

ANNUAL REPORT  
OF THE  
METEOROLOGICAL  
AND THE  
SEISMOLOGICAL OBSERVATIONS  
MADE AT THE  
INTERNATIONAL LATITUDE OBSERVATORY  
OF MIZUSAWA  
FOR  
THE YEAR 1934.

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

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PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY  
OF MIZUSAWA.

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1935.

1934

The present report gives the results of the meteorological and seismological observations made at this observatory during the year 1934. No alteration has been made in the nature and methods of observation. The observations and the calculations were made by Messrs. M. Uchida, S. Satô, and I. Kumagai, under the superintendence of Mr. T. Ikeda.

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

*Hours of observation*—*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 Tôkyô.

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

*Barometer*.—63.1 m above sea level.

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

*Anemometer*.—15.4 m above the ground.

*Wind vane*—16.6 m above the ground.

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\* Note :—The wind velocity is measured by the Robinson anemometer. Since January first of the year 1925 a new factor for this instrument has been used. The ratio of the new factor to the old one is 0.7/1.0.

In recording meteorological phenomena the following symbols are used:—

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

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

The seismological instruments in use are two Omori'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

July, 1935

H. KIMURA, *Rigakuhakushi*  
Director of the International Latitude Observatory  
in Mizusawa.

# SEISMOLOGICAL OBSERVATIONS

Remarks :—

- 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

- 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.
- The time adopted in the Seismological observations is Greenwich Civil Time.
- Symbols and notations.
  - i* Sudden beginning of the motion.
  - e* Gradual beginning of the motion.
  - ? Doubtful phase.
  - \* Time is not accurate due to the disorder of the instrument.
  - ⊕ Out of the range of the instrument.

EARTHQUAKES, 1934.



No.	Date 1934	P				S				L				Maximum Range of Motion				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. 3	i 9 46 05		e 46 03	i 49 08	e 49 08							0.39	0.08	18.6	0	SW off Kamtchatka			
2	4	e 20 57 47			e 58 56								0.00		4.2	0				
3	5	e 10 43 35			i 44 10	e 44 10							0.02	0.03	4.2	0				
4	8	e 11 20 41			i 21 09	e 21 09							0.02		3.8	0				
5	8	e 13 45 02			i 45 28								0.01		3.4	0				
6	8	e 23 09 03			i 10 29	e 10 29							0.01	0.02	9.8	0				
7	9	e 14 32 32			i 32 41	e 32 41							0.02		1.9	1	Hirota Bay			
8	10	11			i 59 46	e 59 44							0.01	0.01	3.9	0				
9	10	23			e 32 32								0.01		1.6	0				
10	12	12			e 11 25								0.00		1.4	0				
11	12	13						? 50	15	? 50	27		0.01	0.05		0				
12	14	e 6 33 36			i 33 48	e 33 49							0.02		2.2	0				
13	15	4			e 40 44								0.00		4.2	0				
14	15	i 8 51 50		e 51 50	i 58 44	e 58 42		69	28	70	53			183.0	0	Calcutta				
15	15	e 16 43 46			i 43 56	e 43 57							0.05	0.03	3.0	0	Neighbourhood of Tayama			
16	15	e 20 25 45			i 25 56	e 25 57							0.02		2.0	0				
17	16	e 18 46 50		e 46 46	i 50 32										23.4	0				
18	17	9			e 20 26								0.01		1.7	0				
19	18	1			e 52 00								0.01		4.7	0				
20	18	2			e 13 16								0.00		1.9	0				
21	18	8			e 38 28										1.7	0				
22	19	e 5 55 53			e 56 21								0.00		2.4	0				
23	19	e 8 49 32			e 49 57										2.3	0				
24	19	e 9 36 08			e 36 37	e 36 39							0.01		3.2	0				
25	19	12			e 40 33								0.01		3.7	0				
26	20	? 18 01 32		? 01 45	? 07 51	? 08 07									19.3	0				
27	20	19			e 27 49								0.01		2.0	0				
28	21	i 5 39 45		e 39 46	i 40 11	i 40 11							0.03	0.05	4.5	0	NE off Miyako			
29	23	e 1 47 40			i 47 49								0.01		1.0	0				
30	23	e 15 41 53			e 42 31								0.01	0.01	3.8	0				
31	24	e 21 42 08		e 42 05	i 42 30	e 42 32							0.04	0.07	5.5	0	E off Cape Sioya			
32	25	i 13 39 13		e 39 12	i 39 22	i 39 22							0.02	0.01	1.9	0	Hirota Bay			
33	26	i 9 32 55		e 32 56	i 33 15	e 33 15							0.07	0.06	4.8	0	Neighbourhood of Kakunodate			
34	26	e 16 35 03			e 35 41								0.01		3.1	0				
35	27	? 0 02 44			? 03 09										2.7	0				
36	27	e 0 41 16			e 41 56	e 42 00							0.00		4.0	0				
37	27	e 4 21 38			i 21 52								0.01		2.0	0	Morioka			
38	27	e 11 37 30			e 37 58	e 37 54							0.00		3.0	0				
39	27	e 20 45 04			e 45 47										3.6	0				
40	28	e 5 49 19			i 50 02	e 50 00							0.01	0.02	5.6	0				
41	28	8														0				
42	28	e 13 46 14			e 46 48								0.01	0.02	6.6	0				
43	28	? 20 08 11			? 15 39	? 15 17								0.03	31.1	0				
44	29	i 12 35 32		e 35 32	i 36 10	i 36 08							0.08	0.15	12.1	0	ESE off Kinkwasan			
45	30	e 7 03 51			i 04 03								0.01		2.0	0				
46	31	? 10 17 44													31.9	0				
47	31	i 16 13 53		e 13 53	i 14 07	e 14 08							0.08	0.05	5.7	0	Upper part of R. Yonesiro			
48	31	18			i 47 50	e 47 49							0.01		1.8	0				
49	31	e 23 37 21			i 37 38	e 37 37							0.01		2.0	0				
50	Feb. 1	e 0 16 57		e 16 57	i 17 42	i 17 42							0.02	0.02	5.3	0				
51	1	15			e 31 27								0.01		2.3	0				
52	2	18														0				
53	3	e 14 41 21		e 41 34		? 48 15				? 54	23				54.1	0				
54	3	? 16 27 04			? 27 44								0.01		4.8	0				
55	4	? 3 15 21		? 15 27	? 16 53	? 16 50							0.01	0.01	8.3	0				



