

OCT 28 1954

# ANNUAL REPORT

OF THE

METEOROLOGICAL

AND THE

SEISMOLOGICAL OBSERVATIONS

MADE AT THE

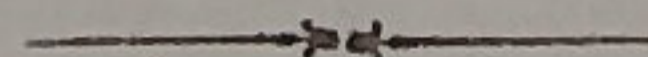
INTERNATIONAL LATITUDE OBSERVATORY  
OF MIZUSAWA

FOR

THE YEAR 1940.



LATITUDE  $39^{\circ} 8' N.$ , LONGITUDE  $141^{\circ} 8' E.$ ,  
HEIGHT ABOVE MEAN SEA LEVEL 61 METRES.



PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY  
OF MIZUSAWA.

1941.

1940

The present report gives the results of the meteorological and seismological observations made at this observatory during the year 1940. No alteration has been made in the nature and methods of observation.

The observations and calculations were made by Messrs. M. Kirita, S. Satô, I. Kumagai, and K. Suzuki under the superintendence of Mr. T. Ikeda

The followings are to be noted with respect to the meteorological observations :

*Hours of observations.*—*Japanese Central Standard Time* (i.e. mean time of the meridian 9h east from Greenwich) is adopted.

*Air Pressure.*—The barometric readings in millimetres are reduced to the freezing point of water, the corrections to sea level and to standard gravity are given at the bottom of the page for each month.

*Air and Earth Temperatures.*—The degrees are given in Centigrade.

*Wind.*—The velocity is expressed in metres per second. The direction was observed relative to the sixteen points of the compass.

*Cloud.*—The amount is estimated by the scale 0-10, the forms are those of the *International classification*, and the direction of motion is indicated relative to the sixteen points of the compass.

*Tension of Water Vapour.*—is given in millimetres.

*Relative Humidity.*—is given in percentages.

*Precipitation.*—The amount is given in millimetres.

*Clear and Cloudy Days.*—The amount of cloud is less than 2 exclusive, for the former; and more than 8 inclusive, for the latter.

*Duration of Sunshine.*—is recorded by a Jordan sunshine-recorder.

*Amount of Evaporation.*—is given in millimetres, for each day,—that is from 10h of the day in question to 10h of the next day, according to the instruction of the Central Meteorological Observatory in Tôkyo.

*The heights of the meteorological instruments* are as follows :

*Barometer.*—63.1 m above sea level.

*Air temperature thermometer.*—1.3m above the ground.

*Anemometer.*—16.5m above the ground.

*Wind vane*—16.6m above the ground.

In recording the meteorological phenomena the following symbols are used:—

●	Rain	∇	Silver thaw	∞	Haze
✱	Snow	~	Glazed frost	⌘	Oceanic noise
⌘	Thunder storm	⊔	Ice	∞	Yellow dust
⌞	Thunder without lightning	✱	Snow storm	0	Unusual visibility
∠	Lightning without thunder	⊕	Snow drift	∞	Red sky
△	Graupel	←	Ice crystals	C	Cirrus
▲	Hail	⊙	Earthquake	CS	Cirro-stratus
≡	Mist, Fog	⊙	Solar corona	CK	Cirro-cumulus
⊔	Hoar frost	⊕	Solar halo	KC	Alto-cumulus
⊔	Ice column in ground	∪	Lunar corona	SC	Alto-stratus
△	Dew	∪	Lunar halo	SK	Strato-cumulus
⊔	Frozen dew	∪	Gale	N	Nimbus
⊙	Frozen rain	∪	Rainbow	K	Cumulus
∞	Wave cloud	∪	Aurora	KN	Cumulo-nimbus
⊔	Snow lying	∪	Zodiacal light	S	Stratus

The descriptions of the meteorological instruments and the observing house are found in the annual reports for the years 1902, 1904, 1905, 1910, 1916, 1925, 1936, and 1937.

The seismological instruments in use are two Ômori's horizontal pendulums, of the same type as that described in p. 8 of No. 5, "Publication of the Earthquake Investigation Committee in Foreign Language," one serving to register the EW component, and the other the NS component, of seismological movements.

	EW Component Apparatus	NS Component Apparatus
Period of free oscillation.	16 seconds	36 seconds
Multiplication of the pointer.	100 times	20 times
Weight of heavy cylinder.	45.0 kilograms	17.6 kilograms
Horizontal distance of the centre of the cylinder from the point of support.	20 centimetres	75 centimetres
Vertical distance between the points of support and suspension.	104 centimetres	104 centimetres

May, 1941

S. KAWASAKI, *Rigakuhakusi*  
Director of the International Latitude Observatory  
of Mizusawa.

# SEISMOLOGICAL OBSERVATIONS

Remarks:—

1. The intensities of the earthquakes are divided into the following seven classes according to the Central Meteorological Observatory of Japan.

Not felt . . . . .	0.
Felt . . . . .	1. . . . . slight
	2. . . . . moderate
	3. . . . . rather strong
	4. . . . . strong
	5. . . . . very strong
	6. . . . . disastrous

2. The approximate epicentres of the chief earthquakes are given, which are extracted from the "Kisyô-Yôran" issued monthly by the Central Meteorological Observatory of Japan.
3. The time adopted in the Seismological observations is Greenwich Civil Time.
4. Symbols and notations.

- i* Sudden beginning of the motion.
- e* Gradual beginning of the motion.
- ? Doubtful phase.
- ✖ Out of order of the instrument.
- ⊕ Out of the range of the instrument.

EARTHQUAKES, 1940.



No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
1	Jan. 1	h m s 2 06 55		m s e 06 53	m s 07 25	m s 07 26			m s -	m s -			μ - 9	μ -	m s 4 56	0	E off Hatinohe			
2	1	e 12 25 20		25 18	25 38	e 25 35			-	-			-	-	3 24	0				
3	1	e 13 28 30		-	28 58	e 28 59			-	-			-	-	3 34	0				
4	2	e 20 12 02		e 12 03	12 27	12 28			-	-			- 12	+ 25	5 57	0	E off Hukusima pref.			
5	3	e 14 10 40		e 10 41	11 07	11 07			-	-			- 25	+ 50	6 35	0	N part of kasima-nada			
6	3	21 51 53		51 53	52 04	52 05			-	-			- 30	- 30	4 03	0	Near Kamaisi			
7	4	1		-	? 46 34	-			-	-			-	-	2 25	0				
8	5	e 4 13 23		e 13 26	13 46	13 46			-	-			- 9	-	4 14	0	E off Cape Sioya			
9	6	2 46 14		46 13	46 24	46 23			-	-			± 30	-	4 33	1	Off Bay of Koizumi			
10	6	e 3 59 11		e 59 12	59 42	59 41			-	-			+ 10	-	5 36	0	Kasima-nada			
11	6	8 17 58		e 17 58	19 41	19 42			-	-			+ 14	- 25	17 47	0	SE off Etoroff I.			
12	6	14 14 15		e 14 14	22 56	22 55			-	-			+ 65	+ 95	50 31	0	Distant			
13	6	15		-	e 43 33	-			-	-			-	-	3 08	0				
14	6	20		-	e 09 21	-			-	-			-	-	1 27	0				
15	7	e 3 23 56		e 23 56	24 49	e 24 49			-	-			+ 30	- 53	21 28	0	SE off Cape Nozima			
16	7	i 5 51 01		e 51 00	i 51 26	51 28			-	-			+ 51	- 53	7 43	1	ESE off Cape Sioya			
17	9	20 02 29		e 02 29	i 03 00	03 02			-	-			- 25	+ 48	7 34	0	E off Cape Sioya			
18	10	e 10 14 34		e 14 36	14 58	14 58			-	-			- 5	-	3 27	0				
19	15	1 12 50		-	13 21	-			-	-			+ 4	-	3 39	0				
20	17	e 0 16 20		-	17 11	17 11			-	-			- 6	+ 10	6 31	0				
21	17	1 19 55		19 54	24 07	24 03			-	-			- 275	+ 275	71 16	0	Mariana Is.			
22	17	e 14 19 32		-	19 54	-			-	-			-	-	2 31	0				
23	17	15 02 11		e 02 08	02 58	e 02 54			-	-			+ 7	-	5 36	0	Off Cape Nozima			
24	17	15		-	30 51	-			-	-			-	-	1 52	0				
25	18	e 1 57 38		-	58 13	-			-	-			-	-	4 11	0				
26	19	e 5 24 37		e 24 38	25 17	25 17			-	-			+ 6	-	7 16	0				
27	19	6		-	? 04 10	-			-	-			-	-	3 20	0				
28	19	e 7 19 09		e 19 09	19 20	19 18			-	-			-	-	2 40	0				
29	19	8		-	e 08 08	-			-	-			-	-	0 55	0				
30	19	8 33 01		32 59	33 18	33 16			-	-			± 33	± 50	6 20	1	E off Hukusima pref.			
31	19	e 14 32 57		-	33 30	33 31			-	-			-	-	4 19	0				
32	20	14 53 16		-	53 37	53 39			-	-			-	-	3 00	0				
33	21	6 31 21		-	31 34	-			-	-			-	-	1 39	0				
34	21	6 37 17		e 37 20	37 54	37 52			-	-			+ 17	- 25	7 41	0	E off Miyako			
35	21	7 51 48		-	52 08	-			-	-			-	-	2 41	0				
36	21	17 26 26		-	27 01	27 00			-	-			-	-	4 00	0				
37	21	17 40 24		-	40 37	-			-	-			-	-	1 51	0				
38	22	18 32 03		e 32 02	32 42	e 32 39			-	-			- 6	-	5 53	0				
39	24	e 8 45 14		-	e 46 31	46 30			-	-			+ 5	-	6 55	0				
40	25	19		-	43 13	-			-	-			-	-	2 16	0				
41	26	e 6 51 31		-	52 12	-			-	-			-	-	3 22	0				
42	26	17 07 40		07 40	12 08	12 08			-	-			+ 40	- 138	35 03	0	SE off Amami-ôshima			
43	27	e 12 03 08		-	03 44	-			-	-			-	-	3 55	0				
44	27	e 14 51 07		51 06	52 14	52 13			-	-			+ 44	+ 53	19 57	0				
45	29	2 39 34		e 39 31	39 46	39 45			-	-			-	-	3 36	0				
46	29	e 11 25 19		-	26 57	26 54			-	-			+ 6	-	7 19	0	SE off Uruppu I.			
47	30	0		-	41 16	e 41 16			-	-			-	-	2 53	0				
48	31	5 42 49		42 49	43 03	? 42 59			-	-			-	-	3 16	0				
49	31	16 43 38		43 36	44 11	44 09			-	-			+ 12	- 25	6 03	0	E off Miyako			
50	Feb. 1	16		-	24 10	-			-	-			-	-	1 52	0				
51	2	e 2 01 07		e 01 05	01 28	01 27			-	-			+ 18	- 28	3 54	0	E off Miyako			
52	2	e 4 41 59		-	42 23	e 42 23			-	-			-	-	2 32	0				
53	5	e 6 25 38		-	25 54	25 55			-	-			-	-	1 38	0				
54	5	e 16 11 12		-	11 44	11 44			-	-			-	-	3 54	0				
55	5	e 22 24 23		-	24 36	-			-	-			-	-	2 28	0				

## EARTHQUAKES, 1940.

No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter								
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S											
56	Feb. 6	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima pref. E off Kuzi (Iwate)								
57	7	0	-	-	-	-	12	19	-	-	-	-	-	-	-	3	48	0										
58	9	17	21	36	21	35	26	07	26	09	-	-	-	-	-	20	53	0										
59	9	4	20	33	*	*	20	52	*	*	-	-	-	-	-	± 150	*	10	14		2							
60	9	13	54	10	54	09	54	31	54	29	-	-	-	-	-	⊕	+1925	17	41		2							
60	9	23	13	14	-	-	13	43	-	-	-	-	-	-	-	-	-	3	33		0							
61	11	9	-	-	-	-	59	10	-	-	-	-	-	-	-	-	-	1	46	0								
62	12	? 0	21	12	? 21	15	23	48	? 24	48	-	-	-	-	-	+	3	7	54	0								
63	12	? 8	32	03	32	00	? 35	15	? 35	13	-	-	-	-	-	+	4	7	41	0								
64	12	e 9	21	40	-	-	21	57	-	-	-	-	-	-	-	+	3	2	36	0								
65	14	? 13	47	16	-	-	48	59	? 49	01	-	-	-	-	-	+	9	9	09	0								
66	17	e 9	41	41	-	-	42	11	42	10	-	-	-	-	-	+	4	4	08	0								
67	17	e 23	42	08	e 42	08	42	39	42	39	-	-	-	-	-	-	5	3	40	0								
68	19	13	24	00	-	-	24	32	24	30	-	-	-	-	-	-	3	5	24	0								
69	20	2	27	57	27	57	35	41	35	38	-	-	-	-	-	-	15	34	15	0								
70	21	e 9	41	07	-	-	41	31	e 41	32	-	-	-	-	-	-	3	3	57	0								
71	21	e 14	11	32	e 11	32	14	16	14	18	-	-	-	-	-	-	4	9	04	0								
72	21	e 17	12	43	-	-	13	20	-	-	-	-	-	-	-	-	-	3	17	0								
73	21	e 22	43	34	-	-	44	07	-	-	-	-	-	-	-	-	-	4	01	0								
74	22	e 13	36	17	36	18	36	44	36	41	-	-	-	-	-	-	5	5	39	0								
75	23	e 19	51	51	-	-	52	30	e 52	28	-	-	-	-	-	-	5	5	18	0								
76	24	? 12	07	54	? 07	53	? 13	45	13	49	-	-	-	-	-	-	-	24	16	0								
77	24	e 18	51	39	-	-	52	22	52	23	-	-	-	-	-	-	-	4	41	0								
78	25	4	09	46	09	44	09	59	09	57	-	-	-	-	-	-	-	± 23	± 30	0								
79	25	e 6	24	43	-	-	26	14	26	13	-	-	-	-	-	-	-	8	34	0								
80	26	e 11	47	26	e 47	28	47	49	47	49	-	-	-	-	-	-	-	+	18	-	28	8	01	0				
81	27	11	39	48	-	-	40	37	-	-	-	-	-	-	-	-	-	4	54	0								
82	29	e 12	32	42	e 32	38	33	25	33	23	-	-	-	-	-	-	-	+	20	-	25	5	25	0				
83	29	16	20	20	20	21	30	39	30	38	-	-	-	-	-	-	-	-	-	-	-	21	53	0				
84	Mar. 1	e 7	59	56	e 59	54	60	44	60	44	-	-	-	-	-	-	-	-	-	-	-	4	17	0				
85	3	e 0	15	45	-	-	16	19	-	-	-	-	-	-	-	-	-	-	-	-	-	4	15	0				
86	3	e 23	16	41	-	-	17	22	17	23	-	-	-	-	-	-	-	+	4	-	-	3	59	0				
87	4	5	-	-	-	-	43	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
88	5	3	47	07	-	-	47	19	-	-	-	-	-	-	-	-	-	-	-	-	-	0	53	0				
89	5	e 8	52	46	e 52	45	54	06	54	07	-	-	-	-	-	-	-	-	15	-	15	8	27	0				
90	6	2	05	08	e 05	06	05	40	05	39	-	-	-	-	-	-	-	-	5	-	-	2	40	0				
91	6	21	31	00	30	59	31	11	31	12	-	-	-	-	-	-	-	-	13	-	-	3	06	0				
92	8	e 3	32	19	-	-	32	55	-	-	-	-	-	-	-	-	-	-	-	-	-	3	20	0				
93	8	e 4	57	26	e 57	28	58	08	58	08	-	-	-	-	-	-	-	-	-	-	-	6	09	0				
94	9	e 3	34	34	e 34	34	35	13	35	13	-	-	-	-	-	-	-	-	-	-	-	3	26	0				
95	9	e 10	49	38	i 49	39	i 51	44	i 51	43	-	-	-	-	-	-	-	-	-	-	-	-	116	-	95	12	27	0
96	11	11	26	09	26	09	i 26	34	i 26	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	11	1
97	12	e 1	20	07	e 20	06	21	09	21	10	-	-	-	-	-	-	-	-	+	11	-	-	7	06	0			
98	13	e 3	36	29	e 36	28	37	21	37	21	-	-	-	-	-	-	-	-	+	6	-	-	3	56	0			
99	14	5	08	06	08	06	08	16	08	16	-	-	-	-	-	-	-	-	-	-	-	-	2	25	0			
100	14	e 16	23	53	-	-	24	28	24	28	-	-	-	-	-	-	-	-	+	5	-	-	4	25	0			
101	16	e 1	38	09	-	-	38	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	35	0			
102	16	e 3	16	03	e 16	03	16	15	16	15	-	-	-	-	-	-	-	-	-	-	-	-	3	05	0			
103	16	e 16	52	10	52	10	52	45	52	46	-	-	-	-	-	-	-	-	+	6	-	-	6	30	0			
104	17	e 8	36	07	e 36	07	36	34	36	35	-	-	-	-	-	-	-	-	+	6	-	-	3	38	0			
105	18	13	-	-	-	-	24	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10	0			
106	19	e 8	41	34	-	-	42	01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	53	0			
107	19	e 9	57	42	-	-	58	00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	34	0			
108	19	e 18	55	37	-	-	56	00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	10	0			
109	20	e 8	35	09	-	-	35	34	35	33	-	-	-	-	-	-	-	-	-	-	-	-	2	36	0			
110	21	e 10	12	31	-	-	13	02	13	02	-	-	-	-	-	-	-	-	-	-	-	-	2	51	0			

EARTHQUAKES, 1940.



