



ANNUAL REPORT
OF THE
METEOROLOGICAL
AND THE
SEISMOLOGICAL OBSERVATIONS
MADE AT THE
INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA
FOR
THE YEAR 1936.

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.

—
1937.

The present report gives the results of the meteorological and seismological observations made at this observatory during the year 1936. No alteration has been made in the nature and methods of observation. But as the observing house hitherto used became too old, a new one was built in the direction of SE, and separated 30 metres from the old position, and all the meteorological and seismological instruments in the old house were removed here. The level of the two positions are the same, and the heights of the barometer, anemometer, and the wind vane are not changed. The dates of the removal of the chief instruments are as follows:

Nasu's seismograph.....	Jan. 31, 1936.
Omori's seismograph NS	Feb. 3 ,,
Omori's seismograph EW.....	Feb. 4 ,,
Barometer	Feb. 6 ,,
Wind vane.....	Feb. 6 ,,
Robinson anemometer	Feb. 7 ,,

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.

* Note:—The wind velocity is observed 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 the meteorological phenomena the following symbols are used:—

●	Rain	▽	Silver thaw	≠	Oceanic noise
*	Snow	~	Glazed frost	∞	Yellow dust
☒	Thunder storm	□	Ice	○	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	Ѱ	Lunar Corona	SC	Alto-stratus
⊴	Ice column in ground	Ѱ	Lunar halo	SK	Strato-cumulus
△	Dew	Ѱ	Gale	N	Nimbus
⊵	Frozen dew	Ѱ	Rainbow	K	Cumulus
⊗	Frozen rain	Ѱ	Aurora	KN	Cumulo-nimbus
〰	Wave cloud	Ѱ	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, 1937

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

SEISMOLOGICAL OBSERVATIONS

Remarks :—

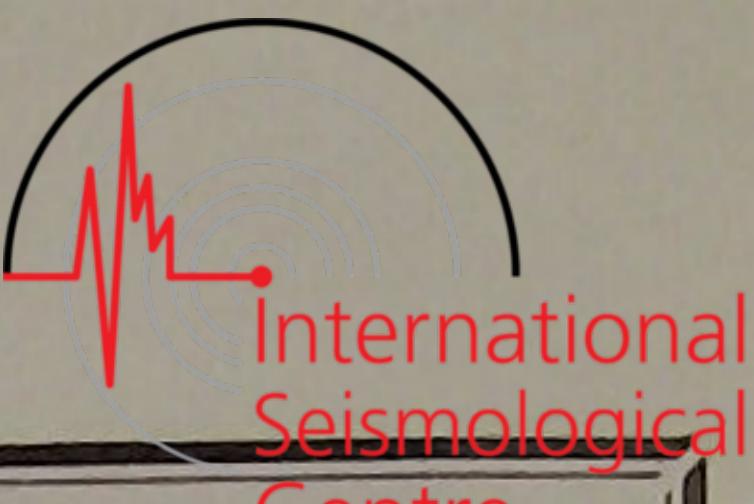
1. The intensities of the earthquakes are divided into the following seven classes according to the Central Meteorological Observatory of Japan.

Not felt	0.												
Felt	<table><tr><td>1.</td><td>slight</td></tr><tr><td>2.</td><td>moderate</td></tr><tr><td>3.</td><td>rather strong</td></tr><tr><td>4.</td><td>strong</td></tr><tr><td>5.</td><td>very strong</td></tr><tr><td>6.</td><td>disastrous</td></tr></table>	1.	slight	2.	moderate	3.	rather strong	4.	strong	5.	very strong	6.	disastrous
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.