## EARTHQUAKES, 1934.

International  
Seismological  
Centre

No.	Date 1934	P				S				L				Maximum Range of Motion				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. 4	e 18	23	11	-	-	e 23	18	-	-	-	-	-	-	0.01	-	m	1.0	0	
57	4	e 22	09	34	e 09	34	e 16	12	e 16	15	-	-	-	-	-	-	-	22.6	0	
58	5	e 7	58	45	-	-	e 59	19	e 59	25	-	-	-	-	0.01	-	-	4.5	0	
59	5	e 23	00	22	-	-	i 00	49	-	-	-	-	-	-	0.01	-	-	2.4	0	
60	6	e 17	56	31	-	-	e 57	01	e 57	03	-	-	-	-	0.01	0.01	-	4.1	0	
61	8	e 15	54	00	-	-	e 54	34	-	-	-	-	-	-	0.01	-	-	5.2	0	
62	9	e 0	52	02	-	-	e 52	33	e 52	36	-	-	-	-	0.01	-	-	3.4	0	
63	9	e 9	36	32	-	-	e 37	15	e 37	17	-	-	-	-	0.01	-	-	5.1	0	
64	10	e 5	48	18	-	-	i 48	27	i 48	26	-	-	-	-	0.02	-	-	2.4	0	
65	10	15			-	-	e 22	52	-	-	-	-	-	-	0.00	-	-	-	0	
66	10	15			-	-	e 24	31	e 24	31	-	-	-	-	0.01	-	-	3.7	0	
67	10	i 22	02	26	i 02	25	i 02	54	i 02	53	-	-	-	-	0.43	0.45	-	10.7	0	NE off Cape Sioya
68	11	e 16	24	21	-	-	e 24	54	e 24	48	-	-	-	-	0.01	0.02	-	4.2	0	
69	12	e 5	25	14	-	-	e 25	47	-	-	-	-	-	-	0.01	-	-	3.1	0	
70	12	e 7	31	22	-	-	i 31	39	-	-	-	-	-	-	0.01	-	-	1.3	0	
71	12	? 11	27	25	? 26	30	? 38	53	-	-	-	-	-	-	-	0.05	-	42.7	0	
72	12	? 14	33	05	-	-	e 33	38	-	-	-	-	-	-	0.00	-	-	2.3	0	
73	12	e 21	45	43	-	-	i 46	47	e 46	47	-	-	-	-	0.01	0.03	-	6.2	0	
74	14	i 4	05	38	e 05	38	e 10	11	e 10	14	13	45	13	37	0.08	1.34	-	79.2	0	W off Philippine
75	15	23			-	-	? 30	48	-	-	-	-	-	-	0.01	-	-	2.3	0	
76	17	e 3	11	00	-	-	i 11	35	e 11	37	-	-	-	-	0.05	0.05	-	7.9	0	
77	17	e 6	15	10	e 15	06	i 15	32	e 15	33	-	-	-	-	0.03	0.05	-	4.5	0	
78	17	e 7	05	55	-	-	i 06	07	-	-	-	-	-	-	0.01	-	-	1.8	0	
79	17	i 9	17	07	e 17	07	i 17	48	e 17	44	-	-	-	-	0.08	0.06	-	8.2	0	Kasima Nada
80	17	e 12	07	09	-	-	i 07	44	e 07	45	-	-	-	-	0.02	0.03	-	6.3	0	
81	17	17			-	-	i 08	05	-	-	-	-	-	-	0.01	-	-	2.4	0	
82	18	e 15	14	19	-	-	e 14	49	e 14	48	-	-	-	-	0.01	0.01	-	4.4	0	
83	21	6			-	-	e 49	11	-	-	-	-	-	-	0.00	-	-	3.3	0	
84	22	e 1	50	40	-	-	i 51	12	e 51	12	-	-	-	-	0.02	0.03	-	5.3	0	
85	23	e 4	21	07	e 21	07	i 21	38	e 21	38	-	-	-	-	0.02	0.03	-	6.9	0	Cape Sioya
86	24	i 6	27	41	e 27	33	i 30	37	e 30	40	31	17	? 31	22	1.10	1.73	-	106.1	0	SSE off Titizima (deep)
87	27	e 21	38	11	-	-	e 39	00	-	-	-	-	-	-	0.01	-	-	4.5	0	
88	28	e 3	03	48	-	-	e 04	40	-	-	-	-	-	-	0.01	-	-	6.4	0	
89	28	e 3	19	14	-	-	e 20	01	-	-	-	-	-	-	0.00	-	-	3.6	0	
90	28	e 7	01	22	-	-	e 02	03	-	-	-	-	-	-	0.01	-	-	4.4	0	
91	Mar. 28	e 14	30	05	e 30	02	e 37	04	e 37	08	? 44	36	? 45	19	0.01	0.53	-	52.3	0	New Guinea
92	1	e 4	16	32	-	-	i 17	03	e 17	02	-	-	-	-	0.01	-	-	2.2	0	
93	1	6			-	-	i 51	29	-	-	-	-	-	-	-	-	-	0.6	0	
94	1	i 7	51	52	e 51	49	i 52	02	i 52	03	-	-	-	-	0.02	0.03	-	3.4	0	NE off Kinkwasan
95	1	e 18	43	31	-	-	e 43	51	e 43	53	-	-	-	-	0.02	0.02	-	4.6	0	
96	1	19			-	-	e 49	55	-	-	-	-	-	-	0.01	-	-	33.2	0	
97	1	e 22	04	48	-	-	e 05	30	-	-	-	-	-	-	0.01	0.01	-	7.8	0	
98	2	6			-	-	e 04	13	-	-	-	-	-	-	-	-	-	3.1	0	
99	2	e 12	41	58	-	-	e 42	53	-	-	-	-	-	-	-	-	-	3.5	0	
100	3	14			-	-	e 45	39	-	-	-	-	-	-	0.01	-	-	2.4	0	
101	3	21			-	-	i 10	28	-	-	-	-	-	-	-	-	-	1.8	0	
102	4	e 6	04	17	-	-	e 05	23	e 05	19	-	-	-	-	0.01	0.02	-	5.3	0	
103	4	e 11	22	37	e 22	39	e 26	41	e 26	41	28	41	28	12	-	0.05	-	26.9	0	
104	4	i 19	16	38	-	-	i 16	49	-	-	-	-	-	-	0.01	-	-	2.4	0	Off Hirota Bay
105	5	e 4	29	28	-	-	30	00	-	-	-	-	-	-	0.01	-	-	3.5	0	
106	5	e 11	58	41	e 58	40	e 69	09	e 69	14	-	-	-	-	-	-	-	99.9	0	
107	6	e 14	47	47	-	-	e 48	36	-	-	-	-	-	-	-	-	-	4.1	0	
108	8	15			-	-	e 11	56	-	-	-	-	-	-	-	-	-	2.0	0	
109	9	e 23	55	29	-	-	i 56	18	e 56	15	-	-	-	-	0.00	-	-	4.4	0	
110	11	e 10	44	46	-	-	e 45	23	e 45	29	-	-	-	-	0.01	-	-	4.2	0	