No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
111	Mar. 22	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	NE off Cape Sioya Kasima-nada
112	22	e 5	36	31	-	-	36	49	36	47	-	-	-	-	-	-	2	16	0	
113	22	e 10	47	26	e 47	26	47	50	47	48	-	-	-	+	14	-	4	33	0	
114	23	e 21	59	20	e 59	18	59	57	59	58	-	-	-	+	9	-	6	27	0	
115	23	16	-	-	? 13	33	-	-	-	-	-	-	-	-	-	-	2	20	0	
	23	18	-	-	46	26	46	24	-	-	-	-	-	-	-	-	1	15	0	
116	27	e 12	37	23	e 37	22	? 43	13	? 43	15	-	-	-	-	-	-	34	38	0	SE off Etoroff I.
117	27	e 18	18	33	-	-	19	59	e 19	59	-	-	-	+	6	-	8	15	0	
118	27	e 18	38	53	-	-	41	10	e 41	08	-	-	-	+	7	-	9	04	0	
119	28	e 0	47	47	-	-	48	08	48	05	-	-	-	-	4	-	3	12	0	
120	28	15	54	51	e 54	49	59	38	59	34	-	-	-	+	10	-	39	04	0	
121	28	e 21	28	11	-	-	28	54	e 28	53	-	-	-	-	-	-	5	28	0	ESE off Kinkwasan
122	29	11	20	43	-	-	21	02	-	-	-	-	-	-	-	-	1	52	0	
123	29	e 19	49	39	e 49	39	50	53	50	53	-	-	-	-	-	-	5	11	0	
124	30	e 21	46	43	-	-	47	05	-	-	-	-	-	-	-	-	2	49	0	
125	30	e 21	58	43	58	43	59	03	59	03	-	-	-	+	15	-	4	15	0	
126	Apr. 1	11	26	53	e 26	52	33	10	33	12	-	-	-	+	14	-	25	01	0	New Guinea
127	2	9	54	35	-	-	55	14	55	13	-	-	-	+	4	-	4	12	0	
128	2	e 19	19	43	-	-	20	44	20	44	-	-	-	-	-	-	4	37	0	E off Hukusima Pref.
129	3	e 20	24	24	-	-	24	45	24	47	-	-	-	-	8	-	4	30	0	
130	5	e 9	23	20	e 23	21	23	59	23	58	-	-	-	-	6	+	5	18	0	
131	5	i 16	38	39	e 38	37	41	07	41	07	-	-	-	+	16	+	9	40	0	
132	6	e 4	32	42	-	-	33	14	-	-	-	-	-	+	2	-	3	57	0	
133	6	5	19	18	-	-	19	49	e 19	53	-	-	-	-	3	-	5	50	0	SSE off Titizima
134	9	e 5	02	24	e 02	24	03	00	02	59	-	-	-	-	7	-	3	29	0	
135	9	e 5	49	24	-	-	49	44	-	-	-	-	-	-	-	-	2	39	0	
136	10	e 10	45	21	-	-	45	33	-	-	-	-	-	-	-	-	1	23	0	
137	11	? 9	08	38	-	-	09	26	09	25	-	-	-	-	5	-	3	56	0	
138	12	e 3	34	35	-	-	34	59	-	-	-	-	-	-	-	-	3	23	0	ENE off Kinkwasan
139	12	4	-	-	-	-	14	10	-	-	-	-	-	-	-	-	0	52	0	
140	12	5	54	33	54	33	54	46	54	48	-	-	-	±	360	+	10	38	2	
141	12	e 11	45	38	-	-	46	05	-	-	-	-	-	-	-	-	2	22	0	
142	12	14	28	59	e 28	58	29	26	29	26	-	-	-	-	48	-	3	24	0	
143	14	e 14	58	16	e 58	15	i 59	47	59	47	-	-	-	-	53	+	5	25	0	S off Etoroff I. Aleutian Is.
144	16	6	13	15	13	15	17	56	17	51	-	-	-	+	82	-	34	50	0	
145	16	6	48	37	48	40	53	19	53	08	-	-	-	-	-	-	71	05	0	
146	16	? 7	14	33	-	-	e 16	08	e 16	09	-	-	-	-	-	-	4	17	0	E off Hukusima Pref.
147	16	e 7	54	12	-	-	e 57	37	-	-	-	-	-	-	-	-	10	34	0	
148	16	21	-	-	-	-	? 16	38	-	-	-	-	-	-	-	-	2	33	0	
149	17	15	57	48	57	49	58	18	58	18	-	-	-	+	85	+	10	00	0	
150	18	e 7	39	00	e 39	00	39	13	39	11	-	-	-	-	-	-	1	49	0	
151	18	? 21	45	23	-	-	? 46	08	? 46	08	-	-	-	-	-	-	3	30	0	Near Kyôto
152	19	e 0	11	36	-	-	12	43	-	-	-	-	-	-	-	-	4	53	0	
153	19	e 7	55	04	e 55	03	55	34	55	36	-	-	-	+	6	-	2	54	0	
154	19	? 14	43	19	? 43	21	? 45	52	? 45	51	-	-	-	-	-	-	10	20	0	
155	19	16	-	-	-	-	? 38	09	38	10	-	-	-	-	-	-	0	35	0	
156	20	i 20	19	33	19	33	i 20	42	e 20	42	-	-	-	+	13	-	6	51	0	Off Kunasiri I.
157	22	e 16	14	50	-	-	15	12	-	-	-	-	-	-	-	-	1	47	0	
158	24	e 1	46	56	-	-	47	33	-	-	-	-	-	-	-	-	3	42	0	
159	24	13	21	56	e 21	55	22	44	22	42	-	-	-	-	6	-	5	58	0	
160	25	e 11	25	56	-	-	26	22	-	-	-	-	-	-	-	-	3	15	0	
161	26	e 16	35	53	-	-	36	11	36	11	-	-	-	-	-	-	0	58	0	Off Kunasiri I.
162	27	2	-	-	-	-	06	24	-	-	-	-	-	-	-	-	1	58	0	
163	27	16	-	-	-	-	? 23	39	-	-	-	-	-	-	-	-	4	37	0	
164	29	15	13	32	e 13	31	14	42	14	42	-	-	-	+	20	-	7	46	0	
165	30	23	17	33	* *	*	17	52	* *	*	-	-	-	+	5	*	2	31	0	





## EARTHQUAKES, 1940.

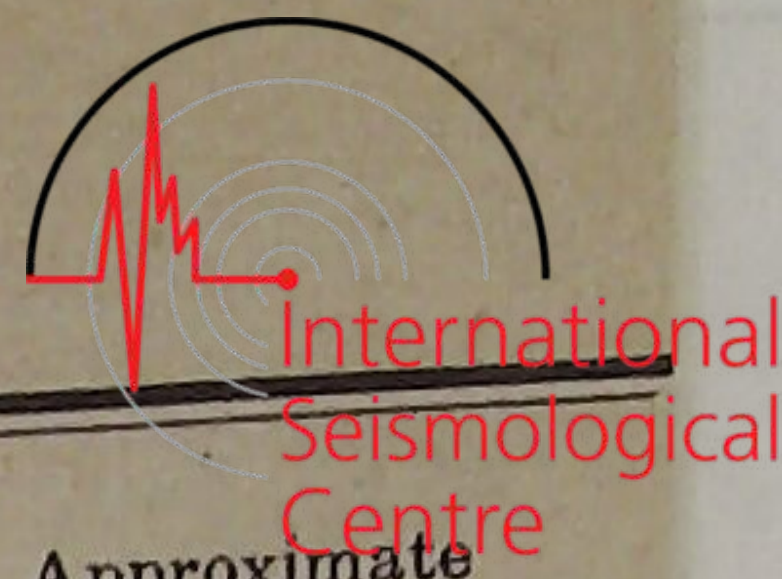
No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
221	June 12	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Katuura (Tiba)
222	12	14	12	21	e 12	20	13	03	13	06	-	-	-	-	123	170	25	28	0	
223	12	15	-	-	-	-	31	26	-	-	-	-	-	-	-	-	-	-	0	
224	12	16	07	17	-	-	08	27	08	26	-	-	-	-	7	-	5	56	0	ESE off Cape Otisi
225	12	18	-	-	-	-	? 15	49	-	-	-	-	-	-	-	-	-	-	0	
226	12	e 18	38	45	e 38	45	40	08	e 40	11	-	-	-	-	16	25	14	33	0	SE off Hatizyô I.
227	13	e 16	36	26	-	-	37	25	37	24	-	-	-	-	10	23	5	52	0	Kuzyukuri-hama
228	15	e 9	10	06	e 10	07	10	51	e 10	53	-	-	-	-	36	45	8	33	0	Off Kuzyukuri-hama
229	15	e 15	19	07	e 19	05	19	23	19	22	-	-	-	-	6	-	2	47	0	
230	16	e 13	41	39	e 41	42	43	01	43	00	-	-	-	-	-	-	4	25	0	
231	17	e 20	08	25	e 08	23	08	35	e 08	33	-	-	-	-	-	-	3	43	0	
232	18	e 13	59	02	e 59	01	64	02	64	01	-	-	-	-	16	-	13	57	0	Mindanao
233	18	i 17	26	29	i 26	27	26	47	26	46	-	-	-	-	77	153	7	41	1	SE off Kinkwasan
234	18	e 18	44	35	e 44	34	49	24	49	25	-	-	-	-	-	-	16	20	0	
235	18	19	40	42	e 40	43	40	56	40	55	-	-	-	-	15	+	3	52	0	off Kinkwasan
236	19	2	-	-	-	-	27	15	-	-	-	-	-	-	-	-	1	28	0	
237	19	e 4	23	47	-	-	24	39	-	-	-	-	-	-	-	-	6	13	0	
238	20	e 18	37	40	-	-	38	03	38	03	-	-	-	-	6	-	3	31	0	
239	21	e 6	55	32	-	-	56	10	-	-	-	-	-	-	-	-	3	23	0	
240	21	e 8	13	38	-	-	13	51	13	52	-	-	-	-	-	-	2	13	0	
241	22	e 1	09	25	e 09	24	09	44	09	45	-	-	-	-	-	-	2	26	0	
242	22	i 11	44	24	44	22	i 50	29	i 50	29	-	-	-	-	19	+	28	19	0	East Indies
243	25	? 2	56	30	-	-	? 57	16	-	-	-	-	-	-	-	-	7	23	0	
244	25	e 11	37	26	-	-	37	36	-	-	-	-	-	-	-	-	1	17	0	
245	26	e 7	29	28	e 29	26	30	05	30	05	-	-	-	-	4	-	5	15	0	
246	26	8	-	-	-	-	? 17	35	? 17	35	-	-	-	-	-	-	5	19	0	
247	26	e 12	41	47	-	-	e 42	25	e 42	26	-	-	-	-	-	-	3	01	0	
248	27	e 3	58	36	-	-	59	07	-	-	-	-	-	-	-	-	3	51	0	
249	27	e 5	22	16	-	-	22	30	-	-	-	-	-	-	-	-	1	49	0	
250	27	e 6	54	37	e 54	36	56	15	56	14	-	-	-	-	15	+	9	02	0	NW off Titizima
251	28	e 20	44	19	-	-	44	43	44	44	-	-	-	-	5	-	2	49	0	
252	30	e 17	14	35	e 14	34	15	15	15	14	-	-	-	-	6	-	3	56	0	
253	30	e 21	11	23	-	-	12	04	e 12	04	-	-	-	-	6	-	3	05	0	
254	July 2	e 1	37	44	e 37	43	38	40	e 38	40	-	-	-	-	19	+	20	52	0	NE off Hatizyo I.
255	2	? 9	09	45	-	-	? 10	43	-	-	-	-	-	-	-	-	7	07	0	
256	3	17	-	-	-	-	? 40	20	-	-	-	-	-	-	-	-	0	56	0	
257	4	9	01	56	e 01	56	03	01	03	00	-	-	-	-	61	-	8	51	0	W off Cape Siretoko
258	5	e 7	12	33	-	-	13	23	13	21	-	-	-	-	10	-	5	16	0	
259	5	i 20	59	54	59	55	60	18	60	18	-	-	-	-	108	+	12	21	0	E off Kinkwasan
260	6	e 1	24	49	-	-	25	13	25	15	-	-	-	-	-	-	2	28	0	
261	8	e 7	54	39	-	-	54	49	-	-	-	-	-	-	-	-	1	10	0	
262	8	e 11	01	57	-	-	02	26	-	-	-	-	-	-	-	-	3	28	0	
263	8	e 15	19	06	e 19	06	21	04	i 21	03	-	-	-	-	22	-	9	23	0	WSW off Titizima
264	10	5	52	11	52	09	i 53	59	i 53	59	-	-	-	-	281	-	30	50	0	Manchukuo
265	11	e 21	45	46	-	-	45	59	-	-	-	-	-	-	-	-	2	12	0	
266	12	e 13	12	13	-	-	12	46	12	45	-	-	-	-	5	-	4	31	0	
267	13	? 17	09	17	? 09	17	? 14	45	? 14	47	-	-	-	-	-	-	46	07	0	
268	14	5	58	47	e 58	48	63	52	63	53	-	-	-	-	-	+	50	29	0	
269	14	e 10	06	45	-	-	07	54	07	42	-	-	-	-	-	-	5	50	0	
270	14	15	32	21	32	21	32	59	33	01	-	-	-	-	195	-	13	36	0	Near Mitukaidô
271	15	e 3	05	50	-	-	06	26	-	-	-	-	-	-	-	-	4	14	0	
272	15	13	44	11	e 44	12	44	43	44	43	-	-	-	-	5	-	4	59	0	
273	16	e 4	55	14	e 55	15	? 57	26	? 57	25	-	-	-	-	-	-	9	23	0	
274	17	e 23	35	26	e 35	28	35	36	35	37	-	-	-	-	-	-	2	03	0	
275	18	18	-	-	-	-	28	28	-	-	-	-	-	-	-	-	3	00	0	
276	19	4	-	-	-	-	? 53	34	-	-	-	-	-	-	3	-	9	08	0	

EARTHQUAKES, 1340.



No.	Date 1940		P				S				L				Maximum Amplitude				Duration of Total Earthquake		Intensity	Approximate Epicenter	
			E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s			
276	July	19	e 5 23 01					e 23 22	e 23 25	-	-	-	-	-	-	-	-	2	07	0	NE off Miyako		
277		21	i 0 02 18	02	19	02	36	02	36	-	-	-	-	-	-	-	147	175	9	23		2	
278		21	e 15 46 10	e 46	10	? 52	27	? 52	25	-	-	-	-	-	-	-	5	-	33	45		0	
279		22	3	-	-	? 53	06	-	-	-	-	-	-	-	-	-	-	-	4	16		0	
280		24	13 27 16	27	18	27	29	27	30	-	-	-	-	-	-	-	-	-	2	02		0	
281		24	e 14 34 15	e 34	18	35	23	35	23	-	-	-	-	-	-	-	6	+ 13	7	01	0	W off Titizima	
282		26	15 06 17	e 06	17	08	23	08	25	-	-	-	-	-	-	-	6	-	10	09	0		
283		27	e 5 22 08	-	-	22	34	22	34	-	-	-	-	-	-	-	5	-	3	52	0		
284		28	e 5 44 07	e 44	06	46	08	46	10	-	-	-	-	-	-	-	+	5	6	05	0		
285		28	e 19 30 10	-	-	31	36	31	35	-	-	-	-	-	-	-	6	-	4	20	0		
286		29	0 01 31	-	-	01	49	-	-	-	-	-	-	-	-	-	-	-	1	46	0		
287		31	10 56 36	56	35	56	57	56	56	-	-	-	-	-	-	-	9	-	4	10	0		
288		31	14 05 42	e 05	43	05	59	06	00	-	-	-	-	-	-	-	-	-	2	44	0		
289		31	e 23 16 13	-	-	16	37	16	36	-	-	-	-	-	-	-	4	-	3	25	0		
290	Aug.	1	e 0 36 35	-	-	37	03	37	03	-	-	-	-	-	-	-	-	-	2	57	0		
291		1	12 50 27	50	26	? 52	37	? 52	34	-	-	-	-	-	-	-	5	-	7	23	0		
292		1	15 09 44	i 09	43	10	52	10	53	-	-	-	-	-	-	-	⊕	⊕	70	16	1	NW off Cape Kamui	
293		1	? 19 14 31	-	-	? 15	22	-	-	-	-	-	-	-	-	-	-	-	4	40	0		
294		2	e 8 08 49	e 08	51	10	00	09	58	-	-	-	-	-	-	-	+	10	4	08	0		
295		2	e 20 54 52	-	-	55	25	-	-	-	-	-	-	-	-	-	-	-	4	08	0		
296		3	e 18 34 09	-	-	34	21	34	23	-	-	-	-	-	-	-	-	-	1	33	0		
297		3	e 20 23 31	-	-	24	32	-	-	-	-	-	-	-	-	-	-	-	5	28	0		
298		4	i 9 16 35	i 16	36	i 16	53	i 16	54	-	-	-	-	-	-	-	±	95	7	13	1	E off Hukusima Pref.	
299		5	? 5 28 36	-	-	? 29	34	-	-	-	-	-	-	-	-	-	-	-	4	03	0		
300		5	? 8 26 20	-	-	? 28	47	-	-	-	-	-	-	-	-	-	-	-	9	28	0		
301		5	e 9 58 32	-	-	? 61	40	? 61	35	-	-	-	-	-	-	-	-	-	11	28	0		
302		5	e 15 24 02	-	-	24	59	e 25	02	-	-	-	-	-	-	-	-	-	3	25	0		
303		5	e 21 09 49	-	-	10	01	-	-	-	-	-	-	-	-	-	-	-	1	18	0		
304		7	e 4 25 36	-	-	26	21	-	-	-	-	-	-	-	-	-	-	-	3	07	0		
305		7	? 5 07 19	-	-	? 08	12	-	-	-	-	-	-	-	-	-	-	-	5	47	0		
306		7	? 13 25 29	-	-	? 26	24	-	-	-	-	-	-	-	-	-	-	-	3	16	0		
307		7	13	-	-	? 57	55	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
308		7	e 19 17 57	-	-	19	13	-	-	-	-	-	-	-	-	-	-	-	4	19	0		
309		9	e 12 25 12	-	-	25	41	25	42	-	-	-	-	-	-	-	-	5	3	35	0		
310		9	e 20 54 18	-	-	55	26	e 55	25	-	-	-	-	-	-	-	-	-	3	44	0		
311		10	2	-	-	e 19	20	e 19	20	-	-	-	-	-	-	-	-	-	-	-	0		
312		11	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
313		11	e 15 15 39	-	-	e 15	59	-	-	-	-	-	-	-	-	-	-	-	1	30	0		
314		11	i 17 19 01	e 19	02	19	24	19	24	-	-	-	-	-	-	-	-	72	78	7	56	0	
315		12	e 3 28 58	e 29	00	29	22	29	24	-	-	-	-	-	-	-	-	8	10	5	59	0	
316		12	e 12 01 17	-	-	01	40	01	38	-	-	-	-	-	-	-	-	6	3	55	0		
317		12	e 12 20 21	-	-	20	35	-	-	-	-	-	-	-	-	-	-	-	1	00	0		
318		12	e 16 15 44	-	-	16	57	16	59	-	-	-	-	-	-	-	-	+	7	5	53	0	
319		12	16	-	-	? 24	20	-	-	-	-	-	-	-	-	-	-	-	2	02	0		
320		12	e 17 56 05	-	-	57	18	57	20	-	-	-	-	-	-	-	-	-	4	12	0		
321		13	15 38 38	38	37	40	23	40	25	-	-	-	-	-	-	-	+	690	88	41	35	0	
322		14	e 9 55 30	-	-	55	58	-	-	-	-	-	-	-	-	-	-	-	1	53	0		
323		14	14	-	-	03	03	e 03	03	-	-	-	-	-	-	-	-	-	1	12	0		
324		15	e 3 12 25	-	-	12	51	-	-	-	-	-	-	-	-	-	-	-	2	03	0		
325		15	e 3 15 34	-	-	16	20	-	-	-	-	-	-	-	-	-	-	-	3	01	0		
326		15	e 14 54 43	e 54	43	55	21	55	19	-	-	-	-	-	-	-	+	9	4	54	0		
327		15	e 18 10 27	-	-	10	56	-	-	-	-	-	-	-	-	-	+	4	4	05	0		
328		15	e 21 28 07	e 28	07	31	50	31	50	-	-	-	-	-	-	-	-	16	11	40	0		
329		16	e 20 09 48	e 09	47	10	07	10	05	-	-	-	-	-	-	-	-	8	3	04	0		
330		17	e 3 29 22	e 29	21	29	45	29	45	-	-	-	-	-	-	-	-	5	2	55	0		
																							Near Simotuma (Ibaragi) Mariana