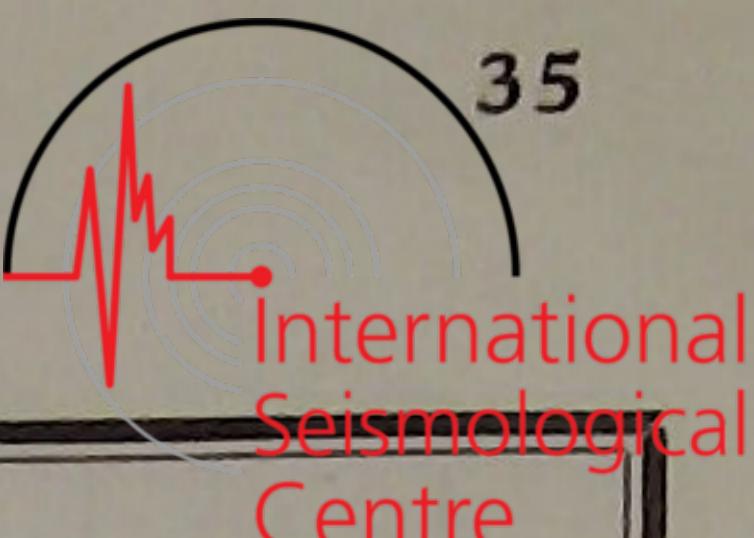
- i* Sudden beginning of the motion.
- e* Gradual beginning of the motion.
- ? Doubtful phase.
- * Out of order of the instrument.
- ⊕ Out of the range of the instrument.

EARTHQUAKES, 1936.