## EARTHQUAKES, 1934.



No.	Date 1934	P				S				L				Maximum Range of Motion				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. 12																			
		h	m	s	m	s	m	s	m	s	m	s	m	s	mm	mm	m			
		e18	15	31	e15	29	i16	17	e16	16	-	-	-	-	0.06	0.06	5.4	0		
112	13	e13	21	32	e21	23	?28	53	?28	44	34	18	34	13	0.01	0.09	50.4	0		
113	14	11	-	-	-	-	e15	09	-	-	-	-	-	-	0.01	-	1.8	0		
114	15	17	-	-	-	-	i05	05	-	-	-	-	-	-	0.01	-	1.3	0		
115	16	e14	21	44	e21	43	i28	21	e28	20	-	-	-	-	0.02	0.04	16.9	0		
116	16	i18	05	04	e05	04	i05	16	i05	16	-	-	-	-	0.02	0.02	2.7	0	Off Kinkwasan	
117	16	e21	26	15	-	-	e26	34	-	-	-	-	-	-	-	-	2.0	0		
118	17	e18	37	53	-	-	i38	32	e38	33	-	-	-	-	0.02	0.02	7.2	0	Off Kuzyukuri Coast	
119	18	e0	58	29	e58	28	i58	59	e58	59	-	-	-	-	0.02	0.01	4.3	0		
120	18	e4	36	35	e36	36	i39	48	e39	49	?41	50	?41	51	-	-	13.7	0	S part of Okhotsk Sea	
121	19	i11	26	51	e26	56	i27	23	i27	27	-	-	-	-	0.12	0.11	7.5	0	E far off Kamaisi	
122	20	2	-	-	-	-	e47	32	-	-	-	-	-	-	0.00	-	3.1	0	Mabuti	
123	20	i13	27	59	e27	59	i28	16	i28	16	-	-	-	-	0.12	0.13	4.5	1	E off the mouth of R.]	
124	21	i0	54	39	i54	40	i55	26	i55	25	-	-	-	-	⊕	0.48	15.6	0	Off Miyako	
125	21	e3	41	06	e41	00	i42	02	e42	01	-	-	-	-	0.06	0.07	7.6	0		
126	21	e5	29	31	-	-	i30	08	e30	07	-	-	-	-	0.02	0.04	4.0	0		
127	21	i5	39	01	e39	02	i39	31	i39	33	-	-	-	-	0.36	0.56	8.4	0	E off Miyako	
128	21	e5	51	03	-	-	e51	30	e51	30	-	-	-	-	0.01	-	2.4	0		
129	21	e5	56	41	-	-	i57	12	e57	13	-	-	-	-	0.02	0.03	3.0	0	E off Miyako	
130	21	10	-	-	-	-	?20	23	-	-	-	-	-	-	-	-	1.2	0		
131	22	e0	41	29	-	-	i41	56	e41	53	-	-	-	-	0.02	0.03	3.4	0	Off Miyako	
132	24	e12	13	46	e13	36	e21	09	e21	06	27	05	26	54	-	0.29	49.0	0	Distant	
133	24	e14	54	05	-	-	i54	17	-	-	-	-	-	-	0.01	-	1.8	0		
134	24	21	-	-	-	-	i48	55	-	-	-	-	-	-	-	-	1.0	0		
135	25	e22	08	47	-	-	i09	16	e09	15	-	-	-	-	0.02	0.03	4.1	0	Off Miyako	
136	27	e20	16	24	-	-	e16	42	-	-	-	-	-	-	0.00	-	1.9	0		
137	28	8	-	-	-	-	e18	03	-	-	-	-	-	-	0.01	-	1.2	0		
138	28	9	-	-	-	-	e07	05	-	-	-	-	-	-	-	-	0.9	0		
139	29	e5	48	12	-	-	i48	42	e48	42	-	-	-	-	0.01	-	3.5	0		
140	29	e7	41	57	-	-	e42	23	e42	23	-	-	-	-	0.01	-	3.3	0		
141	29	e11	25	19	-	-	i25	46	e25	46	-	-	-	-	0.03	0.02	4.4	0		
142	29	20	-	-	-	-	e18	52	-	-	-	-	-	-	0.00	-	2.8	0		
143	31	e0	26	47	-	-	i27	46	e27	45	-	-	-	-	0.02	0.03	4.5	0		
144	Apr. 1	23	-	-	-	-	e36	30	-	-	-	-	-	-	-	-	1.5	0		
145	2	e19	46	36	-	-	i47	01	-	-	-	-	-	-	0.01	-	1.8	0		
146	3	e1	11	06	-	-	e12	02	e11	58	-	-	-	-	0.01	0.02	6.2	0	Neighbourhood of	
147	3	e22	36	22	e36	21	e38	39	e38	29	-	-	-	-	-	0.05	9.8	0	Cape Inubo	
148	5	e8	57	52	-	-	e58	35	e58	37	-	-	-	-	0.03	0.03	7.1	0	Off Kuzyukuri Coast	
149	6	e10	48	12	-	-	i49	15	e49	14	-	-	-	-	0.01	-	4.2	0		
150	6	i19	10	07	i10	07	i10	26	i10	25	-	-	-	-	⊕	3.02	9.4	2	NE off Cape Sioya	
151	7	e16	21	51	-	-	e22	11	-	-	-	-	-	-	0.00	-	2.1	0		
152	11	e10	54	44	-	-	e55	32	e55	42	-	-	-	-	0.01	0.02	4.4	0		
153	11	e21	21	32	-	-	e22	23	-	-	-	-	-	-	0.01	-	6.0	0		
154	11	21	-	-	-	-	i30	46	e30	46	-	-	-	-	0.03	0.06	3.4	0		
155	13	22	-	-	-	-	i11	29	e11	29	-	-	-	-	0.01	0.01	3.4	0		
156	14	i5	22	42	e22	43	i22	55	i22	57	-	-	-	-	0.12	0.10	4.3	0	Neighbourhood of	
157	14	e14	03	16	-	-	i03	33	-	-	-	-	-	-	0.01	-	2.1	0	Yamada Bay	
158	15	i10	34	29	e34	29	i35	20	i35	22	-	-	-	-	0.20	0.22	13.1	0	SSE off Cape Nozima	
159	15	i22	22	01	e22	01	e27	22	e27	21	29	44	29	45	0.04	0.74	26.5	0	Neighbourhood of	
160	16	13	-	-	-	-	e45	45	-	-	-	-	-	-	0.01	-	3.5	0	Mindanao I.	
161	18	1	-	-	-	-	e56	56	-	-	-	-	-	-	0.01	-	3.6	0		
162	19	e2	39	27	-	-	e40	12	-	-	-	-	-	-	0.01	-	4.5	0		
163	19	i16	15	41	i15	41	i17	23	i17	25	-	-	-	-	0.30	0.29	10.3	0	S off Hatizyo I. (deep)	
164	19	19	-	-	-	-	e47	37	-	-	-	-	-	-	-	-	1.5	0		
165	21	e10	34	26	e34	30	i34	55	e34	56	-	-	-	-	0.02	0.04	5.4	0	Off Miyako	