## EARTHQUAKES, 1940.



No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
331	Aug. 17	e 8 25 31				25 56												2 22	0	
332	18	e 6 53 28				53 53	53 53											2 54	0	
333	18	e 8 26 49	e 26 51			27 15	27 14											3 23	0	
334	18	e 11 30 46	e 30 46			31 06	31 06											4 19	0	
335	19	e 16 52 45				53 08												2 00	0	
336	20	e 5 03 24	e 03 25			04 20	04 20											6 51	0	
337	20	e 17 38 10	e 38 08			? 44 42	? 44 45											26 08	0	New Guinea
338	22	e 3 34 39	e 34 37			40 39	40 35	44 30	43 31									92 18	0	Alaska Peninsula
339	22	e 9 33 26				33 55	e 33 58											2 42	0	
340	25	- 10 32 38	e 32 38			33 18	33 19											8 51	0	Near Usikunuma (Ibaragi)
341	26	e 17 18 04	e 18 02			18 24	18 22											5 22	0	NNE off Cape Sioya
342	27	? 14 50 29				? 50 49												2 09	0	
343	27	? 22 21 29				21 48												1 31	0	Sea
344	28	e 15 19 02	e 19 03			20 26	20 26											8 11	0	South part of Okhotsk
345	30	18 09 34	09 33			09 53	09 53											6 26	0	SSE off Kinkwasan
346	Sept. 1	8				e 20 25												1 34	0	
347	1	11				e 47 59												1 13	0	
348	1	e 18 17 14				17 36												3 10	0	
349	2	19				e 54 55												1 14	0	
350	3	e 10 14 46				15 00	e 15 01											1 57	0	
351	3	? 14 48 09	? 47 25															35 19	0	
352	3	18				07 28												1 01	0	
353	6	e 15 02 06	e 02 06			02 20	02 20											3 23	0	
354	7	6				21 16												0 57	0	
355	8	e 0 26 45				27 02	e 27 03											2 23	0	
356	9	e 3 54 07				54 33												2 50	0	
357	9	e 12 14 31				15 06												8 44	0	
358	10	e 10 47 55				48 07												1 17	0	
359	11	e 22 07 01	e 07 02			07 29	07 28											7 16	0	Off Hatinohé
360	12	e 0 28 23				29 05	e 29 05											5 32	0	
361	12	e 1 21 01	e 21 01			21 32	21 32											3 32	0	
362	12	e 13 25 25	e 25 23			32 02	31 59											39 34	0	
363	12	18 52 13	e 52 14			52 30	52 31											3 35	0	
364	14	e 4 44 41				e 45 04												1 30	0	
365	14	e 11 46 04				46 27												3 09	0	
366	15	e 12 12 10				13 24	e 13 25											6 07	0	
367	16	9				59 26													0	
368	17	e 3 43 48				44 14												3 21	0	
369	17	e 4 31 37	e 31 38			32 15	32 15											6 16	0	Near Mt. Tukuba
370	18	e 7 59 09				60 32	e 60 31											6 03	0	
371	18	e 12 14 47				e 15 26	15 27											2 40	0	
372	19	e 6 04 46				05 47	e 05 47											4 24	0	S off Cape Inubô
373	19	e 18 30 41	e 30 39			39 43	39 38											41 26	0	
374	19	e 19 14 21				15 36	15 35											4 42	0	
375	20	e 18 35 09				36 08	36 09											4 01	0	
376	21	e 13 57 54				58 49												6 32	0	
377	21	e 14 39 25				40 06	40 06											4 51	0	
378	22	e 2 39 44	*	*		40 20	*	*										3 18	0	
379	22	e 3 12 38	*	*		13 16	*	*										4 11	0	
380	22	e 22 58 01	e 58 04			62 48	62 50	66 01	66 02									20 53	0	N off Palau I.
381	24	e 17 54 09				54 27	54 27											2 01	0	
382	24	e 18 35 15				35 30	35 30											1 54	0	
383	24	e 22 15 37				15 54												2 25	0	
384	25	e 17 41 01	e 41 00			41 27	41 26											5 29	0	SE off Kinkasan
385	26	e 4 05 53	*	*		06 32	*	*										5 30	0	

## EARTHQUAKES, 1940.

No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
386	Sept. 27	h	m	s	m	s	m	s	m	s	m	s	μ	η	m	s	0	WNW off Titiz ma		
387	27	e 8 33 18	* *	33 38	* *	- -	- -	- -	- -	- -	- -	- -	- -	1 45	0					
388	27	e 21 32 29	* *	34 25	* *	- -	- -	- -	- -	- -	- -	+ 35	*	7 23	0					
389	28	e 23 37 57	* *	38 23	* *	- -	- -	- -	- -	- -	- -	+ 2	*	2 31	0					
390	28	0	* *	29 14	* *	- -	- -	- -	- -	- -	- -	- -	- -	- -	0					
391	Oct. 1	e 13 07 50	e 07 50	08 45	08 47	- -	- -	- -	- -	- -	- -	+ 19	+ 33	18 15	0	E off Fukushima Pref.				
392	1	e 22 40 22	- -	40 39	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 06	0					
393	2	e 16 50 52	- -	51 10	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 23	0					
394	3	e 6 05 32	- -	06 11	- -	- -	- -	- -	- -	- -	- -	- -	- -	4 11	0					
395	4	8	- -	11 02	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 33	0					
396	4	e 8 14 34	- -	15 01	15 01	- -	- -	- -	- -	- -	- -	+ 10	- 23	8 00	0					
397	5	e 14 02 44	- -	03 06	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 29	0					
398	6	e 4 26 24	- -	26 38	26 37	- -	- -	- -	- -	- -	- -	- 6	- -	1 57	0					
399	7	e 6 49 36	e 49 35	e 55 27	e 55 36	- -	- -	- -	- -	- -	- -	- -	- -	18 46	0					
400	7	9	- -	37 08	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 16	0					
401	8	e 17 12 44	e 12 43	13 15	13 17	- -	- -	- -	- -	- -	- -	- 11	- -	4 55	0					
402	8	e 22 00 52	- -	01 31	- -	- -	- -	- -	- -	- -	- -	- -	- -	4 00	0					
403	9	e 15 13 08	e 13 08	13 21	13 23	- -	- -	- -	- -	- -	- -	- -	- -	2 16	0					
404	9	e 16 57 28	e 57 28	58 04	58 04	- -	- -	- -	- -	- -	- -	- 20	- -	7 31	0					
405	9	e 19 16 32	- -	17 03	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 25	0					
406	10	e 3 19 13	- -	19 43	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 07	0					
407	10	e 5 09 01	- -	09 17	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 39	0					
408	10	e 18 22 18	- -	22 43	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 49	0					
409	12	e 1 52 32	- -	52 43	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 31	0					
410	12	e 17 57 29	- -	57 46	57 45	- -	- -	- -	- -	- -	- -	+ 7	- -	3 25	0					
411	13	e 6 37 09	- -	37 27	37 27	- -	- -	- -	- -	- -	- -	- -	- -	2 03	0					
412	15	6 39 12	- -	40 47	e 40 49	- -	- -	- -	- -	- -	- -	+ 4	- -	7 42	0					
413	16	11	- -	56 43	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	0					
414	19	e 23 14 39	e 14 41	15 04	15 04	- -	- -	- -	- -	- -	- -	- 15	- 23	4 41	0					
415	20	1	- -	e 23 49	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	0					
416	20	e 6 54 31	- -	54 50	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 42	0					
417	21	e 3 55 50	- -	56 06	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 37	0					
418	21	e 5 24 12	- -	24 35	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 52	0					
419	21	9	- -	01 31	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 07	0					
420	22	6	- -	49 01	- -	- -	- -	- -	- -	- -	- -	- -	- -	2 33	0					
421	22	e 10 52 13	e 52 14	52 51	52 50	- -	- -	- -	- -	- -	- -	+ 16	- 23	5 52	0	Off Hiroo (Hokkaidô)				
422	23	e 10 38 31	- -	38 55	- -	- -	- -	- -	- -	- -	- -	+ 5	- -	5 07	0					
423	23	e 20 13 19	- -	13 50	13 50	- -	- -	- -	- -	- -	- -	- 11	- -	4 00	0					
424	27	e 7 02 55	- -	03 55	03 57	- -	- -	- -	- -	- -	- -	- 4	- -	4 18	0					
425	28	0 05 12	05 14	05 31	05 33	- -	- -	- -	- -	- -	- -	+ 91	+ 120	7 09	0					
426	28	20	- -	? 55 18	? 55 16	- -	- -	- -	- -	- -	- -	- -	- -	3 12	0	Sôya Strait Off Kuzi (Iwate)				
427	30	23 01 21	e 01 22	02 33	02 34	- -	- -	- -	- -	- -	- -	- 58	+ 75	7 52	0					
428	31	19 06 54	e 06 54	07 12	07 13	- -	- -	- -	- -	- -	- -	- 33	+ 50	6 12	0					
429	Nov. 1	12 08 23	08 25	08 40	08 41	- -	- -	- -	- -	- -	- -	- 73	+ 88	7 03	0					
430	2	e 18 17 21	- -	17 39	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 50	0					
431	2	e 22 44 05	- -	44 29	- -	- -	- -	- -	- -	- -	- -	- -	- -	1 30	0					
432	3	6 24 32	e 24 34	24 49	? 24 46	- -	- -	- -	- -	- -	- -	- 11	- -	2 55	0					
433	3	e 20 31 51	e 31 50	32 25	32 22	- -	- -	- -	- -	- -	- -	- 15	- -	6 02	0					
434	5	23	- -	e 55 28	e 55 30	- -	- -	- -	- -	- -	- -	- -	- -	- -	0					
435	6	e 20 07 23	- -	07 40	- -	- -	- -	- -	- -	- -	- -	+ 3	- -	1 54	0					
436	6	e 23 30 56	e 30 57	31 21	31 19	- -	- -	- -	- -	- -	- -	- 10	- -	2 39	0	E off Sabisiro SSW off Hatizyo I.				
437	7	14 00 10	00 09	i 01 53	01 53	- -	- -	- -	- -	- -	- -	- 192	+ 203	14 50	0					
438	8	4 44 10	- -	44 31	- -	- -	- -	- -	- -	- -	- -	+ 10	- -	3 27	0					
439	9	19 02 29	e 02 29	02 41	02 42	- -	- -	- -	- -	- -	- -	+ 27	- 45	4 23	1					
440	10	1 50 49	e 50 54	60 29	60 25	70 20	70 29	+ 33	- 120	80 31	0				0					

# EARTHQUAKES, 1940.



No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake		Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s		
441	Nov. 11	h	m	s	m	s	m	s	m	s	m	s	m	s	$\mu$	$\mu$	m	s	0	Kasima-nada	
442	14	e 9 19 08	-	-	-	-	19 27	-	-	-	-	-	-	+	10	-	3	43	0		
443	14	e 1 58 00	-	-	-	-	58 34	-	-	-	-	-	-	+	3	-	4	24	0		
444	14	e 2 08 50	-	-	-	-	09 07	-	-	-	-	-	-	-	4	-	4	23	0		
445	15	e 10 34 50	e 34 48	-	-	-	35 34	35 37	-	-	-	-	-	-	368	+ 468	14	05	0		
		0	-	-	-	-	54 31	-	-	-	-	-	-	-	-	-	-	-	0		
446	15	e 4 47 03	-	-	-	-	47 38	-	-	-	-	-	-	-	-	-	4	33	0	Neighbourhood of Ryuzin (Wakayama)	
447	15	e 16 20 42	-	-	-	e 21 12	-	-	-	-	-	-	-	-	-	-	2	51	0		
448	16	13 38 01	-	-	-	38 21	-	-	-	-	-	-	-	-	-	-	2	14	0		
449	17	e 10 41 22	-	-	-	41 54	-	-	-	-	-	-	-	-	-	-	3	03	0		
450	18	12 49 08	49 07	-	-	50 29	50 29	-	-	-	-	-	-	-	85	+ 75	17	46	0		
451	19	e 8 42 15	-	-	-	42 30	-	-	-	-	-	-	-	-	-	-	2	05	0	Off Cape of Ryori	
452	19	15 01 56	01 57	-	-	⊕ ⊕	02 09	-	-	-	-	-	-	-	⊕	⊕	39	44	3		
453	20	e 9 44 58	-	-	-	45 11	-	-	-	-	-	-	-	-	-	-	1	40	0		
454	21	e 22 09 26	-	-	-	09 40	-	-	-	-	-	-	-	-	-	-	2	06	0	Near Vladivostok	
455	22	e 13 08 41	e 08 41	-	-	10 17	10 16	-	-	-	-	-	-	+	21	+ 20	6	19	0		
456	22	e 19 59 51	-	-	-	60 09	-	-	-	-	-	-	-	-	-	-	1	30	0	Neighbourhood of Asikaga	
457	26	e 1 12 40	-	-	-	13 20	-	-	-	-	-	-	-	-	4	-	2	45	0		
458	26	22 25 47	25 46	-	-	26 23	26 23	-	-	-	-	-	-	+	60	+ 50	11	28	0		
459	27	e 14 49 29	? 49 28	-	-	? 56 22	? 56 26	-	-	-	-	-	-	+	6	-	26	22	0		
460	28	e 20 12 53	-	-	-	13 14	-	-	-	-	-	-	-	-	-	-	2	07	0		
461	29	e 0 41 57	e 41 58	-	-	43 46	43 45	-	-	-	-	-	-	+	6	-	10	06	0	Neighbourhood of Tutiura	
462	29	e 2 46 00	e 45 59	-	-	46 35	46 34	-	-	-	-	-	-	+	10	+ 13	5	55	0		
463	29	e 3 16 37	-	-	-	16 56	16 56	-	-	-	-	-	-	-	-	-	1	57	0		
494	29	4 32 09	-	-	-	32 20	-	-	-	-	-	-	-	-	8	-	2	40	0		
465	29	e 12 45 31	-	-	-	45 41	e 45 43	-	-	-	-	-	-	-	-	-	2	33	0		
466	30	2 57 13	-	-	-	57 24	-	-	-	-	-	-	-	-	10	-	2	27	0	ENE off Hatinohe	
467	30	4 18 38	18 39	-	-	18 51	18 52	-	-	-	-	-	-	+	39	+ 63	3	11	0		
468	Dec. 1	5 20 06	20 07	-	-	20 35	20 35	-	-	-	-	-	-	-	20	- 18	4	16	0		
469	3	e 13 22 39	-	-	-	23 06	-	-	-	-	-	-	-	-	4	-	2	16	0		
470	3	e 17 04 31	e 04 31	-	-	05 13	05 13	-	-	-	-	-	-	-	4	-	3	32	0		
471	4	e 5 56 40	e 56 39	-	-	57 33	57 32	-	-	-	-	-	-	-	11	+ 10	5	25	0	Neighbourhood of Akan (Hokkaido)	
472	4	? 13 13 57	? 13 57	-	-	-	-	? 20 02	-	-	-	-	-	-	-	-	18	08	0		
473	6	10 37 01	-	-	-	37 11	-	-	-	-	-	-	-	-	-	-	1	44	0		
474	7	e 8 19 23	-	-	-	19 50	19 49	-	-	-	-	-	-	+	4	-	3	32	0		
475	7	e 11 50 15	-	-	-	50 25	-	-	-	-	-	-	-	-	-	-	1	08	0		
476	7	e 13 21 20	-	-	-	21 31	-	-	-	-	-	-	-	-	-	-	1	48	0	E off Kinkwasan	
477	9	e 0 13 22	-	-	-	13 32	-	-	-	-	-	-	-	-	-	-	1	06	0		
478	11	e 11 58 53	-	-	-	59 10	-	-	-	-	-	-	-	-	6	-	2	37	0		
479	12	e 2 22 14	-	-	-	22 30	-	-	-	-	-	-	-	-	-	-	1	21	0		
480	13	e 19 53 12	-	-	-	53 29	53 27	-	-	-	-	-	-	-	-	-	2	06	0		
481	14	e 1 34 57	-	-	-	35 44	35 44	-	-	-	-	-	-	+	11	- 23	5	15	0	E off Kinkwasan	
482	14	15 14 38	-	-	-	14 53	14 52	-	-	-	-	-	-	-	4	-	1	34	0		
483	15	e 16 20 04	-	-	-	20 10	-	-	-	-	-	-	-	-	-	-	1	09	0		
484	16	e 1 44 22	-	-	-	44 43	44 44	-	-	-	-	-	-	-	6	-	3	01	0		
485	16	e 5 42 37	-	-	-	43 08	43 10	-	-	-	-	-	-	-	8	-	2	44	0		
486	16	e 9 35 54	-	-	-	36 42	-	-	-	-	-	-	-	+	3	-	3	40	0	E off Kinkwasan	
487	16	e 17 27 41	-	-	-	27 51	e 27 49	-	-	-	-	-	-	-	6	-	2	05	0		
488	17	e 14 48 07	-	-	-	49 44	-	-	-	-	-	-	-	+	6	-	6	29	0		
489	17	16 20 46	-	-	-	22 26	-	-	-	-	-	-	-	-	4	-	4	35	0		
490	21	e 16 55 18	-	-	-	55 46	-	-	-	-	-	-	-	-	-	-	2	44	0		
491	22	e 19 19 04	e 19 05	-	-	? 22 29	? 22 28	-	-	-	-	-	-	-	5	-	12	24	0	E off Kinkwasan	
492	23	e 5 46 39	e 46 38	-	-	47 19	47 19	-	-	-	-	-	-	-	25	- 30	9	04	0		
493	24	e 3 18 23	-	-	-	18 41	-	-	-	-	-	-	-	-	-	-	1	19	0		
494	24	16	-	-	-	42 55	-	-	-	-	-	-	-	-	-	-	-	-	0		
495	25	4 41 28	41 28	-	-	41 41	41 41	-	-	-	-	-	-	-	411	- 578	9	24	2		

## EARTHQUAKES, 1940.



No.	Date 1940	P				S				L				Maximum Amplitude				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
496	Dec.25	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	NE off Hatinohé E off Cspe Siriya		
497	26	e 7	03	47	-	-	27	31	-	-	-	-	-	-	1	16	0			
498	26	e 7	03	47	-	-	04	02	-	-	-	-	-	-	1	07	0			
499	26	e 19	25	48	25	47	26	10	26	11	-	-	-	-	5	58	0			
500	27	e 11	10	38	-	-	11	02	-	-	-	-	-	-	3	09	0			
501	28	16	42	35	42	34	46	23	46	21	-	-	-	-	12	55	0	Distant SE off Kinkwasan		
502	29	1	24	09	24	09	24	29	24	30	-	-	-	-	4	57	0			
503	30	e 4	24	06	-	-	24	26	-	-	-	-	-	-	2	53	0	S off Sima Peninsula		
504	30	e 20	53	08	e 53	09	54	18	54	18	-	-	-	-	7	00	0			
505	31	e 0	55	43	-	-	55	56	-	-	-	-	-	-	1	35	0			
506	31	e 9	52	39	-	-	53	11	-	-	-	-	-	-	3	39	0			

# CHIEF EARTHQUAKES OBSERVED WITH NASU'S SEISMOGRAPH, 1940.

Instrument; Nasu's seismograph with three components.

Remarks;

Instrumental constants;

Component	V	T <sub>0</sub>	$\gamma/T_0^2$	Mass
E-W	25	4.5	0.06	7.2 kg.
N-S	25	5.4	0.03	7.2 kg.
Vertical	25	5.3	0.06	4.4 kg.

1. Direction of the earth's displacement is taken to be positive towards north, east, and upward respectively.
2.  $\oplus$  Out of the range of the instrument.
3.  $\times$  Too feeble to measure.
4.  $\ast$  Out of order of the instrument.

No.	Date	P			S		Maximum Amplitude			First Motion			Epicenter	
		Mean of 3 comp.			Mean of 3 comp.		E-W	N-S	Vertical	E-W	N-S	Vertical	$\lambda^\circ$ (E)	$\phi^\circ$ (N)
		h	m	s	m	s	$\mu$	$\mu$	$\mu$	$\mu$	$\mu$	$\mu$		
9	Jan. 6	2	46	13.4	46	24.1	- 24	+ 22	- 28	$\times$	$\times$	$\times$	141.9	38.7
16	7	5	50	58.8	51	26.9	- 100	+ 76	- 32	$\times$	$\times$	$\times$	141.4	36.8
21	17	1	19	55.3	24	6.6	- 368	+ 370	- 70	$\times$	- 8	- 4	Distant.	
58	Feb. 9	4	20	34.0	20	54.6	- 180	+ 200	$\ast$	- 2	- 8	$\ast$	141.5	37.5
59	9	13	54	10.8	54	30.5	-2530	-2640	$\ast$	+ 40	+ 60	$\ast$	142.5	40.2
95	Mar. 9	10	49	38.6	51	42.6	- 400	- 148	- 50	$\times$	+ 12	+ 16	140.0	28.0
96	11	11	26	9.2	26	35.8	- 624	- 588	+ 160	$\times$	$\times$	$\times$	142.2	41.1
140	Apr. 12	5	54	33.7	54	46.6	+ 540	- 662	$\ast$	+ 48	- 80	$\times$	141.8	38.4
184	May 19	15	20	43.4	22	59.0	+ 188	+ 140	- 76	$\times$	$\times$	$\times$	151.0	51.0
207	June 5	12	42	5.6	42	18.9	- 40	+ 40	+ 26	$\times$	$\times$	$\times$	E off Kuzi (Iwate)	
232	18	17	26	30.1	26	49.1	+ 150	- 156	+ 50	+ 12	- 20	- 20	141.7	38.1
256	July 4	9	1	57.2	2	59.1	- 104	+ 102	- 60	$\times$	$\times$	$\times$	144.5	44.3
263	10	5	52	8.8	53	55.9	- 250	+ 302	+ 180	$\times$	$\times$	- 4	130.6	44.8
269	14	15	32	20.5	33	1.2	- 730	+ 382	+ 86	$\times$	$\times$	$\times$	140.0	36.1
277	21	0	2	18.8	2	35.3	- 144	- 180	- 180	$\times$	$\times$	$\times$	142.6	40.1
292	Aug. 1	15	9	42.9	10	47.8	+2700	$\ast$	+1710	+ 4	- 12	+ 8	139.1	44.3
298	4	9	16	34.2	16	52.3	- 108	- 86	- 40	$\times$	+ 8	+ 10	141.1	37.7
437	Nov. 7	14	0	10.1	1	56.1	- 298	+ 262	+ 80	$\times$	$\times$	$\times$	138.5	30.3
444	14	10	34	47.6	35	32.7	+1080	+ 760	+ 200	$\times$	$\times$	$\times$	141.5	36.2
452	19	15	01	56.6	2	8.7	$\oplus$	>2800	$\oplus$	+1840	- 796	-2024	142.0	39.0
495	Dec. 25	4	41	28.4	41	42.1	+ 384	- 484	+ 282	$\ast$	$\ast$	- 68	142.1	38.6
499	26	23	28	39.3	29	12.5	- 162	+ 118	- 84	+ 4	- 5	+ 6	141.8	41.4

PULSATORY OSCILLATIONS, 1940. (EW Component.)

