_o	$\frac{r}{T_o^2}$	V
AN	22	0.01	60
AN	23	0.01	20
AE	23	0.01	20

	T_o	$\frac{r}{T_o^2}$	V	ω
AN	3.5	0.09	77	3.3
AE	3.5	0.07	77	3.0
Az	3.0	0.06	68	3.9

No.	Date	Phase	Time Greenwich			Period	Amplitude			Δ Km	Remarks	
			h	m	s		AE μ	AN μ	Az μ			
1	Jan. 4	ep	1	29	31.0	10.0		+ 91	1721	SErn of chichi-jima island.		
		L	1	33	23.0							
		M	1	33	35.0							
		F	2	11	48.0							
2	Jan. 7	ep	4	08	16.0	22.2			1091	Far EN Ern off cape Miyako.		
		S	4	10	43.0							
		M1	4	11	36.0							
		M2	4	14	05.0							
		M3	4	16	00.0							
		C	4	22	41.0							
F	5	45	45.0	14.4	-100							
3	Jan. 8	ep	6	30	31.5				868	Far East off river Mabuchi		
		S	6	32	28.5							
		F	7	20	20.5							
4	Mar. 2	P	17	32	45.6	3.5	+961		957	East of Sanriku.		
		P	17	32	55.6							
		S	17	34	54.6							
		ME	17	35	24.1							
		MN	17	35	40.6						3.0	+331
		ME	17	36	58.6						2.9	+961

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No.	Date	Phase	Time Greenwich			Period	Amplitude			Δ Km	Remarks
			<i>h</i>	<i>m</i>	<i>s</i>		AE μ	AN μ	AZ μ		
5	Mar. 2	ME	17	36	31.6	5.8	+948				
		MN	17	36	39.6	3.5		338			
		C	17	54	07.6	11.5	± 149				
		F	19	04	37.6						
		ep	20	44	40.5						After shock of Sanriku.
		F	20	50	13.0						
6	Mar. 2	ep	9	14	39.6				2342	Ditto	
		L	9	18	47.6						
		C	9	25	42.6						
		F	10	17	39.6						
7	Mar. 11	P	14	23	22.6				909	Ditto	
		S	14	25	24.1						
		M ₁	14	26	03.6	15.0	-275				
		M ₂	14	27	30.1	13.3	-108				
		M ₃	14	29	22.6	12.2	± 100				
		C	14	34	12.6	12.2	± 51				
		F	15	21	01.1						
8	Mar. 17	p	15	58	55.8				3080	A distant earthquake (Aleutian island)	
		S	16	01	50.3						
		L	16	04	57.3						
		F	16	26	12.3						
9	Mar. 17	ep	19	40	29.6					Ditto	
		F	20	12	42.6						
10	Mar. 18	ep	16	30	?						
11	Mar. 23	eP	17	49	28.6				1410	Ditto	
		S	17	52	38.6						
		F	18	10	21.6						
12	April. 1	P	16	00	45.6				1228	After shock of Sanriku.	
		S	16	03	44.6						
		F	16	20	31.6						
13	April. 3	ep	10	31	13.1					Near Nayoshi province.	
		F	10	33	12.6						
14	April. 9	P	2	48	25.0				1042	After shock of Sanriku.	
		S	2	50	45.5						
		M	2	53	35.0	15.0	-216				
		C	2	56	53.0						
		F	3	32	08.0						

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No.	Date	Phase	Time Greenwich			Period	Amplitude			Δ Km	Remarks
			h	m	s		AE μ	AN μ	Az μ		
15	April. 23	P	7	15	50.0	8.5		-280	571	After shock of Sanriku.	
		S	7	17	07.0						
		M ₁	7	19	55.0						
		M ₂	7	20	12.0						
		C	7	27	23.0						
		F	7	49	50.0						
16	April. 27	P	2	09	46.5	17.4		+362	4915	Karenko (Formosa)	
		S	2	15	41.0						
		L	2	20	28.0						
		M ₁	2	22	32.0						
		M ₂	2	27	10.0						
		C	2	28	29.0						
F	3	37	35.0								
17	April. 30	P	20	10	38.1				1318	Near Mt Tukuba.	
		S	20	10	35.8						
		M ₁	20	14	21.9						
		M ₂	20	15	11.9						
		F	20	15	35.5						
18	May. 24	P	4	36	49.7	2.7	±812		345	Nrn of cape Siretoko.	
		S	4	37	36.2						
		ME	4	37	41.2						
		F	4	39	16.2						
19	June. 11	ip	20	03	01.5	2.3	-150		85	Near Otomari.	
		S	20	03	13.0						
		ME	20	03	26.5						
		MN	20	03	29.5						
		F	20	06	35.5						
20	June. 13	P	20	35	09.5				746	Ern off River Mabuchi.	
		S	20	36	50.0						
		F	20	51	32.5						
21	June. 18	ip	21	39	38.0	5.5	+ 55		942	Ern off Kinkasan.	
		S	21	41	04.5						
		ME	21	41	22.5						
		MN	21	41	51.5						
		ME	21	42	07.0						
		ME	21	42	29.5						
		ME	21	42	59.0						
		C	21	44	41.5						
F	21	51	15.5								