## EARTHQUAKES, 1934.



No.	Date 1934	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
166	Apr. 25	h 1 m 35 s				m 35 s 48				m 35 s 49				0.01	0.01	1.4	0	NE off Miyako		
167	25	e 3 13 11			e 13 13	i 13 44				e 13 45				0.02	0.03	3.6	0			
168	25	e 5 10 52				i 11 19				? 11 17				0.01	0.02	3.0	0			
169	25	10				e 33 21								0.00		1.0	0			
170	25	12				i 33 02								0.01		1.6	0			
171	26	17														4.6	0	S off Cape Nozima SSW off Cape Erimo SE off Miyako		
172	26	21				e 10 23										4.6	0			
173	26	e 22 48 51			e 48 48	i 49 44				e 49 34				0.03	0.05	7.5	0			
174	27	e 6 11 12			e 11 14	i 11 37				11 38				0.06	0.05	6.9	0			
175	27	i 9 17 15			17 17	i 17 50				17 53				0.18		10.9	0			
176	28	e 15 16 11				i 16 40								0.01		3.5	0	E off Miyako S off Titizima		
177	28	e 18 43 54				e 44 17								0.01		1.7	0			
178	28	i 23 26 25			e 26 25	i 27 02				i 27 02				0.16	0.15	10.9	0			
179	30	e 15 23 22			e 23 22	i 26 02				i 26 06				0.08	0.06	8.5	0			
180	May 1	1				i 25 14								0.01		1.8	0			
181	1	i 7 14 02			e 14 01	? 18 58				? 19 07				0.01	0.02	7.9	0	Sizugawa Bay NNW off Titizima		
182	2	e 9 28 24				i 29 08				e 29 08				0.02	0.02	4.2	0			
183	2	i 18 54 42			i 54 41	i 54 49				i 54 49				0.16	0.10	5.1	1			
184	3	e 1 34 06			e 34 06	i 35 55				e 35 54				0.03	0.08	23.2	0			
185	3	e 3 44 24				e 44 56										3.2	0			
186	4	1				e 22 53								0.00		3.1	0	E off Cape Siriya		
187	4	e 4 44 45			e 44 44	i 51 39				i 51 38				0.04		44.9	0			
188	4	12				e 18 03								0.00		1.8	0			
189	4	e 12 55 00			e 55 03	i 55 28				i 55 28				0.04	0.05	5.0	0			
190	5	e 13 25 28				e 26 01								0.00		2.9	0			
191	5	16				e 51 11								0.01		1.9	0	S part of Okhotsk sea		
192	5	20														0.8	0			
193	7	6				e 37 28										2.4	0			
194	9	e 10 08 49				i 09 21				e 09 17				0.01		4.1	0			
195	9	e 16 16 37				i 18 55				e 18 55				0.01	0.03	12.1	0			
196	11	3														2.2	0			
197	12	e 15 30 28				e 31 03								0.01		3.2	0			
198	13	e 1 56 15				e 56 44								0.01		3.2	0			
199	13	e 2 07 27				e 07 59										3.2	0			
200	13	e 9 10 22				e 10 50								0.01		4.2	0			
201	13	e 16 13 37				e 14 34								0.01		5.4	0	E off Cape Ezan		
202	13	? 23 10 37				e 12 35				e 12 38				0.02	0.03	6.2	0			
203	14	22				? 21 11								0.01		3.4	0			
204	17	e 11 54 34				e 55 13				e 55 14				0.01	0.01	5.5	0			
205	17	e 21 27 11				i 27 36				i 27 35				0.02	0.02	3.9	0			
206	18	e 21 10 03				i 10 17								0.01		1.8	0	ESE off Miyako		
207	19	e 10 48 14				e 48 56								0.00		3.8	0			
208	20	i 7 02 37			i 02 38	i 03 09				i 03 06				0.15	0.31	8.9	0			
209	21	6				e 40 58										2.3	0			
210	25	e 12 15 51				e 16 19								0.01		3.0	0			
211	25	e 16 21 37			e 21 36	i 23 34				i 23 33				0.05	0.06	5.8	0	SSE off Hatizyo I.		
212	27	e 1 30 04				i 30 25								0.01		2.7	0	SE off Kinkwasan SE off Etoroff I.		
213	27	i 2 54 34				i 54 46				e 54 44				0.02		2.8	0			
214	28	e 5 34 58			e 34 58	i 36 33				i 36 32				0.03	0.05	7.2	0			
215	29	21				e 44 04								0.01	0.01	2.0	0			
216	30	i 23 04 40			i 04 40	i 05 12				i 05 11				0.28	0.25	13.7	1		Neighbourhood of Mito	
217	31	2				e 38 08										1.8	0			
218	31	6				e 53 06										1.5	0			
219	31	e 8 02 16				e 02 29								0.01		1.4	0			
220	June 1	e 1 36 50			e 36 47	i 37 42				e 37 42				0.03	0.03	7.6	0			