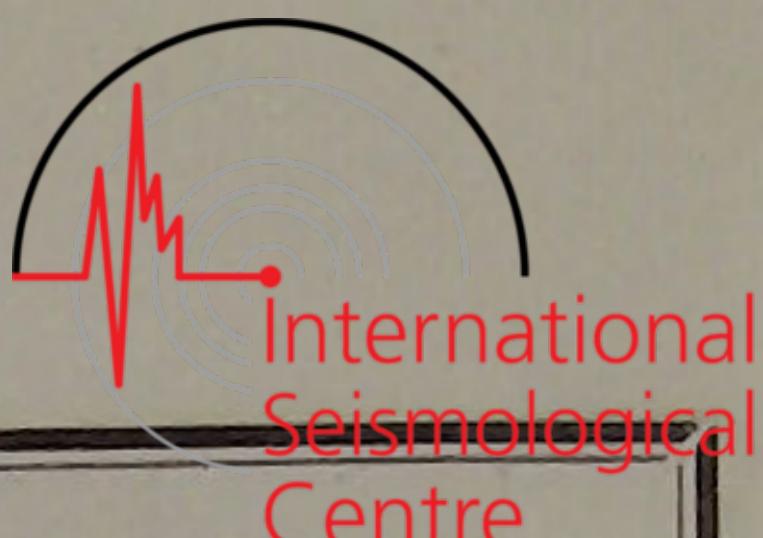
No.	Date 1936	P				S				L				Maximum Range of Motion		Duration of Total Earthquake	Intensity	Approximate Epicenter	
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S		
1	Jan. 1	h m s	m	s	m	s	m	s	m	m	s	m	s	mm	mm	m	2.4	0	
2	2	? 20 31 58	-	-	i 32	39	-	-	-	-	-	-	-	0.01	-	-	2.4	0	
3	2	17	-	-	e 20	42	-	-	-	-	-	-	-	0.00	-	-	1.5	0	
4	2	e 18 49 32	-	-	i 50	13	e 50	11	-	-	-	-	-	0.02	-	-	4.4	0	
5	2	? 22 43 58	? 44	05	-	-	? 63	45	? 63	29	0.02	0.07	43.2	0	-	-	-	0	
6	4	e 8 26 47	-	-	i 27	02	e 27	00	-	-	-	-	-	0.02	-	-	2.9	0	
6	6	e 0 18 26	-	-	i 18	43	-	-	-	-	-	-	-	0.01	-	-	2.1	0	
7	6	e 5 22 21	-	-	e 22	54	-	-	-	-	-	-	-	0.01	-	-	5.2	0	
8	7	e 18 59 52	-	-	i 60	24	e 60	20	-	-	-	-	-	0.01	-	-	3.8	0	
9	8	e 11 35 21	-	-	e 35	33	-	-	-	-	-	-	-	0.00	-	-	1.3	0	
10	8	i 22 20 55	i 20	55	i 21	07	i 21	08	-	-	-	-	-	0.10	0.06	3.9	1	Isinomaki Bay	
11	12	e 8 34 14	-	-	34	30	-	-	-	-	-	-	-	0.00	-	-	1.0	0	
12	14	e 17 59 59	e 59	57	? 66	46	? 66	43	? 71	17	-	-	-	-	-	-	33.5	0	
13	15	e 3 49 22	-	-	e 49	53	-	-	-	-	-	-	-	0.01	-	-	2.3	0	
14	16	21	-	-	? 43	29	-	-	-	-	-	-	-	0.00	-	-	0.7	0	
15	17	e 18 13 06	-	-	e 13	19	-	-	-	-	-	-	-	0.01	-	-	1.1	0	
16	17	e 21 18 51	-	-	e 19	24	-	-	-	-	-	-	-	0.01	-	-	3.2	0	
17	17	e 22 36 27	-	-	e 36	53	-	-	-	-	-	-	-	0.01	-	-	2.7	0	
18	18	e 19 08 05	-	-	08	20	e 08	20	-	-	-	-	-	0.01	-	-	1.7	0	
19	20	e 17 03 11	e 03	19	e 08	54	e 08	46	e 12	37	e 12	31	-	-	-	-	37.2	0	
20	21	i 11 59 45	e 59	45	i 59	58	e 59	58	-	-	-	-	-	0.06	0.03	3.3	1	Off Hirota Bay (Iwate)	
21	22	i 3 03 59	e 03	58	i 04	22	04	22	-	-	-	-	-	0.05	0.05	4.5	0	Neighbourhood of the mouth of R. Mabuti	
22	24	e 1 55 22	-	-	56	25	-	-	-	-	-	-	-	0.02	0.02	6.1	0		
23	27	13	-	-	e 22	01	-	-	-	-	-	-	-	0.01	-	2.0	0		
24	28	e 9 28 02	-	-	28	35	-	-	-	-	-	-	-	0.01	-	3.6	0		