International  
Seismological  
Centre

No.	Beginning			Ending			Maximum				Double Amplitude
	Date			Date			Date				
	Month	Day	Hour	Month	Day	Hour	Day	Hour	Day	Hour	
1	January	2	13	January	4	9	3	2	3	9	5
2		2	21		7	17	5	9	5	17	5
3		8	0		11	15	8	7	8	12	5
4		14	23		16	14	15	17	15	23	5
5		18	17		21	1	19	0	19	5	5
6		23	3		26	10	23	14	23	19	7
7		27	11		30	3	29	5	29	9	4
8	February	2	18	February	5	14	3	6	3	9	8
9		6	3		9	20	7	19	7	23	10
10		13	10		15	15	14	9	14	17	10
11		17	6		18	14	17	18	17	21	6
12		19	22		21	13	20	8	20	11	9
13		25	8		27	1	25	13	25	19	6
14		27	20		29	8	28	8	28	11	5
15	March	9	2	March	11	5	10	1	10	6	4
16		11	9		13	2	12	2	12	6	6
17		13	13		16	1	15	1	15	4	10
18		16	9		18	4	17	0	17	5	5
19		21	14		24	18	22	1	22	5	17
20		29	12	April	1	11	31	8	31	11	4
21	April	2	10		6	6	4	1	4	9	21
22		8	13		11	9	10	5	10	9	7
23		14	4		16	22	14	17	14	21	11
24		21	9		24	16	21	20	22	1	20
25		26	4		29	11	28	1	28	5	6
26	May	12	7	May	15	3	14	6	14	8	4
27		16	14		18	4	17	5	17	9	4
28		30	16	June	1	9	31	14	31	18	3
29	June	17	10		18	24	18	0	18	2	5
30	July	7	19	July	9	10	7	23	8	3	6
31		14	8		16	18	15	9	15	13	4
32		24	15		26	11	25	2	25	5	3
33	August	25	22	August	28	9	26	23	27	5	55
34		30	21	September	1	5	31	6	31	10	4
35	September	4	6		6	18	4	22	5	1	5
36		7	7		11	9	7	21	8	1	5
37		11	21		13	14	12	6	12	9	10
38		17	12		19	20	18	9	18	15	14
39		20	13		22	1	21	0	21	4	4
40	October	15	2	October	16	22	16	12	16	15	7
41		24	0		27	5	25	7	25	11	12
42	November	6	1	November	8	16	7	19	7	23	10
43		10	4		11	10	10	15	10	19	4
44		12	18		15	15	13	5	13	8	5
45		21	1		22	11	21	8	21	10	13
46		24	8		27	20	25	5	25	8	7
47		29	10	December	3	19	30	12	30	15	10
48	December	7	16		10	17	8	5	8	9	10
49		11	15		13	11	12	0	12	5	5
50		17	17		21	9	18	5	18	9	12
51		21	17		25	3	23	22	24	5	13



The present report gives the results of the meteorological and seismological observations made at this observatory during the year 1941. No alteration has been made in the nature and methods of observation.

The observations and calculations were made by Messrs. M. Kirita, S. Satô, I. Kumagai, and K. Suzuki under the superintendence of Mr. T. Ikeda.

The followings are to be noted with respect to the meteorological observations :

*Hours of observations.*—*Japanese Central Standard Time* (i.e. mean time of the meridian 9h east from Greenwich) is adopted.

*Air Pressure.*—The barometric readings in millimetres are reduced to the freezing point of water, the corrections to sea level and to standard gravity are given at the bottom of the page for each month.

*Air and Earth Temperatures.*—The degrees are given in Centigrade.

*Wind.*—The velocity is expressed in metres per second. The direction was observed relative to the sixteen points of the compass.

*Cloud.*—The amount is estimated by the scale 0-10, the forms are those of the *International classification*, and the direction of motion is indicated relative to the sixteen points of the compass.

*Tension of Water Vapour.*—is given in millimetres.

*Relative Humidity.*—is given in percentages.

*Precipitation.*—The amount is given in millimetres.

*Clear and Cloudy Days.*—The amount of cloud is less than 2 exclusive, for the former; and more than 8 inclusive, for the latter.

*Duration of Sunshine.*—is recorded by a Jordan sunshine-recorder.

*Amount of Evaporation.*—is given in millimetres, for each day,—that is from 10h of the day in question to 10h of the next day, according to the instruction of the Central Meteorological Observatory in Tôkyo.

*The heights of the meteorological instruments* are as follows :

*Barometer.*—63.1 m above sea level.

*Air temperature thermometer.*—1.3m above the ground.

*Anemometer.*—16.5m above the ground.

*Wind vane.*—16.6m above the ground.

In recording the meteorological phenomena the following symbols are used:—

●	Rain	∇	Silver thaw	∞	Haze
✱	Snow	~	Glazed frost	⌘	Oceanic noise
⌘	Thunder storm	⊠	Ice	∞	Yellow dust
⌞	Thunder without lightning	✱	Snow storm	0	Unusual visibility
⋖	Lightning without thunder	⊕	Snow drift	∞	Red sky
△	Graupel	←	Ice crystals	C	Cirrus
▲	Hail	⊙	Earthquake	CS	Cirro-stratus
≡	Mist, Fog	⊙	Solar corona	CK	Cirro-cumulus
⌞	Hoar frost	⊕	Solar halo	KC	Alto-cumulus
⌞	Ice columns in ground	∪	Lunar corona	SC	Alto-stratus
∧	Dew	∪	Lunar halo	SK	Strato-cumulus
⌞	Frozen dew	∞	Gale	N	Nimbus
⊙	Frozen rain	∞	Rainbow	K	Cumulus
∞	Waved cloud	∞	Aurora	KN	Cumulo-nimbus
⊠	Snow lying	∞	Zodiacal light	S	Stratus

The descriptions of the meteorological instruments and the observing house are found in the annual reports for the years 1902, 1904, 1905, 1910, 1916, 1925, 1936, and 1937.

The seismological instruments in use are two Ômori's horizontal pendulums, of the same type as that described in p. 8 of No. 5, "Publication of the Earthquake Investigation Committee in Foreign Language," one serving to register the EW component, and the other the NS component, of seismological movements.

	EW Component Apparatus	NS Component Apparatus
Period of free oscillation.	16 seconds	36 seconds
Multiplication of the pointer.	100 times	20 times
Weight of heavy cylinder.	45.0 kilograms	17.6 kilograms
Horizontal distance of the centre of the cylinder from the point of support.	20 centimetres	75 centimetres
Vertical distance between the points of support and suspension.	104 centimetres	104 centimetres

May, 1941

S. KAWASAKI, *Rigakuhakushi*  
Director of the International Latitude Observatory  
of Mizusawa.

### ERRATA

Page	Date	Column	Error	Correction
7	11	Remarks	⊙ <sup>1</sup> 20h26m09h	⊙ <sup>1</sup> 20h26m09 <sup>s</sup>
11	29	Remarks	—Γ <sup>0</sup> —	—ζ <sup>0</sup> —
13	9	Remarks	—Γ <sup>0</sup> z17h52—	—Γ <sup>0</sup> z17h52—
19	3	Remarks	—≡ <sup>3</sup> 8h00—	—≡ <sup>0</sup> 8h00—
44	Dec.26	Epicenter	41.4	41.8

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

January

Latitude, 39° 8' 4" N.  
 Longitude, 141° 7' 52" E.  
 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.050
N S	17.6	20	36	0.005

Intensities of the earthquakes

Not felt ..... 0.

Felt ..... {

- 1. .... slight
- 2. .... moderate
- 3. .... rather strong
- 4. .... strong
- 5. .... very strong
- 6. .... disastrous

1 9 4 0

1

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks			
			h	m	s		AE $\mu$	AN $\mu$					
1	Jan. 1	PE	2	06	55	1.7	-	9	31				
		ePN		06	53								
		SE		07	25								
		SN		07	26								
		ME		08	05								
		MN		07	42								
		FE		11	51								
FN		10	50										
2	1	ePE	12	25	20				18				
		PN		25	18								
		SE		25	38								
		eSN		25	35								
		ME		26	03								
		MN		25	57								
		FE		28	39								
FN		28	44										
3	1	ePE	13	28	30				28				
		SE		28	58								
		eSN		28	59								
		ME		29	09								
		MN		29	16								
		FE		30	37								
		FN		32	04								
4	2	ePE	20	12	02				25				
		ePN		12	03								
		SE		12	27								
		SN		12	28								
		ME		12	37						1.0	-	12
		MN		12	47						2.4		+ 25
		FE		17	59								
		FN		15	27								
5	3	ePE	14	10	40				27				
		ePN		10	41								
		SE		11	07								
		SN		11	07								
		ME		12	09						2.4	-	25
		MN		11	43						2.4		+ 50
		FE		17	15								
		FN		16	03								

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
6	Jan. 3	PE	21	51	53				11	
		PN		51	53					
		SE		52	04					
		SN		52	05					
		ME		52	05	1.7	- 30			
		MN		52	13	1.9		- 30		
		FE		55	56					
		FN		54	20					
7	4	?SE	1	46	34					
		ME		46	42					
		FE		48	59					
8	5	ePE	4	13	23				21	
		ePN		13	26					
		SE		13	46					
		SN		13	46					
		ME		13	55		- 9			
		MN		14	01					
		FE		17	37					
		FN		16	17					
9	6	PE	2	46	14				10	Felt, Intensity 1
		PN		46	13					
		SE		46	24					
		SN		46	23					
		ME		46	27		$\pm 30$			
		MN		46	27					
		FE		50	47					
		FN		49	04					
10	6	ePE	3	59	11				30	
		ePN		59	12					
		SE		59	42					
		SN		59	41					
		ME	4	00	43	2.4	+ 10			
		MN		00	38					
		FE		04	47					
		FN		03	58					
11	6	PE	8	17	58				1 43	
		ePN		17	58					
		SE		19	41					
		SN		19	42					
		ME		20	43	1.1	+ 14			
		MN		20	57	2.4		- 25		
		FE		28	55					
		FN		35	45					

1 9 4 0

3

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
12	Jan. 6	PE	14	14	15				8 41	
		ePN		14	14					
		SE		22	56					
		SN		22	55					
		ME		23	04	3.2	+ 65			
		MN		23	01	4.6		+ 95		
		FE		49	29					
		FN	15	04	46					
13	6	eSE	15	43	33					
		ME		43	56					
		MN		43	40					
		FE		46	24					
		FN		46	41					
14	6	eSE	20	09	21					
		ME		09	26					
		MN		09	25					
		FE		10	32					
		FN		10	48					
15	7	ePE	3	23	56				53	
		ePN		23	56					
		SE		24	49					
		eSN		24	49					
		ME		25	28	3.0	+ 30			
		MN		25	36	2.4		- 53		
		FE		42	08					
		FN		45	24					
16	7	iPE	5	51	01				25	Felt, Intensity 1 Epicenter—Off Cape Sioya.
		ePN		51	00					
		iSE		51	26					
		SN		51	28					
		ME		51	43	2.4	+ 51			
		MN		52	02	2.6		- 53		
		FE		58	14					
		FN		58	44					
17	9	PE	20	02	29				31	
		ePN		02	29					
		iSE		03	00					
		SN		03	02					
		ME		03	18	1.6	- 25			
		MN		03	21	2.2		+ 48		
		FE		09	20					
		FN		10	03					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
18	Jan. 10	ePE	10	14	34				23	
		ePN		14	36					
		SE		14	58					
		SN		14	58					
		ME		15	02		-	5		
		MN		15	12					
		FE		17	56					
		FN		18	01					
19	15	PE	1	12	50				31	
		SE		13	21					
		ME		13	37	1.4	+	4		
		MN		13	45					
		FE		16	29					
		FN		15	09					
20	17	ePE	0	16	20				51	
		SE		17	11					
		SN		17	11					
		ME		17	43	1.7	-	6		
		MN		18	01	2.0		+ 10		
		FE		22	51					
		FN		20	03					
21	17	PE	1	19	55				4 10	
		PN		19	54					
		SE		24	07					
		SN		24	03					
		ME		24	44	?	-	275		
		MN		25	03	2.6		+275		
		FE		30	19					
		FN		31	11					
22	17	ePE	14	19	32				22	
		SE		19	54					
		ME		20	06					
		FE		22	03					
23	17	PE	15	02	11				47	
		ePN		02	08					
		SE		02	58					
		eSN		02	54					
		ME		03	00	0.4	+	7		
		MN		03	03					
		FE		07	47					
		FN		05	27					



1 9 4 0

5

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
24	Jan. 17	SE	15	30	51					
		ME		30	58					
		FE		32	43					
25	18	ePE	1	57	38			35		
		SE		58	13					
		ME		58	47					
		MN		58	27					
		FE	2	01	49					
		FN		00	47					
26	19	ePE	5	24	37			39		
		ePN		24	38					
		SE		25	17					
		SN		25	17					
		ME		26	16	2.2	+ 6			
		MN		25	46					
		FE		31	53					
		FN		28	28					
27	19	?SE	6	04	10					
		ME		04	28					
		MN		04	25					
		FE		06	54					
		FN		07	30					
28	19	ePE	7	19	09			11		
		ePN		19	09					
		SE		19	20					
		SN		19	18					
		ME		19	24					
		MN		19	22					
		FE		21	49					
		FN		20	29					
29	19	eSE	8	08	08					
		ME		08	13					
		FE		09	03					
30	19	PE	8	33	01			17	Felt, Intensity 1 Epicenter—SE Off the mouth R.Abukuma.	
		PN		32	59					
		SE		33	18					
		SN		33	16					
		ME		33	24	?	$\pm 33$			
		MN		33	19	?		$\pm 50$		
		FE		39	21					
		FN		37	39					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
31	Jan. 19	ePE	14	32	57				33	
		SE		33	30					
		SN		33	31					
		ME		34	02					
		MN		34	03					
		FE		37	16					
		FN		36	29					
32	20	PE	14	53	16				22	
		SE		53	37					
		SN		53	39					
		ME		53	58					
		MN		54	03					
		FE		56	16					
		FN		55	34					
33	21	PE	6	31	21				13	
		SE		31	34					
		ME		31	43					
		MN		31	41					
		FE		33	00					
		FN		32	48					
34	21	PE	6	37	17				37	
		ePN		37	20					
		SE		37	54					
		SN		37	52					
		ME		37	56	1.3	+ 17			
		MN		38	11	2.4		- 25		
		FE		44	58					
		FN		41	37					
35	21	PE	7	51	48				20	
		SE		52	08					
		ME		52	42					
		FE		54	29					
36	21	PE	17	26	26				35	
		SE		27	01					
		SN		27	00					
		ME		27	28					
		MN		27	11					
		FE		30	26					
		FN		28	42					
37	21	PE	17	40	24				13	
		SE		40	37					
		ME		40	49					
		FE		42	15					

1 9 4 0

7

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
38	Jan. 22	PE	18	32	03	1.1	-	6	39	
		ePN		32	02					
		SE		32	42					
		eSN		32	39					
		ME		33	23					
		MN		33	14					
		FE		37	56					
		FN		37	20					
39	24	ePE	8	45	14	?	+	5	1 17	
		eSE		46	31					
		SN		46	30					
		ME		46	59					
		MN		47	00					
		FE		52	09					
		FN		50	01					
40	25	SE	19	43	13					
		ME		43	31					
		FE		45	29					
41	26	ePE	6	51	31				41	
		SE		52	12					
		ME		52	21					
		MN		52	31					
		FE		54	53					
		FN		54	53					
42	26	PE	17	07	40	4.0 12.0	+	40	4 28	
		PN		07	40					
		SE		12	08					
		SN		12	08					
		ME		08	50					
		MN		13	15					
		FE		42	01					
		FN		42	43					
43	27	ePE	12	03	08				36	
		SE		03	44					
		ME		04	09					
		FE		07	03					
44	27	ePE	14	51	07	2.4 2.4	+	44	1 07	
		PN		51	06					
		SE		52	14					
		SN		52	13					
		ME		52	53					
		MN		52	40					
		FE	15	05	26					
		FN		11	03					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
45	Jan. 29	PE	2	39	34				12	
		ePN		39	31					
		SE		39	46					
		SN		39	45					
		ME		39	49					
		MN		39	50					
		FE		43	10					
		FN		41	01					
46	29	ePE	11	25	19				1 38	
		SE		26	57					
		SN		26	54					
		ME		27	50	1.9	+ 6			
		MN		27	21					
		FE		32	38					
		FN		31	39					
47	30	SE	0	41	16					
		eSN		41	16					
		ME		41	35					
		MN		41	45					
		FE		44	09					
		FN		43	51					
48	31	PE	5	42	49				14	
		PN		42	49					
		SE		43	03					
		?SN		42	59					
		ME		43	04					
		MN		43	04					
		FE		46	05					
		FN		44	50					
49	31	PE	16	43	38				33	
		PN		43	36					
		SE		44	11					
		SN		44	09					
		ME		44	40	1.5	+ 12			
		MN		44	40	1.5		- 25		
		FE		49	41					
		FN		48	04					

緯  
度  
觀  
測  
所

岩手縣水澤町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

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Latitude, 39° 8' 4" N.  
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 Height above mean sea level, 61m.  
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1 9 4 0

9

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
50	Feb. 1	SE	16	24	10					
		ME		24	24					
		FE		26	02					
51	2	ePE	2	01	07			21		
		ePN		01	05					
		SE		01	28					
		SN		01	27					
		ME		01	40	0.7	+ 18			
		MN		01	42	1.7		- 28		
		FE		05	01					
		FN		04	55					
52	2	ePE	4	41	59			24		
		SE		42	23					
		eSN		42	23					
		ME		42	39					
		MN		42	41					
		FE		44	31					
		FN		44	02					
53	5	ePE	6	25	38			16		
		SE		25	54					
		SN		25	55					
		ME		26	01					
		MN		26	03					
		FE		27	16					
		FN		26	56					
54	5	ePE	16	11	12			32		
		SE		11	44					
		SN		11	44					
		ME		12	20					
		MN		12	05					
		FE		14	40					
		FN		15	06					
55	5	ePE	22	24	23			13		
		SE		24	36					
		ME		24	50					
		MN		24	52					
		FE		26	51					
		FN		25	09					
56	6	SE	0	12	19					
		ME		12	52					
		MN		13	32					
		FE		15	47					
		FN		16	07					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
57	Feb. 7	PE	17	21	36	5.0 5.0	- 20	+ 53	4 32	
		PN		21	35					
		SE		26	07					
		SN		26	09					
		ME		26	42					
		MN		26	45					
		FE		43	39					
		FN		45	43					
58	9	PE	4	20	33				19	Intensity 2
		SE		20	52					
		ME		20	55					
		FE		30	47					
59	9	PE	13	54	10	2.4		+1925	21	Intensity 2
		PN		54	09					
		SE		54	31					
		SN		54	29					
		MN		54	35					
		FE	14	11	51					
		FN		11	05					
		60	9	PE	23					
SE				13	43					
ME				14	05					
MN				13	57					
FE				16	29					
FN				16	47					
61	11			SE	9	59	10			
		ME		59	23					
		FE	10	00	56					
62	12	?PE	0	21	12	1.7	+ 3		2 36	
		?PN		21	15					
		SE		23	48					
		?SN		24	48					
		ME		21	47					
		FE		26	42					
		FN		29	06					
63	12	?PE	8	32	03	2.5	+ 4		3 13	
		PN		32	00					
		?SE		35	15					
		?SN		35	13					
		ME		32	32					
		MN		32	38					
		FE		39	25					
		FN		39	41					