## EARTHQUAKES, 1934.

No.	Date 1934	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
		h m s		m s		m s		m s		m s		m s		mm	mm	m				
331	July 24	e 10	14	16	-	-	e 14	55	-	-	-	-	0.01	-	3.4	0	Off Cape Otiisi Off Cape Sioya			
332	24	e 17	19	55	-	-	e 20	37	-	-	-	-	0.01	-	4.6	0				
333	25	e 2	32	09	-	-	i 32	54	e 32	54	-	-	0.01	-	3.0	0				
334	26	e 11	06	54	e 06	54	i 07	19	i 07	19	-	-	0.05	0.04	4.9	0				
335	26	e 15	28	15	-	-	e 28	41	-	-	-	-	0.01	-	2.8	0				
336	26	22	-	-	-	-	e 41	48	-	-	-	-	0.00	-	1.1	0				
337	27	e 4	44	02	-	-	i 44	18	e 44	19	-	-	0.01	0.01	2.9	0				
338	27	e 8	09	44	-	-	e 10	10	-	-	-	-	0.00	-	2.0	0				
339	27	18	-	-	-	-	e 21	18	-	-	-	-	0.00	-	0.7	0				
340	28	? 5	24	55	? 25	02	? 28	12	? 28	31	-	-	-	-	11.2	0				
341	28	e 6	09	40	-	-	e 10	12	-	-	-	-	-	-	2.3	0				
342	28	i 12	13	17	i 13	17	i 13	35	i 13	33	-	-	0.17	0.26	8.6	1	Off the mouth of R. Abukuma			
343	28	? 21	45	07	? 45	03	-	-	? 51	35	-	-	0.01	0.07	37.0	0				
344	29	14	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0				
345	29	e 14	49	27	-	-	e 49	50	e 50	00	-	-	0.01	0.01	5.4	0				
346	29	e 19	27	31	-	-	e 27	57	-	-	-	-	0.01	-	3.4	0				
347	31	2	-	-	-	-	e 55	33	-	-	-	-	-	-	1.7	0				
348	31	6	-	-	-	-	e 04	50	-	-	-	-	-	-	2.9	0				
349	31	19	-	-	-	-	e 52	20	-	-	-	-	0.00	-	1.8	0				
350	Aug. 1	7	-	-	-	-	e 30	46	-	-	-	-	0.00	-	1.8	0				
351	1	e 14	32	17	-	-	e 32	27	-	-	-	-	0.00	-	2.0	0				
352	3	i 9	36	31	i 36	31	i 36	49	i 36	49	-	-	1.14	0.94	10.0	2	E off Kuzi			
353	3	10	-	-	-	-	e 07	52	-	-	-	-	-	-	1.5	0				
354	3	i 12	25	10	e 25	10	i 25	46	i 25	47	-	-	0.10	0.11	8.9	0	Neighbourhood of Tateno (Ibaragi)			
355	3	e 18	14	04	-	-	e 14	18	-	-	-	-	-	-	1.7	0				
356	4	10	-	-	? 29	34	-	-	-	-	-	-	-	-	0.8	0				
357	5	3 58	10	i 58	10	58	28	i 58	28	-	-	-	0.17	0.15	4.9	1	Off Kuzi			
358	5	9	-	-	e 26	57	-	-	-	-	-	-	-	-	1.1	0				
359	7	e 1	08	43	-	-	i 09	09	e 09	09	-	-	0.01	-	3.6	0				
360	7	e 3	50	00	e 49	48	? 56	34	? 56	39	-	-	? 63	56	-	0.05	52.7	0		
361	7	e 20	48	10	-	-	e 48	30	-	-	-	-	0.01	-	2.8	0				
362	10	12	-	-	e 03	16	-	-	-	-	-	-	0.00	-	1.7	0				
363	11	e 8	23	21	e 23	44	? 27	28	? 27	28	? 31	24	? 30	28	0.01	0.06	24.8	0		
364	12	9	-	-	e 32	40	-	-	-	-	-	-	-	-	1.3	0				
365	12	e 23	56	03	e 55	59	e 61	23	e 61	22	-	-	-	0.05	23.4	0				
366	13	e 0	20	28	e 20	32	e 24	27	e 24	24	-	-	0.01	0.02	33.3	0				
367	13	1	-	-	e 34	22	-	-	-	-	-	-	-	-	0.5	0				
368	13	e 5	02	55	-	-	i 03	12	-	-	-	-	0.01	-	1.1	0				
369	13	e 9	03	13	-	-	e 03	35	-	-	-	-	0.00	-	1.9	0				
370	15	e 12	19	09	-	-	e 19	37	-	-	-	-	0.01	-	2.7	0				
371	15	21	-	-	e 19	06	-	-	-	-	-	-	-	-	0.9	0				
372	16	22	-	-	e 42	55	-	-	-	-	-	-	-	-	0.8	0				
373	16	23	-	-	e 44	46	-	-	-	-	-	-	-	-	0.8	0				
374	17	i 19	26	41	-	-	i 26	52	i 26	52	-	-	0.03	-	2.1	0	Off Kamaisi Neighbourhood of Hatiman (Gihu)			
375	18	i 2	39	58	39	58	i 40	53	? 40	58	-	-	0.22	0.11	12.4	0				
376	18	e 10	22	20	-	-	i 23	24	e 23	24	-	-	0.02	0.02	5.0	0	S off Cape Nagaturo			
377	18	e 14	07	21	-	-	e 07	39	-	-	-	-	-	-	1.3	0				
378	18	e 19	25	52	-	-	i 26	04	e 26	06	-	-	0.01	-	1.8	0				
379	19	e 3	52	05	e 52	04	i 53	05	e 53	05	-	-	0.04	0.03	5.8	0	Neighbourhood of Cape Keramui			
380	19	e 11	49	50	-	-	e 50	12	e 50	13	-	-	0.01	-	3.0	0				
381	19	e 15	49	18	-	-	i 49	28	-	-	-	-	0.02	-	1.2	0				
382	20	1	-	-	e 00	20	-	-	-	-	-	-	0.01	-	1.8	0				
383	20	e 13	13	37	-	-	i 14	20	-	-	-	-	0.02	-	3.8	0				
384	21	2	-	-	i 56	49	-	-	-	-	-	-	0.01	-	2.0	0				
385	21	e 7	31	57	-	-	i 32	14	-	-	-	-	0.08	-	4.0	0				