25	29	e 1 28 55	e 28	56	e 29	34	e 29	33	-	-	-	-	-	0.03	0.03	6.3	0	Kuzyukuri Coast	
26	29	i 18 28 02	e 28	02	i 28	23	i 28	25	-	-	-	-	-	0.27	0.22	6.3	1	SE off Cape Siriya	
27	30	i 4 01 14	e 01	14	i 01	36	i 01	36	-	-	-	-	-	0.06	0.06	3.8	0	E off the mouth of R. Mabuti	
28	30	4	-	-	i 12	48	-	-	-	-	-	-	-	0.01	-	1.3	0		
29	31	18 53 46	-	-	55	23	-	-	-	-	-	-	-	0.02	-	6.2	0		
30	Feb. 1	e 3 24 51	-	-	e 25	38	-	-	-	-	-	-	-	0.01	-	3.1	0		
31	1	e 7 26 24	-	-	e 27	10	-	-	-	-	-	-	-	0.01	-	3.0	0		
32	1	e 12 35 53	-	-	36	35	-	-	-	-	-	-	-	0.02	-	5.1	0		
33	2	e 18 40 58	-	-	e 41	33	-	-	-	-	-	-	-	0.01	-	2.8	0		
34	7	? 9 32 57	? 32	52	e 39	16	e 39	16	? 44	44	? 44	42	0.03	0.85	39.5	0			
35	8	e 6 27 22	-	-	i 28	36	e 28	36	-	-	-	-	-	0.02	0.02	6.0	0		
36	8	e 12 19 21	e 19	19	e 25	39	e 25	37	-	-	? 32	17	0.01	0.02	28.5	0			
37	10	e 18 15 17	-	-	e 15	54	e 15	52	-	-	-	-	-	0.01	0.02	6.3	0		
38	10	e 22 05 52	-	-	e 06	34	-	-	-	-	-	-	-	0.00	-	3.7	0		
39	11	e 15 16 41	-	-	17	05	-	-	-	-	-	-	-	-	-	1.5	0		
40	12	e 20 24 09	e 24	07	i 27	09	e 27	08	-	-	-	-	-	0.03	0.02	9.7	0	S off Titizima	
41	13	e 21 34 15	-	-	34	41	e 34	43	-	-	-	-	-	0.01	0.01	2.8	0		
42	15	e 7 19 11	-	-	i 19	52	e 19	52	-	-	-	-	-	0.01	-	3.1	0		
43	15	i 12 55 07	i 55	05	e 61	35	e 61	31	e 67	22	e 67	21	0.06	1.13	62.7	0			
44	16	e 7 06 18	-	-	06	37	-	-	-	-	-	-	-	-	-	1.8	0		
45	21	e 1 09 40	e 09	40	i 11	21	11	21	-	-	-	-	-	0.22	0.10	17.7	0	Boundary of Kawati and Yamato	
46	21	e 17 05 22	e 05	20	e 11	42	e 11	42	-	-	? 15	03	0.03	0.05	26.9	0			
47	21	e 19 35 49	-	-	i 36	36	e 36	33	-	-	-	-	-	0.02	-	3.7	0		
48	22	e 15 45 03	? 44	49	e 51	17	? 51	39	-	-	? 55	43	-	-	-	-	56.2	0	
49	23	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
50	23	e 23 50 12	-	-	50	59	-	-	-	-	-	-	-	-	-	3.4	0		
51	25	e 15 44 21	-	-	45	16	-	-	-	-	-	-	-	0.01	0.01	2.5	0		
52	27	e 10 12 36	e 12	35	i 19	21	i 19	21	-	-	-	-	-	-	-	27.9	0	</	