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No.	Date	Phase	Time Greenwich			Period	Amplitude			Δ Km	Remarks
			<i>h</i>	<i>m</i>	<i>s</i>		AE μ	AN μ	AZ μ		
22	June. 24	P	22	05	06.4				3859	A distant earthquake	
		S	22	13	06.9						
		L	22	21	23.4						
		M1	22	36	38.4	27.9	+125				
		M2	22	38	24.4	25.4	± 125				
		M3	22	39	41.4	27.3	± 180				
		M4	22	41	50.4	34.8	± 175				
		F	23	16	04.4						
23	July. 9	P	1	31	58.1				675	SErn off Etorofu illand.	
		S	1	33	30.1						
		M1	1	35	10.2						
		M2	1	37	45.1	2.0	- 83				
		C	1	41	54.1						
		F	2	05	39.1						
24	July. 9	ep	9	01	00.3				2878	Ditto.	
		F	9	08	51.3						
25	July. 9	eP	9	29	57.7				2878	Ditto.	
		S	9	35	28.2						
		F	9	49	12.7						
26	July. 9	ep	9	50	17.0				2878	Ditto.	
		F	10	06	03.7						
27	July. 9	P	12	32	34.6				920	SErn of Etorofu island.	
		S	12	34	38.6						
		M1	12	35	28.6	2.6	+275				
		M2	12	38	04.6	2.0	± 150				
		M3	12	39	31.1	1.9	± 133				
		M4	12	40	41.6	1.9	± 117				
		C	12	46	38.6	1.8					
		F	22	00	38.6						
28	July. 9	ep	13	30	06.0				2878	Ditto.	
		F	13	39	55.5						
29	July. 9	ep	16	09	03.4				2878	Ditto.	
		F	16	23	38.4						
30	July. 9	eP	17	54	03.4				2878	Ditto.	
		F	18	03	05.9						
31	July. 20	P	23	15	55.0				2878	Ern off Kinkasan.	
		es	23	17	21.0						
		F	23	27	18.0						

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No.	Date	Phase	Time Greenwich			Period	Amplitude			Δ Km	Remarks
			h	m	s		ΔE μ	ΔN μ	Δz μ		
32	July. 22	P	21	01	35.7				2813	A distant earth quake.	
		L	21	06	55.7						
		M1	21	09	16.2			+ 83			
		M2	21	14	48.2	18.1		\pm 66			
		M3	21	17	48.2	17.0		+ 108			
		C	21	25	01.2						
		F	22	14	13.2						
33	Aug. 25	P	7	57	11.3				4579	Ditto.	
		S	8	02	34.8						
		L	8	06	31.3						
		MN	8	09	07.3	26.7		+2410			
		ME	8	12	05.3	16.8	\pm 1200				
		MN	8	16	08.3	26.7		- 833			
		F	9	03	59.3	20.0					
34	Sep. 2	P	17	44	33.6				1350	Sm of Hachijo island.	
		L	17	47	35.6						
		M	17	47	41.6	3.2	\pm 65				
		F	17	59	11.6						
35	Sep. 21	P	9	48	55.6				1135	SErn off Miyako.	
		S	9	51	28.6						
		F	10	02	53.6						
36	Sep. 25	P	19	10	30.6				1484		
		S	19	13	50.6						
		M	19	14	30.1	16.7		\pm 158			
		F	19	25	48.6						
37	Oct. 16	P	4	42	12.9				749	NErn off cepe Erimo.	
		S	4	43	53.9						
		F	4	46	02.9						
38	Oct. 22	P	11	58	20.6				5887	Ditto.	
		F	12	17	28.6						
39	Nov. 20	P	23	31	32.8				5887	Ditto.	
		S	23	39	28.2						
		L	23	51	57.8						
		F	0	38	40.8						

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No.	Date	Phase	Time Greenwich			Period	Amplitude			Δ Km	Remarks
			<i>h</i>	<i>m</i>	<i>s</i>		AE μ	AN μ	AZ μ		
40	Nov. 23	P	0	51	31.8				374		
		S	0	52	22.3						
		ME	0	52	24.3	4.4	- 175				
		MN	0	53	05.3	3.6		- 71			
		C	0	53	09.3	6.7					
		F	0	55	48.3						
41	Dec. 4	ip	19	34	34.4					Ern off Soya strait.	
		is	19	35	09.4						
		ME	19	35	11.4	2.2	+ 713				
		MN	19	35	12.4	1.9		+ 520			
		F	19	48	39.4						