## EARTHQUAKES, 1934.



No.	Date 1934	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
		h	m	s	m	s	m	s	m	s	m	s	m	s	mm	mm	m			
386	Aug. 21	e 19	35	19	-	-	e 36	04	-	-	-	-	0.01	-	3.6	0	E off Cape Sioya			
387	23	e 7	43	33	-	-	i 44	11	e 44	09	-	-	0.01	-	4.0	0				
388	23	e 15	57	59	-	-	e 58	20	-	-	-	-	0.01	-	2.4	0				
389	23	e 22	35	02	e 35	01	i 35	33	e 35	37	-	-	0.28	0.20	16.1	0				
390	23	23	-	-	-	-	e 58	42	-	-	-	-	0.00	-	2.5	0				
391	24	5	-	-	-	-	e 59	46	-	-	-	-	0.01	-	2.0	0	E off Miyako			
392	24	e 14	53	30	e 53	30	i 53	58	e 53	58	-	-	0.03	0.04	4.6	0				
393	24	23	-	-	-	-	e 24	15	-	-	-	-	0.00	-	2.3	0				
394	25	15	-	-	-	-	i 25	42	-	-	-	-	0.01	-	1.8	0				
395	26	i 9	19	49	e 19	50	i 20	17	e 20	23	-	-	0.28	0.19	10.2	0				
396	26	e 21	32	50	-	-	i 33	04	-	-	-	-	0.01	-	1.4	0	S foot of Mt. Tukuba			
397	27	23	-	-	-	-	e 06	29	-	-	-	-	-	-	1.0	0				
398	28	e 13	34	26	e 34	20	i 38	06	e 38	07	-	-	0.01	-	9.0	0				
399	28	e 17	47	48	-	-	i 48	47	-	-	-	-	0.01	-	3.4	0				
400	30	e 0	37	05	-	-	e 37	37	e 37	39	-	-	0.01	0.03	6.7	0				
401	30	e 16	30	21	e 30	26	e 34	02	e 34	00	-	-	0.01	-	9.7	0				
402	31	e 5	13	41	? 13	36	-	-	? 21	46	-	-	0.01	-	49.2	0				
403	Sept. 1	e 2	21	30	-	-	e 21	51	-	-	-	-	0.00	-	2.1	0				
404	1	e 6	57	06	-	-	i 57	27	-	-	-	-	0.02	-	8.2	0				
405	1	e 11	18	23	-	-	i 18	56	-	-	-	-	0.07	-	6.8	0				
406	2	e 11	30	28	-	-	i 30	59	-	-	-	-	0.01	-	3.5	0	E off Cape Nasayappu			
407	3	e 18	43	10	-	-	e 44	14	e 44	16	-	-	0.01	-	4.8	0				
408	3	19	-	-	-	-	e 11	12	-	-	-	-	-	-	1.9	0				
409	4	18	-	-	-	-	e 21	07	-	-	-	-	-	-	0.9	0				
410	5	0	-	-	-	-	e 25	54	-	-	-	-	-	-	1.0	0				
411	5	e 4	59	14	-	-	i 60	16	e 60	13	-	-	0.02	0.02	6.2	0				
412	5	15	-	-	-	-	e 47	23	-	-	-	-	-	-	1.1	0				
413	6	e 6	36	30	-	-	e 36	48	-	-	-	-	0.01	-	2.1	0				
414	6	9	-	-	-	-	e 57	12	-	-	-	-	0.01	-	3.2	0				
415	6	17	-	-	-	-	e 48	22	-	-	-	-	-	-	2.3	0				
416	9	16	-	-	-	-	e 49	03	-	-	-	-	-	-	1.1	0	S off Hatizyo I.			
417	10	e 14	40	38	-	-	e 40	55	-	-	-	-	0.01	-	1.6	0				
418	10	e 17	36	58	-	-	e 37	32	-	-	-	-	0.01	-	3.3	0				
419	11	e 23	34	48	-	-	i 36	03	e 36	01	-	-	0.02	-	5.4	0				
420	12	e 9	13	51	-	-	e 14	16	-	-	-	-	0.00	-	1.7	0				
421	12	e 9	19	01	-	-	e 19	26	-	-	-	-	0.01	-	2.5	0				
422	12	e 13	24	21	-	-	e 24	45	-	-	-	-	0.01	-	3.0	0				
423	12	14	-	-	-	-	-	-	? 29	54	-	-	-	-	16.5	0				
424	15	e 11	08	25	-	-	i 08	42	i 08	43	-	-	0.02	0.03	3.8	0				
425	15	12	-	-	-	-	-	-	-	-	-	-	-	-	2.3	0				
426	15	14	-	-	-	-	e 34	14	-	-	-	-	-	-	1.2	0	Mizusawa			
427	15	e 18	58	31	-	-	e 58	59	-	-	-	-	-	-	1.7	0				
428	15	e 21	24	57	-	-	e 25	19	-	-	-	-	0.00	-	2.4	0				
429	16	e 0	16	19	-	-	i 16	49	e 16	44	-	-	0.01	-	5.1	0				
430	16	5	-	-	-	-	e 03	58	-	-	-	-	-	-	1.1	0				
431	17	e 0	31	16	-	-	i 31	56	e 31	59	-	-	0.03	-	6.1	0				
432	17	e 9	46	38	-	-	i 46	48	-	-	-	-	0.01	-	1.5	0				
433	18	e 19	47	07	-	-	i 47	35	e 47	37	-	-	0.01	-	3.1	0				
434	18	e 19	53	20	-	-	i 53	36	e 53	36	-	-	0.02	-	2.7	0				
435	18	21	-	-	-	-	e 47	46	-	-	-	-	0.00	-	2.6	0				
436	19	e 15	18	09	e 18	08	i 18	39	e 18	38	-	-	0.03	0.04	4.2	0	E off Cape Todo			
437	19	17	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0				
438	19	19	-	-	-	-	e 22	59	-	-	-	-	0.01	-	2.0	0				
439	20	e 4	23	46	-	-	i 23	51	-	-	-	-	0.02	-	0.5	0				
440	20	e 22	06	36	-	-	e 07	08	-	-	-	-	0.01	-	2.5	0				





EARTHQUAKES, 1934.