EARTHQUAKES, 1936.



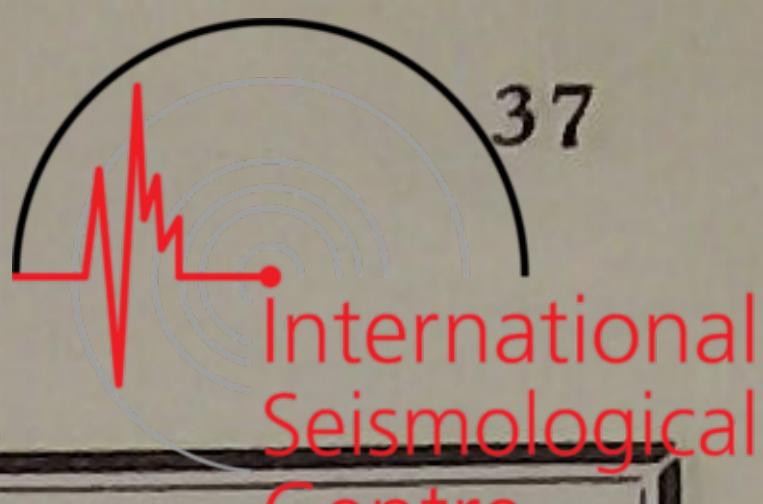
No.	Date 1936	P				S				L				Maximum Range of Motion			Duration of Total Earthquake	Intensity	Approximate Epicenter	
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
56	Mar. 1	h m s	m s	m s	m s	i 10 24 08	e 24 08	i 25 49	i 25 49	m s	m s	m s	mm	0.14	mm	0.20	m	9.8	0	N off Cape Siretoko (deep)
57	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	SE off Cape Erimo
58	2	i 3 20 02	i 20 02	i 20 41	i 20 41	i 20 02	i 20 41	i 20 41	i 20 41	-	-	-	⊕	⊕	⊕	⊕	69.0	1	1	
59	2	3	-	-	-	e 59 16	35	01	35 00	-	-	-	-	-	-	-	4.4	0	0	
60	2	e 4 34 23	e 34 23	e 34 35	e 34 35	e 4 34 23	e 34 35	e 4 34 23	e 34 35	-	-	-	0.04	0.06	0.04	0.06	10.0	0	0	
61	2	e 6 02 55	-	-	03	33	e 03 33	-	-	-	-	-	0.02	0.02	0.02	0.02	5.0	0	0	
62	2	8	-	-	e 43 26	-	-	e 43 26	-	-	-	-	0.00	0.00	-	-	1.8	0	0	
63	3	1	-	-	e 12 31	-	-	e 12 31	-	-	-	-	-	-	-	-	1.7	0	0	
64	3	16	-	-	e 57 50	-	-	e 57 50	-	-	-	-	-	-	-	-	2.4	0	0	
65	4	15	-	-	-	-	e 39 19	-	-	-	-	-	0.03	0.03	0.03	0.03	5.7	0	0	
66	6	e 4 14 30	e 14 30	i 15 11	15 09	i 15 11	15 09	i 15 11	15 09	-	-	-	0.05	0.04	0.04	0.04	7.6	0	0	
67	6	e 4 59 30	e 59 30	60 09	60 08	60 09	60 08	60 09	60 08	-	-	-	0.02	0.02	0.02	0.02	4.7	0	0	
68	7	4	-	-	i 14 35	e 14 35	i 14 35	e 14 35	i 14 35	e 14 35	-	-	0.02	0.01	0.01	0.01	3.5	0	0	
69	8	e 1 29 46	-	-	30 26	e 30 27	-	-	30 26	e 30 27	-	-	0.03	0.02	0.02	0.02	5.0	0	0	
70	10	e 2 27 52	-	-	e 28 31	-	-	e 28 31	-	-	-	-	-	-	-	-	3.3	0	0	
71	10	i 20 36 52	i 36 52	i 37 33	i 37 33	i 36 52	i 37 33	i 37 33	i 37 33	-	-	-	0.17	0.40	0.40	0.40	19.4	0	0	
72	11	i 0 44 25	i 44 23	i 44 50	i 44 48	i 0 44 25	i 44 23	i 44 50	i 44 48	-	-	-	⊕	3.23	3.23	3.23	-	1	1	E off Miyako
73	11	1 ⊕	e 50 41	⊕	51 06	e 50 41	⊕	51 06	e 50 41	-	-	-	⊕	0.15	0.15	0.15	4.2	1	1	
74	11	2	-	-	e 36 06	-	-	e 36 06	-	-	-	-	0.00	-	-	-	2.3	0	0	
75	11	e 3 25 02	-	-	e 25 41	-	-	e 25 41	-	-	-	-	-	-	-	-	2.9	0	0	
76	11	5	-	-	? 16 55	-	-	? 16 55	-	-	-	-	0.00	-	-	-	3.0	0	0	