1940

11

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
64	Feb. 12	ePE	9	21	40	2.4	+	3	17	
		SE		21	57					
		ME		22	10					
		MN		22	11					
		FE		24	16					
		FN		23	51					
65	14	?PE	13	47	16	2.0	+	9	1 43	
		SE		48	59					
		?SN		49	01					
		ME		49	12					
		MN		50	11					
		FE		56	25					
FN		53	51							
66	17	ePE	9	41	41	1.6	+	4	30	
		SE		42	11					
		SN		42	10					
		ME		42	24					
		MN		42	39					
		FE		45	47					
FN		45	49							
67	17	ePE	23	42	08	0.6	-	5	31	
		ePN		42	08					
		SE		42	39					
		SN		42	39					
		ME		43	04					
		MN		42	55					
FE		45	36							
FN		45	48							
68	19	PE	13	24	00	1.6	-	3	32	
		SE		24	32					
		SN		24	30					
		ME		25	25					
		MN		25	19					
		FE		29	24					
FN		29	12							
69	20	PE	2	27	57	2.4	-	15	7 43	
		PN		27	57					
		SE		35	41					
		SN		35	38					
		ME		28	16					
		MN		28	58					
FE	3	02	12	3.3		28				
FN		11	07							

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
70	Feb. 21	ePE	9	41	07	1.7	-	3	24	
		SE		41	31					
		eSN		41	32					
		ME		41	56					
		MN		41	56					
		FE		44	42					
		FN		45	04					
71	21	ePE	14	11	32	1.7	-	4	2 45	
		ePN		11	32					
		SE		14	16					
		SN		14	18					
		ME		14	41					
		MN		14	34					
		FE		18	56					
FN		20	36							
72	21	ePE	17	12	43				37	
		SE		13	20					
		ME		13	46					
		FE		16	00					
73	21	ePE	22	43	34				33	
		SE		44	07					
		ME		44	42					
		FE		47	35					
74	22	ePE	13	36	17	2.4	-	5	25	
		PN		36	18					
		SE		36	44					
		SN		36	41					
		ME		36	59					
		MN		37	27					
		FE		41	42					
FN		41	57							
75	23	ePE	19	51	51	1.5	-	5	39	
		SE		52	30					
		eSN		52	28					
		ME		52	56					
		MN		52	36					
		FE		58	09					
		FN		56	36					

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13

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		$\Delta E \mu$	$\Delta N \mu$		
76	Feb. 24	?PE	12	07	54				5 54	
		?PN		07	53					
		?SE		13	45					
		SN		13	49					
		FE		21	29					
		FN		32	09					
77	24	ePE	18	51	39				43	
		SE		52	22					
		SN		52	23					
		ME		52	52					
		MN		52	48					
		FE		56	20					
		FN		55	19					
78	25	PE	4	09	46				13	
		PN		09	44					
		SE		09	59					
		SN		09	57					
		ME		09	59	?	$\pm 23$			
		MN		09	55	?		$\pm 30$		
		FE		12	13					
		FN		11	47					
79	25	ePE	6	24	43				1 31	
		SE		26	14					
		SN		26	13					
		ME		26	46					
		MN		27	17					
		FE		31	40					
		FN		33	17					
80	26	ePE	11	47	26				22	
		ePN		47	28					
		SE		47	49					
		SN		47	49					
		ME		48	26	1.9	+ 18			
		MN		48	13	1.7		- 28		
		FE		55	27					
		FN		52	57					
81	27	PE	11	39	48				49	
		SE		40	37					
		ME		40	48					
		MN		41	16					
		FE		44	25					
		FN		44	42					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
82	Feb. 29	ePE	12	32	42				44	
		ePN		32	38					
		SE		33	25					
		SN		33	23					
		ME		33	34	2.4	+ 20			
		MN		33	37	2.1		- 25		
		FE		38	07					
		FN		37	01					
83	29	PE	16	20	20				10 19	
		PN		20	21					
		SE		30	39					
		SN		30	38					
		ME		31	27					
		MN		31	17					
		FE		42	13					
		FN		39	58					

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町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

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International Latitude Observatory of Mizusawa

1 9 4 0

March

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Latitude,           39° 8' 4" N.  
Longitude,        141° 7' 52" E.  
Height above mean sea level,       61m.  
Sub-soil,           Diluvial Formation.  
Instrument,       Omori's Horizontal Pendulum Seismograph.  
Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.050
N S	17.6	20	36	0.005

Intensities of the earthquakes

Not felt ..... 0.

Felt ..... {

- 1. .... slight
- 2. .... moderate
- 3. .... rather strong
- 4. .... strong
- 5. .... very strong
- 6. .... disastrous

1 9 4 0

15

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
84	Mar. 1	ePE	7	59	56				49	
		ePN		59	54					
		SE	8	00	44					
		SN		00	44					
		ME		01	05					
		MN		01	09					
		FE		04	12					
		FN		04	03					
85	3	ePE	0	15	45				34	
		SE		16	19					
		ME		17	08					
		MN		16	39					
		FE		20	00					
		FN		18	26					
86	3	ePE	23	16	41				41	
		SE		17	22					
		SN		17	23					
		ME		17	31	1.2	+ 4			
		MN		17	38					
		FE		20	40					
		FN		18	53					
87	4	SE	5	43	34					
		ME		43	36					
		MN		43	36					
		FE		44	42					
		FN		43	48					
88	5	PE	3	47	07				12	
		SE		47	19					
		ME		47	22					
		FE		48	00					
89	5	ePE	8	52	46				1 22	
		ePN		52	45					
		SE		54	06					
		SN		54	07					
		ME		55	12	1.9	- 15			
		MN		55	07	1.4		- 15		
		FE	9	01	12					
		FN		00	50					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P-S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
90	Mar. 6	PE	2	05	08	0.9	—	5	31	
		ePN		05	06					
		SE		05	40					
		SN		05	39					
		ME		05	45					
		MN		05	41					
		FE		07	48					
FN		07	08							
91	7	PE	21	31	00				13	
		PN		30	59					
		SE		31	11					
		SN		31	12					
		ME		31	15					
		MN		31	16					
		FE		34	05					
FN		33	05							
92	8	ePE	3	32	19				36	
		SE		32	55					
		ME		33	12					
		MN		33	08					
		FE		35	39					
		FN		34	45					
93	8	ePE	4	57	26	1.0 1.3	—	11	41	
		ePN		57	28					
		SE		58	08					
		SN		58	08					
		ME		58	40					
		MN		58	39					
		FE	5	03	35					
		FN		02	58					
94	9	ePE	3	34	34				39	
		ePN		34	34					
		SE		35	13					
		SN		35	13					
		ME		35	16					
		MN		35	15					
		FE		38	00					
		FN		37	45					



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17

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
95	Mar. 9	ePE	10	49	38				2 05	
		iPN		49	39					
		iSE		51	44					
		iSN		51	43					
		ME		51	48	4.2	-116			
		MN		52	11	2.4		- 95		
		FE	11	00	09					
		FN		02	06					
96	11	PE	11	26	09				25	Intensity 1
		PN		26	09					
		iSE		26	34					
		iSN		26	35					
		ME		26	49	2.4	-266			
		MN		26	39	2.4		-458		
		FE		37	44					
		FN		39	20					
97	12	ePE	1	20	07				1 03	
		ePN		20	06					
		SE		21	09					
		SN		21	10					
		ME		21	20	2.6	+ 11			
		MN		21	29					
		FE		27	13					
		FN		26	55					
98	13	ePE	3	36	29				52	
		ePN		36	28					
		SE		37	21					
		SN		37	21					
		ME		37	38	?	+ 6			
		MN		37	38					
		FE		40	25					
		FN		39	41					
99	14	PE	5	08	06				10	
		PN		08	06					
		SE		08	16					
		SN		08	16					
		ME		08	17					
		MN		08	19					
		FE		10	31					
		FN		09	24					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
100	Mar. 14	ePE	16	23	53	0.9	+	5	35	
		SE		24	28					
		SN		24	28					
		ME		24	53					
		MN		24	49					
		FE		28	18					
		FN		26	50					
101	16	ePE	1	38	09				36	
		SE		38	45					
		ME		39	07					
		MN		39	04					
		FE		41	44					
		FN		41	19					
		102	16	ePE	3					
ePN				16	03					
SE				16	15					
SN				16	15					
ME				16	16					
MN				16	20					
FE				19	08					
FN				19	04					
103	16	ePE	16	52	10	2.4	+	6	35	
		PN		52	10					
		SE		52	45					
		SN		52	46					
		ME		53	47					
		MN		53	25					
		FE		58	00					
		FN		58	40					
104	17	ePE	8	36	07	1.6	+	6	27	
		ePN		36	07					
		SE		36	34					
		SN		36	35					
		ME		36	49					
		MN		36	45					
		FE		39	45					
		FN		38	50					
105	18	SE	13	24	22					
		ME		24	37					
		MN		25	07					
		FE		26	32					
		FN		26	15					

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19

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
106	Mar. 19	ePE	8	41	34				27	
		SE		42	01					
		ME		42	07					
		FE		43	27					
107	19	ePE	9	57	42				18	
		SE		58	00					
		ME		58	05					
		FE		59	16					
108	19	ePE	18	55	37				23	
		SE		56	00					
		ME		56	14					
		FE		57	47					
109	20	ePE	8	35	09				25	
		SE		35	34					
		SN		35	33					
		ME		35	49					
		MN		35	50					
		FE		37	45					
		FN		37	13					
110	21	ePE	10	12	31				31	
		SE		13	02					
		SN		13	02					
		ME		13	16					
		MN		13	25					
		FE		14	45					
		FN		15	22					
111	22	ePE	5	36	31				17	
		SE		36	49					
		SN		36	47					
		ME		36	53					
		MN		36	51					
		FE		38	47					
		FN		37	36					
112	22	ePE	10	47	26				23	
		ePN		47	26					
		SE		47	50					
		SN		47	48					
		ME		48	01	0.7	+ 14			
		MN		48	06					
		FE		51	59					
		FN		50	18					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
113	Mar. 22	ePE	21	59	20	2.2	+	9	33	
		ePN		59	18					
		SE		59	57					
		SN		59	58					
		ME	22	00	59					
		MN		01	04					
		FE		05	46					
		FN		03	37					
114	23	?SE	16	13	33					
		ME		13	46					
		FE		15	53					
115	23	SE	18	46	26					
		SN		46	24					
		ME		46	31					
		MN		46	30					
		FE		47	41					
		FN		47	26					
116	27	ePE	12	37	23				5 51	
		ePN		37	22					
		?SE		43	13					
		?SN		43	15					
		ME		46	25					
		MN		44	34					
		FE		57	51					
		FN	13	12	01					
117	27	ePE	18	18	33	1.4	+	6	1 26	
		SE		19	59					
		eSN		19	59					
		ME		20	21					
		MN		20	29					
		FE		25	44					
		FN		26	48					
118	27	ePE	18	38	53	1.2	+	7	2 17	
		SE		41	10					
		eSN		41	08					
		ME		41	51					
		MN		42	40					
		FE		47	34					
		FN		47	57					

1940

21

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
119	Mar. 28	ePE	0	47	47	?	-	4	20	
		SE		48	08					
		SN		48	05					
		ME		48	24					
		MN		48	19					
		FE		50	59					
		FN		49	52					
120	28	PE	15	54	51	2.4	+	10	4	45
		ePN		54	49					
		SE		59	38					
		SN		59	34					
		ME		55	48					
		MN	16	02	28					
		FE		15	37					
		FN		33	55					
121	28	ePE	21	28	11				42	
		SE		28	54					
		eSN		28	53					
		ME		29	36					
		MN		29	22					
		FE		33	39					
		FN		31	56					
122	29	PE	11	20	43				19	
		SE		21	02					
		ME		21	04					
		FE		22	35					
123	29	ePE	19	49	39				1	14
		ePN		49	39					
		SE		50	53					
		SN		50	53					
		ME		51	06					
		MN		51	01					
		FE		54	50					
FN		52	43							
124	30	ePE	21	46	43				22	
		SE		47	05					
		ME		47	19					
		MN		47	15					
		FE		49	32					
		FN		48	31					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
125	Mar. 30	ePE	21	58	43				20	
		PN		58	43					
		SE		59	03					
		SN		59	03					
		ME		59	26	1.4	+ 15			
		MN		59	15	1.3		- 25		
		FE	22	02	58					
		FN		01	56					

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岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

upel

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

April

Latitude, 39° 8' 4" N.  
 Longitude, 141° 7' 52" E.  
 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.050
N S	17.6	20	36	0.005

Intensities of the earthquakes

Not felt ..... 0.

Felt .....	}	1. .... slight
		2. .... moderate
		3. .... rather strong
		4. .... strong
		5. .... very strong
		6. .... disastrous



1 9 4 0

23

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
126	Apr. 1	PE	11	26	53	4.3	+ 14		6 19	
		ePN		26	52					
		SE		33	10					
		SN		33	12					
		ME		33	42					
		MN		33	50					
		FE		45	36					
		FN		51	53					
127	2	PE	9	54	35	1.8	+ 4		39	
		SE		55	14					
		SN		55	13					
		ME		55	39					
		MN		55	20					
		FE		58	47					
		FN		57	05					
		128	2	ePE	19					
SE				20	44					
SN				20	44					
ME				21	04					
MN				20	53					
FE				24	20					
FN				22	56					
129	3			ePE	20	24	24	2.1	- 8	
		SE		24	45					
		SN		24	47					
		ME		25	43					
		MN		25	02					
		FE		28	54					
		FN		26	35					
		130	5	ePE	9	23	20			
ePN				23	21					
SE				23	59					
SN				23	58					
ME				24	40					
MN				24	15					
FE				28	38					
FN				28	14					
131	5	iPE	16	38	39	2.6	+ 16		2 29	
		ePN		38	37					
		SE		41	07					
		SN		41	07					
		ME		41	48					
		MN		41	36					
		FE		48	19					
		FN		47	29					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
132	Apr. 6	ePE	4	32	42	1.2	+	2	32	
		SE		33	14					
		ME		33	40					
		MN		33	31					
		FE		36	39					
		FN		35	33					
133	6	PE	5	19	18	1.7	-	3	31	
		SE		19	49					
		eSN		19	53					
		ME		20	34					
		MN		20	18					
		FE		25	08					
		FN		22	43					
134	9	ePE	5	02	24	1.1	-	7	36	
		ePN		02	24					
		SE		03	00					
		SN		02	59					
		ME		03	07					
		MN		03	05					
		FE		05	53					
		FN		05	30					
135	9	ePE	5	49	24				20	
		SE		49	44					
		ME		50	00					
		MN		49	53					
		FE		52	03					
		FN		51	10					
136	10	ePE	10	45	21				12	
		SE		45	33					
		ME		45	45					
		MN		45	55					
		FE		46	44					
		FN		46	35					
137	11	?PE	9	08	38	1.2	-	5	48	
		SE		09	26					
		SN		09	25					
		ME		10	04					
		MN		09	48					
		FE		12	34					
		FN		13	21					

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25

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
138	Apr. 12	ePE	3	34	35				24	
		SE		34	59					
		ME		35	24					
		FE		37	58					
139	12	SE	4	14	10					
		ME		14	17					
		FE		15	02					
140	12	PE	5	54	33				24	Intensity 2
		PN		54	33					
		SE		54	46					
		SN		54	48					
		ME		54	49	?	$\pm 360.$			
		MN		54	49			+540		
		FE	6	05	11					
141	12	ePE	11	45	38				27	
		SE		46	05					
		ME		46	18					
		MN		46	15					
		FE		48	00					
		FN		47	29					
142	12	PE	14	28	59				27	
		ePN		28	58					
		SE		29	26					
		SN		29	26					
		ME		29	56	2.0	- 48			
		MN		29	47					
		FE		32	23					
		FN		31	47					
143	14	ePE	14	58	16				1 31	
		ePN		58	15					
		iSE		59	47					
		SN		59	47					
		ME		59	51	1.3	- 53			
		MN	15	00	13	1.7		+ 53		
		FE		13	13					
		FN		13	40					
144	16	PE	6	13	15				4 40	
		PN		13	15					
		SE		17	56					
		SN		17	51					
		ME		19	20	12.0	+ 82			
		MN		20	04	18.0		-488		
		FE		47	31					
		FN		48	05					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P-S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
145	Apr. 16	PE	6	48	37	16.6		-318	4 35	
		PN		48	40					
		SE		53	19					
		SN		53	08					
		MN		55	23					
		FE	7	37	47					
		FN		59	45					
146	16	?PE	7	14	33				1 35	
		eSE		16	08					
		eSN		16	09					
		ME		16	16					
		MN		16	31					
		FE		18	50					
		FN		17	37					
147	16	ePE	7	54	12				3 25	
		eSE		57	37					
		ME		58	00					
		FE	8	04	46					
148	16	?SE	21	16	38					
		ME		17	02					
		MN		17	25					
		FE		19	11					
		FN		19	41					
149	17	PE	15	57	48	2.3 1.5	+ 85	+130	30	
		PN		57	49					
		SE		58	18					
		SN		58	18					
		ME		58	25					
		MN		58	31					
		FE	16	07	48					
FN		04	27							
150	18	ePE	7	39	00				12	
		ePN		39	00					
		SE		39	13					
		SN		39	11					
		ME		39	16					
		MN		39	14					
		FE		40	49					
FN		40	26							

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27

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
151	Apr. 18	?PE	21	45	23				45	
		?SE		46	08					
		?SN		46	08					
		ME		46	36					
		MN		46	26					
		FE		48	53					
		FN		48	12					
152	19	ePE	0	11	36				1 07	
		SE		12	43					
		ME		13	16					
		MN		13	04					
		FE		16	29					
		FN		15	13					
153	19	ePE	7	55	04				31	
		ePN		55	03					
		SE		55	34					
		SN		55	36					
		ME		55	38	1.3	+ 6			
		MN		55	46					
		FE		57	58					
		FN		57	54					
154	19	?PE	14	43	19				2 32	
		?PN		43	21					
		?SE		45	52					
		?SN		45	51					
		ME		46	52					
		MN		46	15					
		FE		50	13					
		FN		53	41					
155	19	?SE	16	38	09					
		SN		38	10					
		ME		38	11					
		MN		38	12					
		FE		38	43					
		FN		38	45					
156	20	iPE	20	19	33				1 09	
		PN		19	33					
		iSE		20	42					
		eSN		20	42					
		ME		20	48	2.0	+ 13			
		MN		20	54	1.1	- 23			
		FE		25	24					
		FN		24	53					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
157	Apr. 22	ePE	16	14	50				22	
		SE		15	12					
		ME		15	26					
		MN		15	32					
		FE		17	12					
		FN		16	37					
158	24	ePE	1	46	56				37	
		SE		47	33					
		ME		47	57					
		MN		48	28					
		FE		50	30					
		FN		50	38					
159	24	PE	13	21	56				48	
		ePN		21	55					
		SE		22	44					
		SN		22	42					
		ME		23	31	2.3	—	6		
		MN		23	38					
		FE		27	54					
		FN		27	10					
160	25	ePE	11	25	56				26	
		SN		26	22					
		ME		26	36					
		MN		26	50					
		FE		29	11					
		FN		28	52					
161	26	ePE	16	35	53				18	
		SE		36	11					
		SN		36	11					
		ME		36	11					
		MN		36	12					
		FE		36	51					
		FN		36	44					
162	27	SE	2	06	24					
		ME		06	39					
		FE		08	22					
163	27	?SE	16	23	39					
		ME		24	15					
		FE		28	16					

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29

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
164	Apr. 29	PE	15	13	32				1 10	
		ePE		13	31					
		SE		14	42					
		SN		14	42					
		ME		14	47	1.6	+ 20			
		MN		15	13	2.1		- 25		
		FE		21	18					
		FN		20	58					
165	30	PE	23	17	33				19	
		SE		17	52					
		ME		17	59	0.9	+ 5			
		FE		20	04					

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岩手縣水澤町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社



suppl.