No.	Date 1934	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
551	Dec. 7	h	m	s	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	Lower valley of R. Hei (Iwate) Mabuchi E off the mouth of R. R. Ootuti (Iwate)	
552	8	15			-	-	e 25	37	-	-	-	-	-	-	-	-	1.8	0		
553	9	16			-	-	e 29	37	-	-	-	-	-	-	-	-	1.1	0		
554	9	9			-	-	e 02	04	-	-	-	-	-	-	-	-	1.0	0		
555	9	16			-	-	e 57	09	-	-	-	-	-	0.00	-	-	2.3	0		
555	9	e 23	26	03	-	-	i 26	14	e 26	15	-	-	-	0.04	0.03	2.5	0			
556	9	e 23	38	36	-	-	e 38	55	e 38	57	-	-	-	0.02	-	3.1	0			
557	10	i 0	22	20	e 22	20	i 22	30	i 22	30	-	-	-	0.61	0.61	7.3	2			
558	10	e 2	09	16	⊕		e 09	41	⊕		-	-	-	0.01	-	2.2	0			
559	10	e 10	03	28	-	-	e 04	14	-	-	-	-	-	0.01	-	4.8	0			
560	10	e 19	10	42	-	-	e 11	09	-	-	-	-	-	-	-	2.7	0			
561	11	e 3	50	19	-	-	e 50	48	e 50	45	-	-	-	0.03	0.02	4.1	0	N part of Kasima Nada		
562	12	e 3	09	16	-	-	e 09	36	-	-	-	-	-	0.00	-	2.5	0			
563	14	e 9	09	55	-	-	e 10	30	-	-	-	-	-	-	-	2.4	0			
564	14	e 9	55	16	-	-	i 55	45	e 55	42	-	-	-	0.02	0.02	3.1	0	Off Miyako		
565	15	e 2	05	29	e 05	15	e 12	07	e 12	00	-	-	17	52	-	1.68	53.3	0		
566	15	e 19	25	03	-	-	e 25	31	-	-	-	-	-	0.01	-	4.0	0			
567	15	19			-	-	e 33	47	e 33	46	-	-	-	0.01	-	3.1	0			
568	16	e 8	23	14	-	-	e 23	48	-	-	-	-	-	0.00	-	4.3	0			
569	17	e 16	00	46	e 00	40	? 05	33	? 05	38	10	07	10	34	-	0.08	33.2	0		
570	19	9	⊕		-	-	⊕		e 02	29	-	-	-	⊕	0.02	3.1	0			
571	25	e 3	45	26	-	-	e 46	07	-	-	-	-	-	0.01	-	3.7	0			
572	25	e 6	32	11	e 32	06	e 36	03	? 36	21	-	-	? 39	09	-	-	22.6	0		
573	25	7			-	-	-	-	-	-	-	-	-	0.01	-	2.3	0			
574	26	e 21	38	36	-	-	e 39	08	-	-	-	-	-	0.01	-	3.1	0			
575	28	7			-	-	-	-	-	-	-	-	-	0.00	-	2.8	0			
576	31	i 21	14	39	e 14	40	i 14	59	i 15	02	-	-	-	0.13	0.09	6.2	0	ENE off Miyako		

# CHIEF EARTHQUAKES OBSERVED WITH NASU'S SEISMOGRAPH, 1934.



Instrument; Nasu's seismograph with three components.

Remarks:

Instrumental constants

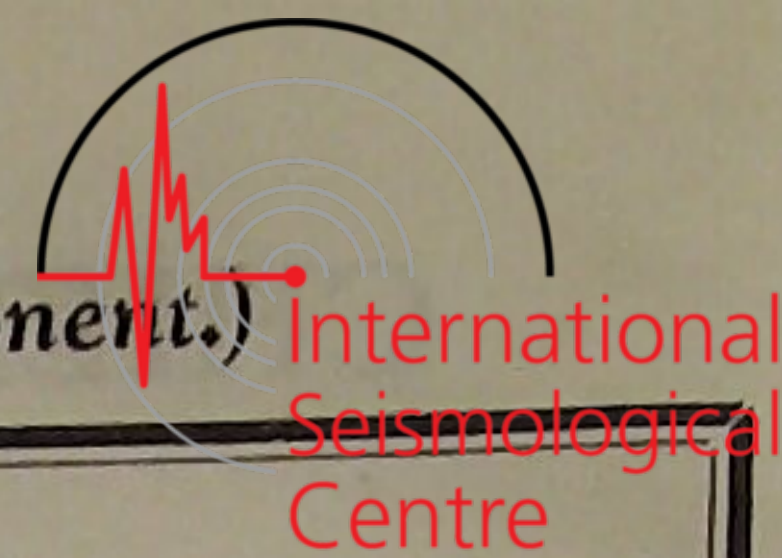
Component	V	T <sub>0</sub>	$\gamma/T_0^2$	Mass
E-W	25	6.1 s	0.007	7.2 kgr.
N-S	25	6.0	0.013	7.2
Vertical	25	5.3	0.048	4.4

1. Direction of the earth's displacement; positive towards north, east, and upward respectively.
2.  $\oplus$  out of the range of the instrument.
3.  $\times$  too feeble to measure.
4.  $\times$  out of order of the instrument.