77	12	e 5 54 55	-	-	e 55 46	e 55 45	-	e 55 45	-	-	-	-	0.01	0.02	0.02	0.02	5.8	0	0	
78	17	14	-	-	e 53 17	-	-	e 53 17	-	-	-	-	-	-	-	-	1.5	0	0	
79	19	e 0 47 27	-	-	e 47 41	? 47 43	-	e 47 41	? 47 43	-	-	-	0.01	-	-	-	1.8	0	0	
80	22	? 12 33 51	? 33 39	? 40 31	? 40 31	? 12 33 51	? 33 39	? 40 31	? 40 31	? 43 20	? 43 20	-	-	0.05	0.05	0.05	22.0	0	0	
81	25	e 17 59 29	-	-	60 33	e 60 31	-	e 17 59 29	-	-	-	-	0.01	0.02	0.02	0.02	5.6	0	0	
82	25	21 42 59	e 42 56	43 48	e 43 49	21 42 59	e 42 56	43 48	e 43 49	-	-	-	0.01	0.03	0.03	0.03	5.1	0	0	
83	27	e 9 16 41	-	-	17 02	-	-	e 9 16 41	-	-	-	-	0.02	-	-	-	4.4	0	0	
84	29	12	-	-	? 50 29	-	-	12	-	-	-	-	0.00	-	-	-	1.8	0	0	
85	30	15	-	-	? 57 50	-	-	15	-	-	-	-	0.01	-	-	-	1.8	0	0	
86	Apr. 31	e 3 36 59	36 59	i 40 07	i 40 06	e 3 36 59	i 40 07	i 40 06	i 40 06	-	-	-	0.07	0.06	0.06	0.06	9.2	0	0	S off Titizima (deep)
87	1	e 2 16 37	e 16 37	i 22 17	i 22 18	e 2 16 37	e 16 37	i 22 17	i 22 18	26 48	27 18	-	-	-	-	-	73.1	0	0	
88	1	e 8 35 31	e 35 30	i 35 49	35 49	e 8 35 31	e 35 30	i 35 49	35 49	-	-	-	0.04	0.05	0.05	0.05	3.2	0	0	Off Kuzi
89	1	e 20 18 09	e 18 09	e 24 08	e 23 51	e 20 18 09	e 18 09	e 24 08	e 23 51	e 28 24	28 07	-	-	-	-	-	41.6	0	0	
90	2	? 6 25 02	? 25 07	? 31 24	? 31 21	? 6 25 02	? 25 07	? 31 24	? 31 21	-	-	-	-	-	-	-	24.7	0	0	
91	3	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	
92	3	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	
93	4	e 9 39 20	e 39 19	i 40 23	40 23	e 9 39 20	e 39 19	i 40 23	40 23	-	-	-	0.04	0.06	0.06	0.06	4.0	0	0	
94	5	6	-	-	-	-	-	-	-	-	-	-	0.03	0.03	0.03	0.03	-	0	0	
95	5	e 14 30 14	-	-	e 31 15	e 31 16	-	e 14 30 14	-	-	-	-	0.01	0.03	0.03	0.03	7.6.	0	0	
96	6	18 04 02	-	-	i 04 15	e 04 15	i 04 15	18 04 02	-	-	-	-	0.03	-	-	-	2.2	0	0	
97	8	e 5 25 22	e 25 23	25 55	e 25 59	e 5 25 22	e 25 23	25 55	e 25 59	-	-	-	0.05	0.05	0.05	0.05	5.3	0	0	
98	8	e 5 33 05	e 33 05	e 33 34	e 33 33	e 5 33 05	e 33 05	e 33 34	e 33 33	-	-	-	0.02	0.02	0.02	0.02	3.3	0	0	
99	8	e 15 48 47	e 48 47	e 49 27	e 49															