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1 9 4 0

May

Latitude,            39° 8' 4" N.  
 Longitude,        141° 7' 52" E.  
 Height above mean sea level,        61m.  
 Sub-soil,            Diluvial Formation.  
 Instrument,        Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.050
N S	17.6	20	36	0.005

Intensities of the earthquakes

Not felt ..... 0.

Felt .....	}	1. .... slight
		2. .... moderate
		3. .... rather strong
		4. .... strong
		5. .... very strong
		6. .... disastrous

1 9 4 0

30

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
166	May. 1	?SE ME FE	8	01	23 51 55					
167	1	ePE SE eSN ME MN FE FN	18	27	12 47 45 39 22 09 09	1.6	- 5		35	
168	2	ePE SE eSN ME MN FE FN	9	26	24 53 56 07 08 45 02	1.4	+ 5		29	
169	4	PE ePN SE SN ME MN FE FN	7	29	38 36 01 01 16 02 50 47	3.6 13.7	+ 6	+ 50	4 24	
170	6	ePE ePN SE eSN ME MN FE FN	21	16	38 36 58 56 09 14 57 24		+ 5		20	
171	7	ePE SE ME FE	18	22	20 32 35 44				12	
172	9	ePE ePN SE ePN ME MN FE FN	11	46	04 04 28 27 40 31 37 17				24	

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks		
			h	m	s		AE $\mu$	AN $\mu$				
173	May. 11	ePE	13	38	39				1 01			
		SE		39	40							
		SN		39	41							
		ME		39	45							
		MN		39	47							
		FE		45	34							
		FN		42	14							
174	11	ePE	14	00	08				4 33			
		ePN		00	11							
		eSE		04	44							
		SN		04	41							
		ME		00	58						2.4	- 5
		MN		06	45						15.6	+ 43
		FE		16	47							
		FN		21	00							
175	12	SE	3	59	26							
		ME		59	31							
		MN		59	37							
		FE	4	01	16							
		FN		01	06							
176	13	ePE	23	59	51				29			
		ePN		59	52							
		SE	24	00	20							
		SN		00	22							
		ME		00	22						0.2	+ 10
		MN		00	50						1.2	- 13
		FE		02	54							
		FN		03	19							
177	14	PE	13	24	07				26			
		SE		24	33							
		SN		24	33							
		ME		24	45						?	+ 5
		MN		24	51							
		FE		27	22							
		FN		27	10							
178	15	PE	6	39	55				27			
		SE		40	22							
		SN		40	22							
		ME		40	36						1.0	+ 4
		MN		40	33							
		FE		42	57							
		FN		42	28							

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32

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
179	May. 15	ePE SE ME FE	22	54	01 19 24 49				18	
180	18	ePE SE SN ME MN FE FN	2 3	59	54 22 20 25 41 38 21	0.8 1.4	+ 20	+ 28	28	
181	18	ePE SE SN ME MN FE FN	16	23	37 12 12 21 16 54 48				35	
182	19	ePE SE ME FE	3	37	26 41 43 34				15	
183	19	MN	5	16	37					
184	19	PE PN SE SN ME MN FE FN	15	20	42 42 57 00 09 07 43 55	3.0 2.4	- 96	-103	2 16	
185	20	ePE SE SN ME MN FE FN	8	07	20 39 40 45 48 56 28				19	
186	20	SE ME MN FE FN	8	37	44 55 54 37 24					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
187	May. 21	ePE	18	59	49				2 45	
		ePN		59	47					
		SE	19	02	33					
		SN		02	32					
		ME		02	54					
		MN		03	49					
		FE		06	25					
		FN		08	00					
188	21	SE	20	03	05					
		ME		03	12					
		FE		04	05					
189	22	ePE	10	42	32				30	
		SE		43	02					
		ME		44	52					
		MN		44	30					
		FE		49	21					
		FN		47	58					
190	22	ePE	13	03	07				32	
		ePN		03	08					
		SE		03	39					
		SN		03	40					
		ME		04	08					
		MN		04	04					
		FE		07	44					
		FN		06	30					
191	23	PE	5	38	14				18	
		SE		38	32					
		ME		38	36					
		MN		38	40					
		FE		40	48					
		FN		40	13					
192	24	ePE	16	53	29				20 29	
		ePN		53	32					
		?SE	17	14	03					
		?SN		13	56					
		FE	19	10	26					
		FN		05	27					
193	24	ePE	22	38	43				15	
		SE		38	58					
		SN		38	58					
		ME		39	09					
		MN		39	06					
		FE		40	28					
		FN		40	53					

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34

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
194	May. 25	PE	18	08	10				11	
		SE		08	21					
		SN		08	22					
		ME		08	26					
		MN		08	31					
		FE		10	31					
		FN		09	35					
195	25	PE	23	31	30				29	
		SE		31	59					
		SN		32	00					
		ME		32	35					
		MN		32	23					
		FE		35	38					
		FN		33	55					
196	26	ePE	22	12	42				23	
		SE		13	05					
		ME		13	13					
		MN		13	35					
		FE		15	23					
		FN		15	12					
197	26	ePE	23	13	22				29	
		eSE		13	51					
		eSN		13	51					
		ME		14	15					
		MN		14	17					
		FE		16	30					
		FN		16	05					
198	27	ePE	8	52	48				58	
		SE		53	46					
		eSN		53	51					
		ME		53	58					
		MN		54	07					
		FE		57	26					
		FN		56	17					
199	27	ePE	11	43	07				36	
		SE		43	43					
		SN		43	42					
		ME		44	43					
		MN		44	03					
		FE		47	57					
		FN		47	06					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
200	May. 28	PE	9	48	29	2.1	-	10	6	13
		PN		48	29					
		SE		54	41					
		SN		54	42					
		ME		49	15					
		MN		48	48					
		FE	10	15	47					
		FN		34	21					
201	28	ePE	14	25	12	2.4	+	14	2	02
		ePN		25	17					
		SE		27	16					
		eSN		27	17					
		ME		28	00					
		FE		35	02					
		FN		34	41					
		202	31	iPE	14					
PN				57	28					
SE				58	16					
SN				58	18					
ME				58	50					
MN				58	44					
FE	15			05	07					
FN				03	37					

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岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社



# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

June

Latitude, 39° 8' 4" N.  
 Longitude, 141° 7' 52" E.  
 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.055
N S	17.6	20	36	0.006

Intensities of the earthquakes

Not felt ..... 0.

Felt ..... {

- 1. .... slight
- 2. .... moderate
- 3. .... rather strong
- 4. .... strong
- 5. .... very strong
- 6. .... disastrous

1 9 4 0

36

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
203	June 2	eSE	2	44	22					
		eSN		44	22					
		ME		44	29					
		MN		44	28					
		FE		46	25					
		FN		45	46					
204	3	ePE	2	18	37			11		
		ePN		18	34					
		SE		18	48					
		eSN		18	44					
		ME		18	51					
		MN		18	52					
		FE		20	45					
		FN		20	27					
205	3	SE	15	57	40					
		ME		57	51					
		MN		57	44					
		FE		59	41					
		FN		59	36					
206	5	?PE	11	09	29			8 10		
		?PN		09	42					
		eSE		17	45					
		eSN		17	46					
		ME		18	36					
		MN		17	58					
		FE		39	31					
		FN		49	30					
207	5	ePE	12	42	05			13	Intensity 1	
		ePN		42	05					
		iSE		42	19					
		iSN		42	18					
		ME		42	23	$\pm 36$				
		MN		42	21		$\pm 43$			
		FE		46	57					
		FN		46	21					
208	5	iPE	15	11	51			12		
		PN		11	49					
		iSE		12	03					
		iSN		12	01					
		ME		12	05	$\pm 16$				
		MN		12	02					
		FE		14	54					
		FN		13	57					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
209	June 5	ePE	22	22	29				27	
		eSE		22	56					
		ME		23	06					
		MN		23	08					
		FE		25	21					
		FN		24	11					
210	7	?SE	7	26	39					
		ME		27	10					
		MN		26	56					
		FE		31	07					
		FN		30	48					
211	7	?SE	8	11	18					
		?SN		11	18					
		ME		11	43					
		MN		11	59					
		FE		14	42					
		FN		13	38					
212	8	ePE	14	29	26				16	
		SE		29	42					
		ME		29	49					
		MN		29	44					
		FE		30	57					
		FN		30	21					
213	9	PE	7	07	30				11	
		SE		07	41					
		SN		07	40					
		ME		07	44					
		MN		07	44					
		FE		08	57					
		FN		08	11					
214	10	ePE	5	03	01	0.5	-	5	1 31	
		SE		04	32					
		ME		04	39					
		MN		04	41					
		FN		07	16					
		FN		05	41					
215	10	ePE	12	36	43				27	
		SE		37	10					
		ME		37	37					
		MN		37	10					
		FE		39	41					
		FN		38	12					

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38

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
216	June 11	?PE	8	50	48				2 15	
		?PN		50	49					
		?SE		53	05					
		?SN		53	00					
		FE	9	00	47					
		FN		00	38					
217	11	ePE	19	46	32				1 17	
		SE		47	49					
		eSN		47	49					
		ME		48	16	1.7	-	5		
		MN		48	23					
		FE		53	08					
		FN		52	12					
218	12	ePE	1	41	26				22	
		SE		41	48					
		ME		42	28					
		MN		42	32					
		FE		46	05					
		FN		45	51					
219	12	ePE	5	39	15				1 21	
		ePN		39	17					
		SE		40	37					
		SN		40	37					
		ME		41	07	1.4	-	7		
		MN		41	06					
		FN		46	16					
220	12	ePE	14	00	47				49	
		PN		00	47					
		SE		01	36					
		SN		01	36					
		ME		03	01	2.6	-	160		
		MN		02	52	2.1		-250		
221	12	PE	14	12	21				44	
		ePN		12	20					
		SE		13	03					
		SN		13	06					
		ME		14	07	4.2	-	123		
		MN		14	27	3.0		-170		
		FE		28	32					
		FN		37	49					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
222	June 12	SE	15	31	26					
		ME		31	56					
		MN		31	50					
		FE		34	25					
		FN		35	27					
223	12	PE	16	07	17			1 10		
		SE		08	27					
		SN		08	26					
		ME		09	07	1.7	- 7			
		MN		09	02					
		FE		13	08					
		FN		13	13					
224	12	?SE	18	15	49					
		ME		16	09					
		MN		16	31					
		FE		19	09					
		FN		19	16					
225	12	ePE	18	38	45			1 24		
		ePN		38	45					
		SE		40	08					
		eSN		40	11	3.0	- 16			
		ME		40	44	2.7		- 25		
		MN		40	41					
		FE		47	55					
		FN		53	18					
226	13	ePE	16	36	26			59		
		SE		37	25					
		SN		37	24					
		ME		37	38	2.5	- 10			
		MN		37	35	3.0		- 23		
		FE		42	18					
		FN		41	37					
227	15	ePE	9	10	06			25		
		ePN		10	07					
		SE		10	31					
		eSN		10	33					
		ME		12	18	3.0	- 36			
		MN		11	56	2.9		- 45		
		FE		18	39					
		FN		18	17					

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40

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
228	June 15	ePE	15	19	07	0.8	-	6	16	
		ePN		19	05					
		SE		19	23					
		SN		19	22					
		ME		19	31					
		MN		19	28					
		FE		21	54					
		FN		21	03					
229	16	ePE	13	41	39				1 21	
		ePN		41	42					
		SE		43	01					
		SN		43	00					
		ME		43	12					
		MN		43	14					
		FE		46	04					
		FN		46	01					
230	17	ePE	20	08	25				10	
		ePN		08	23					
		SE		08	35					
		eSN		08	33					
		ME		08	44					
		MN		08	49					
		FE		11	11					
		FN		12	08					
231	18	ePE	13	59	02	2.5	-	16	5 00	
		ePN		59	01					
		SE	14	04	02					
		SN		04	01					
		ME		04	10					
		MN		04	15					
		FE		12	59					
		FN		10	53					
232	18	iPE	17	26	29	1.5	-	77	18	Intensity 1
		iPN		26	27					
		SE		26	47					
		SN		26	46					
		ME		27	23					
		MN		27	18					
		FE		34	10					
		FN		33	01					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
233	June 18	ePE	18	44	35			4 50		
		ePN		44	34					
		SE		49	24					
		SN		49	25					
		FE		55	48					
		FN	19	00	55					
234	18	PE	19	40	42			14		
		ePN		40	43					
		SE		40	56					
		SN		40	55					
		ME		41	15	2.4	- 15			
		MN		41	13	1.6	+ 28			
		FE		44	34					
		FN		43	16					
235	19	SE	2	27	15					
		ME		27	22					
		FE		28	43					
236	19	ePE	4	23	47			52		
		SE		24	39					
		ME		25	32					
		MN		25	14					
		FE		30	00					
		FN		27	49					
237	20	ePE	18	37	40			23		
		SE		38	03					
		SN		38	03					
		ME		38	17	1.7	- 6			
		MN		38	23					
		FE		41	11					
		FN		40	42					
238	21	ePE	6	55	32			38		
		SE		56	10					
		ME		56	25					
		MN		56	10					
		FE		58	55					
		FN		58	50					
239	21	ePE	8	13	38			13		
		SE		13	51					
		SN		13	52					
		ME		13	53					
		MN		13	58					
		FE		15	51					
		FN		15	02					

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42

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
240	June 22	ePE	1	09	25				20	
		ePN		09	24					
		SE		09	44					
		SN		09	45					
		ME		09	47					
		MN		09	48					
		FE		11	50					
		FN		11	38					
241	June 22	iPE	11	44	24				6 06	
		PN		44	22					
		iSE		50	29					
		iSN		50	29					
		ME		51	43	2.8	- 19			
		MN		53	58	9.4		+ 60		
		FE	12	06	52					
		FN		12	41					
242	June 25	?PE	2	56	30				46	
		?SE		57	16					
		ME		58	02					
		MN		57	02					
		FE	3	03	53					
		FN		01	32					
243	25	ePE	11	37	26				10	
		SE		37	36					
		ME		37	39					
		MN		37	38					
		FE		38	43					
		FN		38	33					
244	26	ePE	7	29	28				38	
		ePN		29	26					
		SE		30	05					
		SN		30	05					
		ME		30	34	1.8	- 4			
		MN		30	20					
		FE		34	41					
		FN		34	00					
245	26	?SE	8	17	35					
		?SN		17	35					
		ME		17	38					
		MN		17	50					
		FE		22	54					
		FN		22	47					



No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
246	June 26	ePE	12	41	47				38	
		eSE		42	25					
		eSN		42	26					
		ME		43	01					
		MN		42	50					
		FE		44	48					
		FN		44	20					
247	27	ePE	3	58	36				31	
		SE		59	07					
		ME		59	35					
		MN		59	20					
		FE	4	02	27					
		FN		01	23					
248	27	ePE	5	22	16				14	
		SE		22	30					
		ME		22	35					
		MN		22	37					
		FE		23	49					
		FN		24	05					
249	27	ePE	6	54	37				1 29	
		ePN		54	36					
		SE		56	15					
		SN		56	14					
		ME		56	51	2.4	+ 15			
		MN		57	27					
		FE	7	03	38					
FN		01	49							
250	28	ePE	20	44	19				24	
		SE		44	43					
		SN		44	44					
		ME		44	59	1.4	- 5			
		MN		45	08					
		FE		47	08					
		FN		46	29					
251	30	ePE	17	14	35				40	
		ePN		14	34					
		SE		15	15					
		SN		15	14					
		ME		15	18	0.8	+ 6			
		MN		15	18					
		FN		18	31					
FN		17	59							

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44

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
252	June 30	ePE	21	11	23	1.0	+	6	41	
		SE		12	04					
		eSN		12	04					
		ME		12	08					
		MN		12	10					
		FE		14	28					
		FN		13	34					

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岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

July

Latitude, 39° 8' 4" N.  
 Longitude, 141° 7' 52" E.  
 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.055
N S	17.6	20	36	0.006

Intensities of the earthquakes

Not felt ..... 0.

Felt .....	}	1. .... slight
		2. .... moderate
		3. .... rather strong
		4. .... strong
		5. .... very strong
		6. .... disastrous

1940

45

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
253	July 2	ePE	1	37	44				56	
		ePN		37	43					
		SE		38	40					
		eSN		38	40					
		ME		39	19	2.4	- 19			
		MN		40	31	2.4		+ 25		
		FE		53	41					
		FN		57	35					
254	2	?PE	9	09	45				58	
		?SE		10	43					
		ME		12	16					
		MN		11	30					
		FE		16	52					
		FN		15	11					
255	3	?SE	17	40	20					
		ME		40	23					
		FE		41	16					
256	4	PE	9	01	56				1 05	
		ePN		01	56					
		SE		03	01					
		SN		03	00					
		ME		03	20	1.3	+ 61			
		MN		03	19	1.2		- 93		
		FE		10	47					
		FN		09	00					
257	5	ePE	7	12	33				50	
		SE		13	23					
		SN		13	21					
		ME		13	30	1.3	+ 10			
		MN		13	41					
		FE		17	49					
		FN		15	59					
258	5	iPE	20	59	54				24	
		PN		59	55					
		SE	21	00	18					
		SN		00	18					
		ME		00	27	1.8	+108			
		MN		00	49	2.4		+178		
		FE		09	13					
		FN		12	15					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
259	July 6	ePE	1	24	49				24	
		SE		25	13					
		SN		25	15					
		ME		25	26					
		MN		25	18					
		FE		27	17					
		FN		26	45					
260	8	ePE	7	54	39				10	
		SE		54	49					
		ME		54	51					
		FE		55	49					
261	8	ePE	11	01	57				29	
		SE		02	26					
		ME		02	45					
		FE		05	25					
262	8	ePE	15	19	06				1 58	
		ePN		19	06					
		SE		21	04					
		SN		21	03					
		ME		21	07	2.4	- 22			
		MN		21	24	2.2		- 20		
		FE		28	29					
		FN		26	58					
263	10	PE	5	52	11				1 49	
		PN		52	09					
		iSE		53	59					
		iSN		53	59					
		ME		54	11	2.3	+281			
		MN		54	16	1.9		-300		
		FE	6	20	58					
		FN		22	59					
264	11	ePE	21	45	46				13	
		SE		45	59					
		ME		46	03					
		MN		46	43					
		FE		47	08					
		FN		47	58					
265	12	ePE	13	12	13				33	
		SE		12	46					
		SN		12	45					
		ME		12	54	0.8	- 5			
		MN		13	02					
		FE		15	42					
		FN		16	44					

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47

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
266	July 13	?PE	17	09	17				5 29	
		?PN		09	17					
		?SE		14	45					
		?SN		14	47					
		FE		21	56					
		FN		55	24					
267	14	PE	5	58	47				5 05	
		PN		58	48					
		SE	6	03	52					
		SN		03	53					
		MN		08	32	13.0		+360		
		FE	7	42	24					
268	14	ePE	10	06	45				1 09	
		SE		07	54					
		SN		07	42					
		ME		08	30					
		MN		08	13					
		FE		12	35					
269	14	PE	15	32	21				39	
		PN		32	21					
		SE		32	59					
		SN		33	01					
		ME		33	13	2.9		-195		
		MN		33	24	2.4		-253		
270	15	ePE	3	05	50				36	
		SE		06	26					
		ME		07	00					
		MN		06	56					
		FE		09	29					
		FN		10	04					
271	15	PE	13	44	11				32	
		ePN		44	12					
		SE		44	43					
		SN		44	43					
		ME		45	02	1.4		- 5		
		MN		44	57					
		FE		49	10					
FN		47	15							