No.	Date	P			S			Maximum Amplitude			First Motion			Approximate epicenter
		mean of 3 comp.			mean of 3 comp.			E-W	N-S	Vertical	E-W	N-S	Vertical	
1 44	Jan. 3 29	h	m	s	m	s	$\mu$	$\mu$	$\mu$	$\mu$	$\mu$	$\mu$		SW off Kamtchatka ESE off Kinkwasan
		9	46	04	49	07	- 420	+ 71	- 28	$\times$	$\times$	$\times$		
		12	35	32	36	08	+ 70	- 186	$\times$	$\times$	$\times$			
67 86	Feb. 10 24	22	02	26	02	52	- 340	- 448	- 184	- 12	+ 18	+ 28	NE off Cape Sioya SSE off Titizima (deep)	
		6	27	33	30	47	- 622	- 496	+ 70	$\times$	$\times$	$\times$		
123 124 127	Mar. 20 21 21	13	27	58	28	16	- 70	- 64	- 32	$\times$	$\times$	$\times$	E off the mouth of R. Mabuchi Off Miyako E off Miyako	
		0	54	40	25	17	+ 346	- 770	+ 200	- 20	- 2	+ 18		
		5	39	01	39	26	+ 260	+ 530	+ 130	- 18	- 7	+ 10		
150 156 158 163	Apr. 6 14 15 19	19	10	07	10	26	$\oplus$	$\oplus$	$\oplus$	- 22	+ 166	+ 78	NE off Cape Sioya Neighbourhood of Yamada Bay SSE off Cape Nozima S off Hatizyo I. (deep)	
		5	22	43	22	57	+ 50	- 50	+ 36	$\times$	$\times$	$\times$		
		10	34	29	35	21	- 274	+ 358	- 70	$\times$	$\times$	$\times$		
		16	15	42	17	23	+ 320	- 410	- 150	- 8	+ 76	+ 64		
183 208 216	May 2 20 30	18	54	40	54	49	- 68	+ 50	- 40	+ 27	- 14	- 48	Sizugawa Bay ESE off Miyako Neighbourhood of Mito	
		7	02	36	03	05	+ 94	- 368	+ 70	- 22	+ 3	+ 33		
		23	04	40	05	10	- 450	- 274	- 98	+ 2	+ 5	+ 5		
251 261 275	June 13 19 29	1	52	35	53	48	+ 548	- 410	+ 298	$\times$	$\times$	$\times$	Neighbourhood of Sikotan I. S off Hatizyo I. Neighbouring sea of New Guinea	
		15	49	17	50	58	- 128	+ 140	- 40	$\times$	$\times$	$\times$		
		8	33	05	39	22	- 220	- 290	- 28	+ 4	- 13	- 40		
296 342	July 12 28	9	52	24	52	57	+ 310	- 286	+ 100	- 80	+ 22	+ 70	Off Kinkwasan Off the mouth of R. Abukuma	
		12	13	18	13	35	100	80	200	$\times$	$\times$	$\times$		
352 357 375 389 395	Aug. 3 5 18 23 26	9	36	31	36	48	+ 660	+ 730	+ 252	+ 18	+ 18	- 36	E off Kuzi Off Kuzi Neighbourhood of Hatiman (Gifu) E off Cape Sioya E off Miyako	
		3	58	10	58	28	+ 82	- 122	- 40	- 5	- 16	+ 16		
		2	39	57	40	58	$\times$	- 188	+ 50	$\times$	$\times$	$\times$		
		22	35	01	35	38	+ 166	+ 208	+ 40	$\times$	$\times$	$\times$		
		9	19	49	20	15	+ 140	+ 224	+ 68	- 14	0	+ 12		
444	Sept. 23	21	41	22	41	39	+ 586	+ 492	$\times$	- 40	- 52	$\times$	ENE off Miyako	
458 469 477 483	Oct. 5 17 23 29	20	26	44	27	21	+1212	+1216	- 200	$\times$	$\times$	$\times$	S off Cape Erimo NE off Miyako ESE off Cape Siriya W part of Tugaru Str.	
		15	28	48	29	07	+ 140	- 172	- 120	+ 4	+ 4	- 10		
		22	24	15	24	40	+ 140	- 220	+ 120	$\times$	$\times$	$\times$		
		17	23	37	24	06	- 200	- 370	- 88	+ 4	- 14	+ 10		
496 499 510	Nov. 4 4 8	6	19	26	19	52	- 64	- 88	+ 60	$\times$	$\times$	$\times$	SE off Cape Siriya Off Yoshihama Bay Off Nadati (Niigata)	
		19	59	52	60	04	6	- 8	- 20	$\times$	$\times$	$\times$		
		3	26	36	27	26	+ 210	+ 270	+ 188	$\times$	$\times$	$\times$		
557	Dec. 10	0	22	20	22	30	+ 216	+ 268	- 138	- 20	- 9	+ 20	R. Ootuti (Iwate)	



## PULSATORY OSCILLATIONS, 1934 (EW Component.)



No.	Beginning			Ending			Maximum				Double Amplitude
	Date			Date			Date				
	Month	Day	Hour	Month	Day	Hour	Day	Hour	Day	Hour	
1	January	3	12	January	6	20	3	15	3	18	7
2		8	9		9	17	8	15	8	17	4
3		10	20		15	20	13	22	13	24	5
4		16	14		18	21	17	5	17	7	6
5		19	12		25	23	20	7	20	11	18
6		28	21		31	12	29	22	29	24	3
7	February	2	20	February	7	23	3	6	3	9	5
8		14	0		17	5	14	17	14	20	5
9		18	17		21	14	19	12	19	15	10
10		22	11		26	10	23	4	23	6	4
11	March	1	2	March	2	22	1	18	1	20	4
12		8	1		11	24	8	23	9	2	5
13		12	9		16	18	14	1	14	3	13
14		18	15		20	13	19	6	19	9	10
15		21	2		23	15	21	15	21	17	20
16		24	0		25	18	24	10	24	13	10
17		26	20		28	2	27	11	27	13	5
18	April	1	0	April	2	12	1	15	1	17	5
19		3	16		6	13	5	0	5	2	6
20		9	0		10	14	9	21	9	23	5
21		11	19		13	15	12	17	12	19	4
22		16	2		18	5	16	12	16	15	4
23		24	1		26	15	24	23	25	1	6
24		29	22	May	1	11	1	7	1	9	7
25	May	8	22		10	8	9	0	9	2	3
26		13	3		15	20	13	16	13	18	6
27	June	20	4	June	22	16	21	8	21	10	6
28	July	9	18	July	12	17	11	23	12	1	5
29	August	29	11	August	31	15	29	22	30	1	5
30	September	5	15	September	7	8	6	9	6	11	7
31		8	19		11	4	9	12	9	14	5
32		13	22		15	5	14	13	14	15	4
33		20	20		23	12	21	20	21	22	65
34	October	7	4	October	10	13	8	8	8	10	6
35		11	19		13	9	12	6	12	9	5
36		15	0		16	8	15	7	15	9	6
37		24	1		25	23	25	1	25	3	11
38	November	1	3	November	3	20	2	5	2	7	8
39		6	23		8	12	7	13	7	15	12
40		18	21		20	14	19	4	19	6	11
41		27	3		29	22	27	17	27	19	16
42	December	1	5	December	2	15	2	1	2	3	3
43		10	0		12	1	11	5	11	9	4
44		13	23		15	9	14	13	14	17	3
45		23	1		24	19	23	13	23	15	8
46		31	14	January (1935)	3	4	31	22	31	24	11