EARTHQUAKES, 1936.



No.	Date 1936	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	Apr. 18	h m s	m s	m	s	e 13 05	m s	m	s	m	s	m	s	mm	mm	m	2.7	0		
112		e 5 16 12	e 16 01	e 21 43	e 21 34	e 27 09	e 26 51	-	-	-	-	-	-	-	-	-	78.8	0		
113		e 4 16 24	- -	e 16 56	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	2.5	0			
114		e 15 01 45	- -	e 02 08	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.1	0			
115		e 9 51 38	- -	e 52 13	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	0.02	3.2	0			
116	22	e 16 52 39	- -	e 53 06	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	2.7	0			
117	23	e 18 46 28	- -	47 27	e 47 27	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.02	4.9	0			
118	23	e 23 20 19	e 20 23	e 25 30	e 25 34	- -	- -	- -	- -	- -	- -	- -	- -	-	0.05	24.4	0			
119	26	e 5 55 44	- -	e 56 17	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.03	0.02	3.5	0			
120	27	e 0 05 17	- -	e 11 03	- -	15 00	- -	- -	- -	- -	- -	- -	- -	0.01	-	27.4	0			
121	27	i 12 51 54	e 51 52	i 52 24	i 52 25	- -	- -	- -	- -	- -	- -	- -	- -	0.17	0.16	8.2	0	Kasima-Nada		
122	27	e 14 49 06	- -	e 49 32	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.5	0			
123	28	5	- -	e 29 38	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.00	-	2.2	0			
124	28	e 13 44 04	e 44 01	e 50 40	e 50 37	- -	- -	- -	- -	- -	- -	- -	- -	-	-	15.8	0			
125	29	e 16 48 38	e 48 38	e 49 36	e 49 41	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.03	8.1	0			
126	May	2 20	- -	e 41 58	e 42 00	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	2.6	0			
127		e 23 17 09	- -	17 47	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	0.01	3.2	0			
128		e 9 30 27	- -	i 30 57	e 30 58	- -	- -	- -	- -	- -	- -	- -	- -	0.03	0.04	4.3	0			
129		e 20 10 29	- -	10 54	e 10 55	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	2.3	0			
130		8 12 04	12 02	i 12 43	e 12 44	- -	- -	- -	- -	- -	- -	- -	- -	0.05	0.08	8.5	0	S off Kusiro		
131	4	17 37 26	- -	38 02	e 38 03	- -	- -	- -	- -	- -	- -	- -	- -	0.03	0.04	5.0	0			
132	5	13 51 11	- -	51 22	e 51 22	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.02	3.8	0			
133	5	20	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	0				
134	7	e 17 33 57	- -	e 34 31	e 34 32	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	5.2	0			
135	8	e 9 19 53	e 19 53	i 26 26	e 26 30	- -	- -	- -	- -	- -	- -	- -	- -	-	-	17.0	0			
136	9	e 18 05 27	- -	i 05 38	e 05 38	- -	- -	- -	- -	- -	- -	- -	- -	0.05	-	1.3	0			
137	10	e 9 10 36	- -	e 11 06	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.00	-	2.5	0			
138	10	e 11 14 34	- -	i 14 51	e 14 50	- -	- -	- -	- -	- -	- -	- -	- -	0.01	0.02	2.5	0			
139	11	13	- -	? 42 06	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	1.0	0			
140	11	17 35 46	e 35 42	? 41 58	? 42 28	- -	- -	- -	- -	- -	- -	- -	- -	-	-	20.7	0			
141	13	e 9 06 42	- -	07 19	e 07 17	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.7	0			
142	14	e 19 42 07	e 42 07	i 42 21	e 42 22	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.0	0			
143	16	e 7 12 08	e 12 15	e 17 12	e 17 12	? 22	27	? 22	22	- -	- -	- -	- -	-	-	41.1	0			
144	18	e 19 11 21	- -	11 51	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.5	0			
145	19	e 0 24 35	- -	i 24 46	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.09	0.05	2.1	0			
146	19	i 7 30 46	e 30 44	i 37 25	e 37 23	- -	- -	- -	- -	- -	- -	- -	- -	-	-	47.5	0			
147	19	e 20 58 52	- -	i 66 09	? 66 04	- -	- -	- -	- -	- -	- -	- -	- -	-	-	21.2	0			
148	20	e 3 14 24	? 14 14	? 21 48	? 21 41	? 27	36	? 26	55	- -	- -	- -	- -	-	-	60.3	0			
149	20	12	- -	? 05 24	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	0				
150	20	e 12 06 35	e 06 36	07 03	e 07 00	- -	- -	- -	- -	- -	- -	- -	- -	0.04	-	4.7	0			
151	20	e 12 13 53	- -	14 20	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.3	0			
152	20	12	- -	e 33 08	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	1.5	0			
153	21	e 13 02 44	- -	e 03 27	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	4.1	0			
154	21	19	- -	e 06 45	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	1.3	0			
155	22	4	- -	e 08 32	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.00	-	2.5	0			
156	22	e 5 35 22	- -	35 54	e 35 52	- -	- -	- -	- -	- -	- -	- -	- -	0.01	0.01	3.6	0			
157	22	21	- -	? 02 37	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	1.5	0			
158	24	7 36 12	e 36 12	e 36 31	e 36 33	- -	- -	- -	- -	- -	- -	- -	- -	0.08	0.10	5.9	0			
159	25	e 12 07 11	- -	08 26	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	4.5	0			
160																				