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
272	July 16	ePE	4	55	14				2 11	
		ePN		55	15					
		?SE		57	26					
		?SN		57	25					
		FE	5	03	06					
		FN		04	38					
273	17	ePE	23	35	26				10	
		ePN		35	28					
		SE		35	36					
		SE		35	37					
		ME		35	52					
		MN		35	42					
		FE		37	29					
		FN		36	44					
274	18	SE	18	28	28					
		ME		28	39					
		FE		31	28					
275	19	?SE	4	53	34	2.0	-	3		
		ME		54	31					
		MN		53	53					
		FE	5	02	42					
		FN		01	18					
276	19	ePE	5	23	01				21	
		eSE		23	22					
		eSN		23	25					
		ME		23	30					
		MN		23	35					
		FE		25	08					
		FN		24	39					
277	21	iPE	0	02	18	?	-	147	18	Intensity 2
		PN		02	19					
		SE		02	36					
		SN		02	36					
		ME		02	38					
		MN		02	42					
		FE		11	41					
		FN		09	21					
278	21	ePE	15	46	10	2.4	-	5	6	16
		ePN		46	10					
		?SE		52	27					
		?SN		52	25					
		ME		46	48					
		MN		53	05					
		FN	16	15	22					
		FN		19	55					



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49

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
279	July 22	?SE ME FE	3	53	06 46 22					
280	24	PE PN SE SN ME MN FE FN	13	27	16 18 29 30 31 31 18 49			13		
281	24	ePE ePN SE SN ME MN FE FN	14	34	15 18 23 23 40 46 53 16	1.6 2.0	- 6 + 13	1 07		
282	26	PE ePN SE SN ME MN FE FN	15	06	17 17 23 25 34 48 26 06	1.7	- 6	2 07		
283	27	ePE SE SN ME MN FE FN	5	22	08 34 34 01 45 00 27	1.9	- 5	26		
284	28	ePE ePN SE SN ME MN FE FN	5	44	07 06 08 10 34 53 55 12	1.6	+ 5	2 02		

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
285	July 28	ePE	19	30	10	1.8	-	6	1 26	
		SE		31	36					
		SN		31	35					
		ME		32	01					
		MN		31	54					
		FE		34	30					
		FN		34	14					
286	29	PE	0	01	31				18	
		SE		01	49					
		ME		01	57					
		MN		01	51					
		FE		03	14					
		FN		03	17					
		287	31	PE	10					
PN				56	35					
SE				56	57					
SN				56	56					
ME				57	05					
MN				57	07					
FE	11			00	46					
FN	10			59	45					
288	31	PE	14	05	42				17	
		ePN		05	43					
		SE		05	59					
		SN		06	00					
		ME		06	08					
		MN		06	11					
		FE		08	26					
		FN		07	39					
289	31	ePE	23	16	13	1.1	-	4	24	
		SE		16	37					
		SN		16	36					
		ME		16	40					
		MN		16	45					
		FE		19	38					
		FN		18	15					

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岩手縣水澤町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

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1940

August

Latitude, 39° 8' 4" N.  
 Longitude, 141° 7' 52" E.  
 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.080
N S	17.6	20	36	0.007

Intensities of the earthquakes

Not felt ..... 0.

Felt .....	}	1. .... slight
		2. .... moderate
		3. .... rather strong
		4. .... strong
		5. .... very strong
		6. .... disastrous

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51

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
290	Aug 1	ePE	0	36	35				28	
		SE		37	03					
		SN		37	03					
		ME		37	14					
		MN		37	16					
		FE		39	32					
		FN		38	29					
291	1	PE	12	50	27				2 09	
		PN		50	26					
		?SE		52	37					
		?SN		52	34					
		ME		50	55	2.0	-	5		
		FE		57	49					
		FN		56	14					
292	1	PE	15	09	44				1 09	Intensity 1
		iPN		09	43					
		SE		10	52					
		SN		10	53					
		FN		17	20	00				
293	1	?PE	19	14	31				51	
		?SE		15	22					
		ME		15	46					
		MN		15	46					
		FE		18	08					
		FN		19	11					
294	2	ePE	8	08	49				1 09	
		ePN		08	51					
		SE		10	00					
		SN		09	58					
		ME		10	05	1.4	+	10		
		MN		10	14	1.2				
		FE		12	58					
		FN		12	58			- 8		
295	2	ePE	20	54	52				33	
		SE		55	25					
		ME		55	43					
		MN		55	45					
		FE		58	47					
		FN		59	00					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
296	Aug 3	ePE	18	34	09			13		
		SE		34	21					
		SN		34	23					
		ME		34	23					
		MN		34	26					
		FE		35	27					
		FN		35	42					
297	3	PE	20	23	31			1 01		
		SE		24	32					
		ME		25	25					
		MN		24	44					
		FE		28	27					
		FN		28	59					
		298	4	iPE	9	16	35			
iPN				16	36					
iSE				16	53					
iSN				16	54					
ME				16	54	$\pm 95$	$\pm 95$			
MN				16	55					
FE				23	48					
FN				22	57					
299	5	?PE	5	28	36			58		
		?SE		29	34					
		ME		29	48					
		FE		32	39					
300	5	?PE	8	26	20			2 27		
		?SE		28	47					
		FE		35	48					
301	5	ePE	9	58	32			3 08		
		?SE	10	01	40					
		?SN		01	35					
		ME	9	59	11					
		FE	10	08	06					
		FN	10	00						
302	5	ePE	15	24	02			52		
		SE		24	59					
		eSN		25	02					
		ME		25	10					
		MN		25	06					
		FE		27	27					
		FN		26	49					

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53

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
303	Aug 5	ePE	21	09	49				12	
		SE		10	01					
		ME		10	07					
		FE		11	07					
304	7	ePE	4	25	36				45	
		SE		26	21					
		ME		26	29					
		FE		28	43					
305	7	?PE	5	07	19				53	
		?SE		08	12					
		FE		13	06					
306	7	?PE	13	25	29				55	
		?SE		26	24					
		FE		28	45					
307	7	?SE	13	57	55					
		ME		58	28					
		FE		59	13					
308	7	ePE	19	17	57				1 16	
		SE		19	13					
		ME		19	21					
		FE		22	16					
309	9	ePE	12	25	12				29	
		SE		25	41					
		eSN		25	42					
		ME		26	18	1.7	- 5			
		MN		26	02					
		FE		28	47					
		FN		28	41					
310	9	ePE	20	54	18				1 08	
		SE		55	26					
		eSN		55	25					
		ME		55	34					
		MN		55	42					
		FE		58	02					
		FN		57	44					
311	10	e SE	2	19	20					
		e SN		19	20					
		ME		19	30					
		MN		19	30					
		FE		21	01					
		FN		20	45					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
312	Aug 11	ME FE	5	40	03 46 25					
313	11	ePE eSE ME FE	15	15	39 15 59 16 11 17 09			20		
314	11	iPE ePN SE SE ME MN FE FN	17	19	01 19 02 19 24 19 24 20 04 19 44 26 24 26 58	2.2 1.7	- 72	- 78	23	
315	12	ePE ePN SE SN ME MN FE FN	3	28	58 29 00 29 22 29 24 29 39 29 53 34 57 32 18	2.4 1.4	- 8	- 10	24	
316	12	ePE SE SN ME MN FE FN	12	01	17 01 40 01 38 02 34 02 06 05 12 04 45	1.1	- 6		23	
317	12	ePE SE ME FE	12	20	21 20 35 20 40 21 21				14	
318	12	ePE SE SN ME MN FN FN	16	15	44 16 57 16 59 17 34 17 37 21 37 19 56	1.2	+ 7		1 13	



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55

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
319	Aug 12	?SE ME FE	16	24	20 36 22					
320	12	ePE SE SN ME MN FE FN	17	56	05 18 20 45 36 17 30		- 4	1 13		
321	13	PE PN SE SN ME MN FE FN	15	38	38 37 23 25 34 19 13 27	12.4 3.7	+690 - 88	1 46		
322	14	ePE SE ME FE	9	55	30 58 05 23			28		
323	14	SE eSN ME MN FE FN	14	03	03 03 09 11 15 56					
324	15	ePE SE ME FE	3	12	25 51 58 28			26		
325	15	ePE SE ME FE	3	15	34 20 40 35			46		
326	15	ePE ePN SE SN ME MN FE FN	14	54	43 43 21 19 04 10 04 37	2.2	+ 9	37		

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
327	Aug 15	ePE	18	10	27	1.2	+	4	29	
		SE		10	56					
		ME		11	13					
		FE		14	32					
328	15	ePE	21	28	07				3	43
		ePN		28	07					
		SE		31	50					
		SE		31	50					
		ME		31	56					
		MN		31	57					
		FE		37	48					
		FN		39	47					
329	16	ePE	20	09	48				19	
		ePN		09	47					
		SE		10	07					
		SN		10	05					
		ME		10	23					
		MN		10	23					
		FE		12	52					
		FN		12	16					
330	17	ePE	3	29	22	1.4		-	5	23
		ePN		29	21					
		SE		29	45					
		SN		29	45					
		ME		30	08					
		MN		29	52					
		FE		32	17					
		FN		31	51					
331	17	ePE	8	25	31				25	
		SE		25	56					
		ME		26	13					
		FE		27	53					
332	18	ePE	6	53	28				25	
		SE		53	53					
		SN		53	53					
		ME		54	22					
		MN		54	05					
		FN		56	22					
		FN		55	56					

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57

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
333	Aug 18	ePE	8	26	49	1.4	+	6	25	
		ePN		26	51					
		SE		27	15					
		SN		27	14					
		ME		27	37					
		MN		27	33					
		FE		30	12					
		FN		29	23					
334	18	ePE	11	30	46	2.4	-	13	20	
		ePN		30	46					
		SE		31	06					
		SN		31	06					
		ME		31	31					
		MN		31	26					
		FE		35	05					
		FN		34	07					
335	19	ePE	16	52	45				23	
		SE		53	08					
		ME		53	19					
		MN		53	20					
		FE		54	45					
		FN		54	11					
336	20	ePE	5	03	24	1.2	+	5	56	
		ePN		03	25					
		SE		04	20					
		SN		04	20					
		ME		05	17					
		MN		05	37					
		FE		10	15					
		FN		10	09					
337	20	ePE	17	38	10	2.4	+	5	6 34	
		ePN		38	08					
		?SE		44	42					
		?SN		44	45					
		ME		38	42					
		MN		38	49					
		FE		49	12					
		FN	18	04	17					
338	22	ePE	3	34	39	4.8	+	16	5 58	
		ePN		34	37					
		SE		40	39					
		SN		40	35					
		LE		44	30					
		LN		43	31					
		ME		40	49					
		MN		46	54					
		FE	4	22	17					
		FN	5	06	56					

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
339	Aug 22	ePE	9	33	26				29	
		SE		33	55					
		eSN		33	38					
		ME		34	04					
		MN		34	10					
		FE		36	08					
		FN		35	18					
340	25	PE	10	32	38				40	
		ePN		32	38					
		SE		33	18					
		SN		33	19					
		ME		33	35	2.4	+ 81			
		MN		33	21	1.3		+150		
		FN		39	55					
341	26	ePE	17	18	04				20	
		ePN		18	02					
		SE		18	24					
		SN		18	22	1.7	+ 23			
		ME		18	26	1.7		- 23		
		MN		18	52					
		FN		21	50					
342	27	?PE	14	50	29				20	
		?SE		50	49					
		ME		51	01					
		FE		52	38					
343	27	?PE	22	21	29				19	
		SE		21	48					
		ME		22	00					
		FE		23	00					
344	28	ePE	15	19	02				1 23	
		ePN		19	03					
		SE		20	26					
		SN		20	26					
		ME		20	51	1.6	+ 24			
		MN		20	59	1.4		+ 15		
		FN		27	13					

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59

No.	Date	Phase	Time (G.C.T.)			Period s	Max. Amp.		P - S m s	Remarks
			h	m	s		AE $\mu$	AN $\mu$		
345	Aug. 30	PE	18	09	34				19	
		PN		09	33					
		SE		09	53					
		SN		09	53					
		ME		10	03	0.6	- 45			
		MN		10	04	1.6		+ 50		
		FE		16	00			.		
		FN		14	17			.		

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岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1 9 4 0

September

Latitude,           39° 8' 4" N.  
 Longitude,       141° 7' 52" E.  
 Height above mean sea level,       61m.  
 Sub-soil,           Diluvial Formation.  
 Instrument,       Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.080
N S	17.6	20	36	0.007

Intensities of the earthquakes

Not felt ..... 0.

Felt .....	}	1. .... slight
		2. .... moderate
		3. .... rather strong
		4. .... strong
		5. .... very strong
		6. .... disastrous

September.

1940

International  
Seismological  
Centre

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
346	Sept. 1	eSE	8	20	25		
		ME		20	35		
		FE		21	59		
347	1	eSE	11	47	59		
		ME		48	03		
		FE		49	12		
348	1	ePE	18	17	14		
		SE		17	36		
		ME		17	42		
		MN		17	52		
		FE		19	54		
		FN		20	24		
349	2	eSE	19	54	55		
		ME		55	06		
		MN		54	44		
		FE		56	09		
		FN		55	34		
350	3	ePE	10	14	46		
		SE		15	00		
		eSN		15	01		
		ME		15	04		- 8
		MN		15	03		
		FE		16	43		
		FN		15	46		
351	3	?PE	14	48	09		
		?PN		47	25		
		ME	15	07	14		
		MN		03	09		
		FE		19	02		
		FN		22	44		
352	3	SE	18	07	28		
		ME		07	38		
		MN		07	37		
		FE		08	29		
		FN		08	27		
353	6	ePE	15	02	06		
		ePN		02	06		
		SE		02	20		
		SN		02	20		
		ME		02	32		
		MN		02	24		
		FE		05	29		
		FN		03	50		
354	7	SE	6	21	16		
		ME		21	23		
		FE		22	13		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.	
			h	m	s			
355	Sept. 8	ePE	0	26	45			
		SE		27	02			
		eSN		27	03			
		ME		27	09			
		MN		27	08			
		FE		29	08			
356	9	ePE	3	54	07			
		SE		54	33			
		ME		54	51			
		FE		56	57			
357	9	ePE	12	14	31			
		SE		15	06			
		ME		15	21			
		MN		21	22			
		FE		18	41			
358	10	ePE	10	47	55			
		SE		48	07			
		ME		48	03			
		FE		49	12			
359	11	ePE	22	07	01			
		ePN		07	02			
		SE		07	29			
		SN		07	28			
		ME		07	36	1.0	+ 16	
		MN		07	50			
360	12	ePE	0	28	23			
		SE		29	05			
		eSN		29	05			
		ME		29	58			
		MN		29	23			
		FE		33	55			
361	12	ePE	1	21	01			
		ePN		21	01			
		SE		21	32			
		SN		21	32			
		ME		21	46	1.3	+ 6	
		MN		21	44			
		FE		24	33			
		FN		24	03			



No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
362	Sept.12	ePE	13	25	25	2.4	- 16
		ePN		25	23		
		SE		32	02		
		SN		31	59		
		ME		26	21		
		FE	14	04	59		
		FN		03	29		
363	12	PE	18	52	13	0.9	+ 5
		ePN		52	14		
		SE		52	30		
		SN		52	31		
		ME		52	42		
		MN		52	43		
		FE		55	48		
FN		54	39				
364	14	ePE	4	44	41		
		eSE		45	04		
		ME		45	19		
		FE		46	11		
365	14	ePE	11	46	04		
		SE		46	27		
		ME		46	47		
		MN		47	27		
		FE		48	25		
FN		49	13				
366	15	ePE	12	12	10	1.2	- 5
		SE		13	24		
		eSN		13	25		
		ME		13	55		
		MN		13	50		
		FE		17	40		
		FN		18	17		
367	16	SE	9	59	26		
		ME		59	39		
		FE	10	01	06		
368	17	ePE	3	43	48		
		SE		44	14		
		ME		44	17		
		MN		44	36		
		FE		45	45		
FN		47	09				

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
369	Sept.17	ePE	4	31	37		
		ePN		31	38		
		SE		32	15		
		SN		32	15		
		ME		32	57		
		MN		33	05		
		FE		37	53		
FN		36	47				
370	18	ePE	7	59	09		
		SE	8	00	32		
		eSN		00	31		
		ME		00	54		
		MN		01	04		
		FE		05	12		
		FN		03	31		
371	18	ePE	12	14	47		
		eSE		15	26		
		SN		15	27		
		ME		15	50		
		MN		15	33		
		FE		17	27		
		FN		17	22		
372	19	ePE	6	04	46		
		SE		05	47		
		eSN		05	47		
		ME		06	13		
		MN		06	20		
		FE		09	10		
		FN		08	21		
373	19	ePE	18	30	41		
		ePN		30	39		
		SE		39	43		
		SN		39	38		
		ME		40	00		
		MN		39	48		
		FE		54	01		
FN	19	12	05				
374	19	ePE	19	14	21		
		SE		15	36		
		SN		15	35		
		ME		15	39		
		MN		15	47		
		FE		19	03		
		FN		17	21		

September.

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No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
375	Sept.20	ePE	18	35	09	0.8	+ 7
		SE		36	08		
		SN		36	09		
		ME		36	13		
		MN		36	13		
		FE		39	10		
		FN		38	08		
376	21	ePE	13	57	54		
		SE		58	49		
		ME		59	51		
		MN		59	59		
		FE	14	03	16		
		FN		04	26		
		377	21	ePE	14		
SE				40	06		
SN				40	06		
ME				40	12		
MN				40	31		
FE				43	11		
FN				44	16		
378	22	ePE	2	39	44		
		SE		40	20		
		ME		40	36		
		FE		43	02		
379	22	ePE	3	12	38		
		SE		13	16		
		ME		13	36		
		FE		16	49		
380	22	ePE	22	58	01		
		ePN		58	04		
		SE	23	02	48		
		SN		02	50		
		LE		06	01		
		LN		06	02		
		ME		03	00		
		FE		17	05		
		FN		18	54		
381	24	ePE	17	54	09		
		SE		54	27		
		SN		54	27		
		ME		54	30		
		MN		54	32		
		FE		56	10		
		FN		55	21		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.				
			h	m	s						
382	Sept.24	ePE	18	35	15						
		SE		35	30						
		SN		35	30						
		ME		35	36						
		MN		35	38						
		FE		37	09						
		FN		36	49						
383	24	ePE	22	15	37						
		SE		15	54						
		ME		15	58						
		FE		18	02						
384	25	ePE	17	41	01						
		ePN		41	00						
		SE		41	27						
		SN		41	26						
		ME		41	50						
		MN		42	07						
385	26	ePE	4	05	53						
		SE		06	32						
		ME		06	47						
		FE		11	23						
		386	27	ePE	8			33	18		
				SE				33	38		
ME				33	40						
387	27	ePE	21	32	29						
		SE		34	25						
		ME		34	29						
388	27	ePE	23	37	57						
		SE		38	23						
		ME		38	38						
389	28	SE	0	29	14						
		ME		29	15						
		FE		29	29						
390	28	ePE	13	07	43						
		ePN		07	43						
		SE		08	15						
		SN		08	13						
		ME		08	31						
		MN		08	35						
		FE		11	51						
		FN		11	22						

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岩手縣水澤町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

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International Latitude Observatory of Mizusawa

1940

October

---

Latitude, 39° 8' 4" N.

Longitude, 141° 7' 52" E.

Height above mean sea level, 61m.

Sub-soil, Diluvial Formation.

Instrument, Omori's Horizontal Pendulum Seismograph.

Instrumental Constants,

Comp.	M kg.	V	$T_0$ s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.080
N S	17.6	20	36	0.007

Intensities of the earthquakes

Not felt ..... 0.

Felt ..... {

- 1. .... slight
- 2. .... moderate
- 3. .... rather strong
- 4. .... strong
- 5. .... very strong
- 6. .... disastrous

October.

1940



International  
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Centre

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
391	Oct. 1	ePE	13	07	50	4.3 2.8	+ 19 + 33
		ePN		07	50		
		SE		08	45		
		SN		08	47		
		ME		10	53		
		MN		11	26		
		FE		17	51		
		FN		26	05		
392	1	ePE	22	40	22		
		SE		40	39		
		ME		40	56		
		FE		42	28		
393	2	ePE	16	50	52		
		SE		51	10		
		ME		51	14		
		FE		52	15		
394	3	ePE	6	05	32		
		SE		06	11		
		ME		06	45		
		FE		09	43		
395	4	SE	8	11	02		
		ME		11	16		
		FE		12	35		
396	4	ePE	8	14	34	2.4 2.4	+ 10 - 23
		SE		15	01		
		SN		15	01		
		ME		15	56		
		MN		15	38		
		FE		22	16		
FN		22	34				
397	5	ePE	14	02	44		
		SE		03	06		
		ME		03	30		
		FE		05	13		
398	6	ePE	4	26	24		- 6
		SE		26	38		
		SN		26	37		
		ME		26	42		
		MN		26	41		
		FE		28	21		
		FN		27	39		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
399	Oct. 7	ePE	6	49	36		
		ePE		49	35		
		eSE		55	27		
		eSN		55	36		
		ME		56	26		
		MN		56	36		
		FE	7	05	39		
		FN		08	21		
400	7	SE	9	37	08		
		ME		37	12		
		FE		38	24		
401	8	ePE	17	12	44		
		ePN		12	43		
		SE		13	15		
		SN		13	17		
		ME		13	54		
		MN		13	31		
		FE		17	39		
FN		16	24				
402	8	ePE	22	00	52		
		SE		01	31		
		ME		02	03		
		MN		02	02		
		FE		04	52		
		FN		04	15		
403	9	ePE	15	13	08		
		ePN		13	08		
		SE		13	21		
		SN		13	23		
		ME		13	26		
		MN		13	28		
		FE		15	24		
		FN		14	51		
404	9	ePE	16	57	28		
		ePN		57	28		
		SE		58	04		
		SN		58	04		
		ME		58	45		
		MN		58	38		
		FE	17	04	59		
FN		02	54				
405	9	ePE	19	16	32		
		SE		17	03		
		ME		17	18		
		MN		17	29		
		FE		19	52		
		FN		19	57		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
406	Oct. 10	ePE	3	19	13		
		SE		19	43		
		ME		19	57		
		MN		20	07		
		FE		22	20		
		FN		21	57		
407	10	ePE	5	09	01		
		SE		09	17		
		ME		09	23		
		FE		10	40		
408	10	ePE	18	22	18		
		SE		22	43		
		ME		22	56		
		MN		22	49		
		FE		25	07		
		FN		24	01		
409	12	ePE	1	52	32		
		SE		52	43		
		ME		52	48		
		FE		54	03		
410	12	ePE	17	57	29		
		SE		57	46		
		SN		57	45		
		ME		58	12	1.6	+ 7
		MN		58	24		
		FE	18	00	40		
		FN		00	54		
411	13	ePE	6	37	09		
		SE		37	27		
		SN		37	27		
		ME		37	33		
		MN		37	32		
		FE		39	12		
		FN		38	36		
412	15	ePE	6	39	12		
		SE		40	47		
		eSN		40	49		
		ME		41	43	2.4	+ 4
		MN		41	43		
		FE		46	54		
		FN		46	51		
413	16	SE	11	56	43		
		ME		56	49		
		FE		58	15		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.
			h	m	s		
414	Oct. 19	ePE	23	14	39		
		ePN		14	41		
		SE		15	04		
		SN		15	04		
		ME		15	24	1.3	- 15
		MN		15	32	1.1	- 23
		FE		19	20		
		FN		17	52		
415	20	eSE	1	23	49		
		ME		23	55		
		FE		24	57		
416	20	ePE	6	54	31		
		SE		54	50		
		ME		54	57		
		MN		55	00		
		FE		56	13		
		FN		55	52		
417	21	ePE	3	55	50		
		SE		56	06		
		ME		56	12		
		MN		56	09		
		FE		57	14		
		FN		57	27		
418	21	ePE	5	24	12		
		SE		24	35		
		ME		24	48		
		FE		26	04		
419	21	SE	9	01	31		
		ME		01	36		
		FE		02	38		
420	22	SE	6	49	01		
		ME		49	25		
		FE		51	34		
421	22	ePE	10	52	13		
		ePN		52	14		
		SE		52	51		
		SN		52	50		
		ME		53	17	0.9	+ 16
		MN		53	09	1.7	- 23
		FE		58	05		
		FN		56	31		

October.

1940

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.		
			h	m	s				
422	Oct. 23	ePE	10	38	31	1.5	+ 5		
		SE		38	55				
		ME		39	01				
		MN		39	38				
		FE		42	57				
		FN		43	38				
423	23	ePE	20	13	19				
		SE		13	50				
		SN		13	50				
		ME		13	52			- 11	
		MN		13	54				
		FE		17	19				
		FN		15	51				
424	27	ePE	7	02	55	1.3	- 4		
		SE		03	55				
		SN		03	57				
		ME		03	58				
		MN		04	04				
		FE		07	13				
		FN		05	44				
425	28	PE	0	05	12	2.1	+ 91		
		PN		05	14				
		SE		05	31				
		SN		05	33				
		ME		05	33				
		MN		05	40			2.0	+120
		FN		10	18				
426	28	?SE	20	55	18				
		?SN		55	16				
		ME		55	51				
		MN		55	48				
		FE		58	29				
		FN		57	20				
427	30	PE	23	01	21	2.3	- 58		
		ePN		01	22				
		SE		02	33				
		SN		02	34				
		ME		02	57				
		MN		02	44			2.0	+ 75
		FE		09	13				
FN		06	42						

No.	Date	Phase	Time (G. C. T.)			Period s	Amp.		
			h	m	s				
428	Oct. 31	PE	19	06	54				
		ePN		06	54				
		SE		07	12				
		SN		07	13				
		ME		07	36			2.4	- 33
		MN		07	20			2.0	+ 50
		FE		12	06				
		FN		11	02				

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岩手縣水澤町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社



# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

November

Latitude, 39° 8' 4" N.  
 Longitude, 141° 7' 52" E.  
 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.080
N S	17.6	20	36	0.007

Intensities of the earthquakes

Not felt ..... 0.

Felt .....	}	1. .... slight
		2. .... moderate
		3. .... rather strong
		4. .... strong
		5. .... very strong
		6. .... disastrous

November.

1940

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
429	Nov. 1	PE	12	08	23		
		PN		08	25		
		SE		08	40		
		SN		08	41		
		ME		08	42	2.2	- 73
		MN		08	43	1.4	+ 88
		FE		15	26		
		FN		12	18		
430	2	ePE	18	17	21		
		SE		17	39		
		ME		17	42		
		MN		17	38		
		FE		19	11		
		FN		18	55		
431	2	ePE	22	44	05		
		SE		44	29		
		ME		44	37		
		MN		44	45		
		FE		45	49		
		FN		45	35		
432	3	PE	6	24	32		
		ePN		24	34		
		SE		24	49		
		?SN		24	46		
		ME		24	54	0.7	- 11
		MN		24	51		
		FE		27	27		
		FN		25	55		
433	3	ePE	20	31	51		
		ePN		31	50		
		SE		32	25		
		SN		32	22		
		ME		32	38	2.7	- 15
		MN		32	54		
		FE		37	53		
		FN		36	37		
434	5	eSE	23	55	28		
		eSN		55	30		
		ME		55	58		
		FE		58	57		
		FE		57	53		
435	6	ePE	20	07	23		
		SE		07	40		
		ME		07	55	?	+ 3
		MN		08	04		
		FE		09	17		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
436	Nov. 6	ePE	23	30	56		
		ePE		30	57		
		SE		31	21		
		SN		31	19		
		ME		31	25	2.4	-- 10
		MN		31	44		
		FE		33	35		
		FN		33	03		
437	7	PE	14	00	10		
		PN		00	09		
		iSE		01	53		
		SN		01	53		
		ME		02	06	3.5	-192
		MN		02	11	2.4	+ 20
		FE		11	31		
		FN		15	00		
438	8	ePE	4	44	10		
		SE		44	31		
		ME		44	33	1.0	+ 10
		MN		44	51		
		FE		47	37		
		FN		46	32		
439	9	PE	19	02	29		
		ePN		02	29		
		SE		02	41		
		SN		02	42		
		ME		02	42	1.1	+ 27
		MN		02	44	?	- 45
		FE		06	52		
		FN		05	24		
440	10	PE	1	50	49		
		ePN		50	54		
		SE	2	00	29		
		SN		00	25		
		LE		10	20		
		LN		10	29		
		ME	1	51	51	2.8	+ 33
		MN	2	01	34	?	-120
FE		46	04				
FN	3	11	25				
441	11	ePE	9	19	08		
		SE		19	27		
		ME		19	57	2.2	+ 10
		MN		20	32		
		FE		22	51		
		FN		22	35		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
442	Nov. 14	ePE	1	58	00	1.7	+ 3
		SE		58	34		
		ME		58	49		
		FE	2	02	24		
443	14	ePE	2	08	50	1.6	- 4
		SE		09	07		
		ME		09	23		
		FE		13	13		
444	14	ePE	10	34	50	2.7	-368
		ePN		34	48		
		SE		35	34		
		SN		35	37		
		ME		36	26		
		MN		36	22		
		FE		48	55		
		FN		48	43		
445	15	SE	0	54	31		
		ME		54	49		
		FE		57	23		
446	15	ePE	4	47	03		
		SE		47	38		
		ME		47	52		
		MN		48	06		
		FE		51	36		
		FN		50	08		
447	15	ePE	16	20	42		
		eSE		21	12		
		ME		21	38		
		FE		23	33		
448	16	PE	13	38	01		
		SE		38	21		
		ME		38	39		
		FE		40	15		
449	17	ePE	10	41	22		
		SE		41	54		
		ME		42	14		
		MN		42	13		
		FE		44	25		
		FN		43	53		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
450	Nov. 18	PE	12	49	08		
		PN		49	07		
		SE		50	29		
		SN		50	29		
		ME		51	20		
		MN		51	26		
		FE	13	06	54		
451	19	ePE	8	42	15		
		SE		42	30		
452	19	PE	15	01	56		
		PN		01	57		
		SN		02	09		
		FE		32	15		
453	20	ePE	9	44	58		
		SE		45	11		
		ME		45	17		
454	21	ePE	22	09	26		
		SE		09	40		
		ME		09	53		
		FE		11	32		
455	22	ePE	13	08	41		
		ePN		08	41		
		SE		10	17		
		SN		10	16		
		ME		10	29		
		ME		10	24		
		FE		15	00		
456	22	ePE	19	59	51		
		SE	20	00	09		
		ME		00	17		
		FE		01	21		
		FN		14	03		
457	26	ePE	1	12	40		
		SE		13	20		
		ME		13	24		
		MN		13	44		
		FE		15	25		
		FN		15	15		

November.

1940

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
458	Nov. 26	PE	22	25	47		
		PN		25	46		
		SE		26	23		
		SN		26	23		
		ME		26	51	2.2	+ 60
		MN		26	34	1.8	+ 50
		FE		37	15		
		FN		32	25		
459	27	ePE	14	49	29		
		?PN		49	28		
		?SE		56	22		
		?SN		56	26		
		ME		50	09	2.0	+ 6
		FE	15	05	46		
		FN		15	51		
460	28	ePE	20	12	53		
		SE		13	14		
		ME		13	20		
		FE		15	00		
461	29	ePE	0	41	57		
		ePN		41	58		
		SE		43	46		
		SN		43	45		
		ME		43	51	3.3	+ 6
		MN		43	55		
		FE		52	03		
		FN		49	48		
462	29	ePE	2	46	00		
		ePN		45	59		
		SE		46	35		
		SN		46	34		
		ME		46	50	2.8	+ 10
		MN		47	08	1.3	+ 13
		FE		51	55		
		FN		50	20		
463	29	ePE	3	16	37		
		SE		16	56		
		SN		16	56		
		ME		17	04		
		MN		16	59		
		FE		18	34		
		FN		17	59		
464	29	PE	4	32	09		
		SE		32	20		
		ME		32	26	?	- 8
		MN		32	19		
		FE		34	49		
		FN		33	32		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
465	Nov. 29	ePE	12	45	31		
		SE		45	41		
		eSN		45	43		
		ME		45	42		
		MN		45	47		= 33
		FE		48	04		+ 50
		FN		46	43		
466	30	PE	2	57	13		
		SE		57	24		
		ME		57	25	1.9	- 10
		MN		57	33		
		FE		59	40		
		FN		59	31		
467	30	PE	4	18	38		
		PN		18	39		
		SE		18	51		
		SN		18	52		
		ME		18	52	1.1	+ 39
		MN		18	53	0.6	+ 63
		FN		21	49		
			20	28			

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岩手縣水澤町

岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社

# MIZUSAWA JAPAN

## SEISMOLOGICAL BULLETIN

International Latitude Observatory of Mizusawa

1940

December

Latitude, 39° 8' 4" N.  
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 Height above mean sea level, 61m.  
 Sub-soil, Diluvial Formation.  
 Instrument, Omori's Horizontal Pendulum Seismograph.  
 Instrumental Constants,

Comp.	M kg.	V	T <sub>0</sub> s	$\frac{r}{T_0^2}$
E W	45.0	100	16	0.080
N S	17.6	20	36	0.007

Intensities of the earthquakes

Not felt ..... 0.

Felt ..... {

- 1. .... slight
- 2. .... moderate
- 3. .... rather strong
- 4. .... strong
- 5. .... very strong
- 6. .... disastrous

December.

1 9 4 0

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
468	Dec. 1	PE	5	20	06		
		PN		20	07		
		SE		20	35		
		SN		20	35		
		ME		20	43	1.2	- 20
		MN		20	40	1.2	- 18
		FE		24	22		
		FN		24	01		
469	3	ePE	13	22	39		
		SE		23	06		
		ME		23	15	0.8	- 4
		FE		24	55		
470	3	ePE	17	04	31		
		ePN		04	31		
		SE		05	13		
		SN		05	13		
		ME		05	23	1.2	- 4
		MN		05	22		
		FN		07	29		
471	4	ePE	5	56	40		
		ePN		56	39		
		SE		57	33		
		SN		57	32		
		ME		57	38	1.0	- 11
		MN		57	42	1.4	+ 10
		FE	6	02	05		
		FN		00	29		
472	4	?PE	13	13	57		
		?PN		13	57		
		?SN		20	02		
		FE		23	10		
		FN		32	05		
473	6	PE	10	37	01		
		SE		37	11		
		ME		37	13		
		FE		38	45		
474	7	ePE	8	19	23		
		SE		19	50		
		SN		19	49		
		ME		19	57	0.9	+ 4
		MN		19	58		
		FE		22	55		
		FN		20	50		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
475	Dec. 7	ePE	11	50	15		
		SE		50	25		
		ME		50	25		
		FE		51	23		
476	7	ePE	13	21	20		
		SE		21	31		
		ME		21	34		
		MN		21	47		
		FN		23	08		
477	9	ePE	0	13	22		
		SE		13	32		
		ME		13	33		
		FE		14	28		
478	11	ePE	11	58	53		
		SE		59	10		
		ME		59	15		- 6
		MN		59	45		
		FE	12	00	46		
		FN		01	30		
479	12	ePE	2	22	14		
		SE		22	30		
		ME		22	38		
		FE		23	35		
480	13	ePE	19	53	12		
		SE		53	29		
		SN		53	27		
		ME		53	35		
		FN		55	18		
481	14	ePE	1	34	57		
		SE		35	44		
		SN		35	44		
		ME		36	05	2.4	+ 11
		MN		36	35	2.8	- 23
		FE		40	12		
		FN		40	01		
482	14	PE	15	14	38		
		SE		14	53		
		SN		14	52		
		ME		14	59		- 4
		MN		14	57		
		FE		16	12		
		FN		16	07		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
483	Dec. 15	ePE	16	20	04		
		SE		20	10		
		ME		20	12		
		FE		21	13		
484	16	ePE	1	44	22		
		SE		44	43		
		SN		44	44		
		ME		45	05	1.6	- 6
		MN		45	16		
		FE		47	23		
		FN		46	58		
485	16	ePE	5	42	37		
		SE		43	08		
		SN		43	10		
		ME		43	12	1.7	- 8
		MN		43	33		
		FE		45	21		
		FN		44	43		
486	16	ePE	9	35	54		
		SE		36	42		
		ME		36	50	1.8	+ 3
		FE		39	34		
487	16	ePE	17	27	41		
		SE		27	51		
		eSN		27	49		
		ME		27	54	1.5	- 6
		MN		28	11		
		FE		29	06		
		FN		29	46		
488	17	ePE	14	48	07		
		SE		49	44		
		ME		50	28	2.3	+ 6
		FE		54	36		
489	17	PE	16	20	46		
		SE		22	26		
		ME		22	54	1.7	- 4
		FE		25	21		
490	21	ePE	16	55	18		
		SE		55	46		
		ME		55	48		
		FE		58	02		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
491	Dec. 22	ePE	19	19	04		
		ePN		19	05		
		?SE		22	29		
		?SN		22	28		
		ME		19	58	2.3	- 5
		MN		19	37		
		FE		28	29		
492	23	ePE	5	46	39		
		ePN		46	38		
		SE		47	19		
		SN		47	19		
		ME		48	01	1.9	- 25
		MN		48	03	1.6	- 30
		FE		55	43		
493	24	ePE	3	18	23		
		SE		18	41		
		ME		18	42		
		FE		19	42		
494	24	SE	16	42	55		
		ME		42	56		
		FE		43	42		
495	25	PE	4	41	28		
		PN		41	28		
		SE		41	41		
		SN		41	41		
		ME		41	43	?	-411
		MN		41	47	?	-578
		FE		50	52		
496	25	FN		49	24		
		Intensity 2					
		PE	6	27	16		
		SE		27	31		
497	26	ME		27	35		
		FE		28	32		
		ePE	7	03	47		
498	26	SE		04	02		
		ME		04	06		
		FE		04	54		



December.

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No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
498	Dec. 26	PE	19	25	48		
		PN		25	47		
		SE		26	10		
		SN		26	11		
		ME		26	15	2.4	- 82
		MN		26	13	2.0	-128
		FE		31	46		
		FN		28	57		
499	26	PE	23	28	38		
		PN		28	39		
		SE		29	07		
		SN		29	06		
		ME		29	43	2.1	+102
		MN		29	22	2.4	-103
		FE		37	19		
		FN		33	43		
500	27	PE	11	10	38		
		SE		11	02		
		ME		11	12		
		FE		13	47		
501	28	PE	16	42	35		
		PN		42	34		
		SE		46	23		
		SN		46	21		
		ME		47	58	3.6	-108
		MN		43	25	4.1	-168
		FE		51	28		
		FN		55	30		
502	29	PE	1	24	09		
		PN		24	09		
		SE		24	29		
		SN		24	30		
		ME		24	41	1.6	+ 36
		MN		24	52	1.6	- 40
		FE		29	06		
		FN		28	21		
503	30	ePE	4	24	06		
		SE		24	26		
		ME		24	46		
		MN		24	59		
		FE		26	59		
		FN		26	46		

No.	Date	Phase	Time (G. C. T.)			Period s	Amp. $\mu$
			h	m	s		
504	Dec. 30	ePE	20	53	08		
		ePN		53	09		
		SE		54	18		
		SN		54	18		
		ME		54	21	2.4	- 35
		MN		54	30	2.4	+ 33
		FE	21	00	08		
		FN	20	58	42		
505	31	PE	0	55	43		
		SE		55	56		
		ME		55	58		
		FE		57	18		
506	31	ePE	9	52	39		
		SE		53	11		
		ME		54	08	2.2	+ 5
		MN		53	14		
		FE		58	11		
		FN		56	18		

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岩手縣水澤町表小路十二番地

印刷人 佐々木 正 藏

岩手縣水澤町裏町四番地

印刷所 水澤印刷株式會社