EARTHQUAKES, 1936.



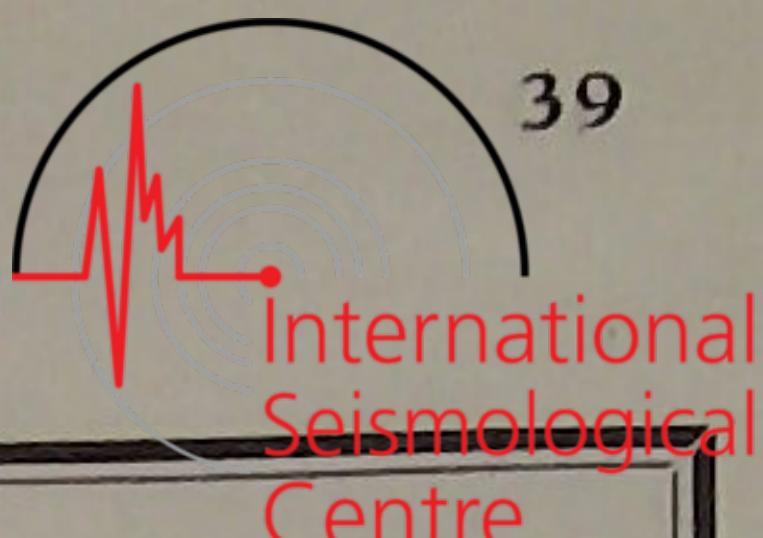
No.	Date 1936	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
166	June 3	h m s	m s	m s	m s	m s	m s	m s	m s	m s	m s	m s	m s	mm	mm	m	19.1	1	E off Cape Siriya Neighbourhood of Sikotan Is.	
167		i 2 56 18	56 19	i 56 48	56 50	- -	- -	- -	- -	- -	- -	- -	- -	0.90	0.90	-	7.9	0		
168		i 10 25 02	e 24 59	i 26 05	e 26 07	- -	- -	- -	- -	- -	- -	- -	- -	0.08	-	-	9.1	0		
169		e 13 09 32	e 09 36	i 10 18	e 10 22	- -	- -	- -	- -	- -	- -	- -	- -	0.09	0.08	-	5.7	0		
170		e 18 26 23	- -	e 27 42	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	5.6	0		
171	5	14	- -	e 45 08	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	4.8	0	Neighbourhood of Sizugawa Bay	
172	8	i 6 27 02	i 27 02	i 27 13	i 27 13	- -	- -	- -	- -	- -	- -	- -	- -	0.20	0.25	-	6.0	0		
173	8	9	- -	? 15 28	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.5	0		
174	8	12	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	-	0		
175	9	e 16 45 58	- -	e 46 30	e 46 30	- -	- -	- -	- -	- -	- -	- -	- -	0.00	0.02	-	3.6	0		
176	10	i 8 31 24	i 31 24	i 37 47	i 37 48	42	15	42	16	0.04	-	-	-	-	-	-	42.3	0	SW off Hatizyo Is. (deep)	
177	11	1	- -	? 58 17	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	2.7	0		
178	13	e 3 12 19	- -	e 13 29	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.9	0		
179	14	2 32 36	32 36	36 36	36 37	- -	- -	- -	- -	- -	- -	- -	- -	0.01	0.03	-	10.7	0		
180	15	e 7 08 14	- -	09 12	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	3.6	0		
181	19	4	- -	? 48 39	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	3.4	0	Off Cape Otiisi	
182	19	5	- -	? 27 51	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.9	0		
183	19	6	- -	? 36 42	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.1	0		
184	21	e 21 58 33	- -	i 59 03	e 59 03	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.05	-	4.8	0		
185	21	23	- -	? 41 58	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	3.2	0		
186	22	e 0 02 26	- -	i 02 38	e 02 39	- -	- -	- -	- -	- -	- -	- -	- -	0.05	0.04	-	3.0	0	Direction of Okhotsk sea	
187	25	15	- -	? 46 42	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	3.1	0		
188	25	i 16 53 39	i 53 38	i 55 01	i 55 01	- -	- -	- -	- -	- -	- -	- -	- -	0.09	0.06	-	8.1	0		
189	25	? 18 16 23	- -	? 16 47	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.8	0		
190	25	19	- -	e 51 32	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.0	0		
191	25	20	- -	? 36 49	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	1.2	0	Off Cape Otiisi	
192	26	3	- -	? 22 11	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	1.5	0		
193	26	? 11 47 48	- -	48 43	? 48 38	- -	- -	- -	- -	- -	- -	- -	- -	0.04	0.05	-	4.9	0		
194	26	23	- -	? 12 08	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	0.9	0		
195	27	i 21 14 58	e 14 58	i 16 03	i 16 03	- -	- -	- -	- -	- -	- -	- -	- -	0.17	0.17	-	15.6	0		
196	28	e 8 12 21	e 12 22	i 13 30	e 13 31	- -	- -	- -	- -	- -	- -	- -	- -	0.03	0.06	-	19.0	0	Direction of Okhotsk sea	
197	28	8	- -	e 35 17	e 35 10	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	11.6	0		
198	28	e 14 39 31	- -	i 39 41	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.02	-	-	2.9	0		
199	28	e 15 27 46	- -	i 28 36	e 28 33	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.02	-	5.8	0		
200	28	16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	-	0		
201	28	16	- -	e 46 28	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	2.3	0	Off Kuzyukuri Coast Mount. Asama	
202	28	e 17 25 20	- -	e 25 54	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	10.2	0		
203	30	e 6 26 03	- -	26 45	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	3.4	0		
204	30	i 15 10 52	i 10 52	i 14 28	i 14 24	- -	- -	- -	- -	- -	- -	- -	- -	1.40	3.46	-	106.2	0		
205	July 3	3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	-	-	-	-	0		
206	3	e 7 15 03	- -	i 15 59	15 59	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.03	-	5.1	0	Mouth of R. Niikappu	
207	4	e 20 41 40	e 41 40	e 42 23	e 42 26	- -	- -	- -	- -	- -	- -	- -	- -	0.03	0.02	-	7.5	0		
208	5	e 13 14 06	e 14 07	e 14 43	e 14 40	- -	- -	- -	- -	- -	- -	- -	- -	0.03	0.06	-	6.6	0		
209	5	e 14 35 23	- -	e 36 46	e 36 45	- -	- -	- -	- -	- -	- -	- -	- -	0.02	0.03	-	6.9	0		
210	5	e 15 30 02	- -	30 59	e 31 00	- -	- -	- -	- -	- -	- -	- -	- -	0.01	-	-	3.5	0		
211	5	e 17 06 45	- -	e 07 33	- -	- -	- -	- -	- -	- -	- -	- -	- -	0.00	-	-	5.5	0	Neighbourhood of Yamada Bay</	

EARTHQUAKES, 1936.



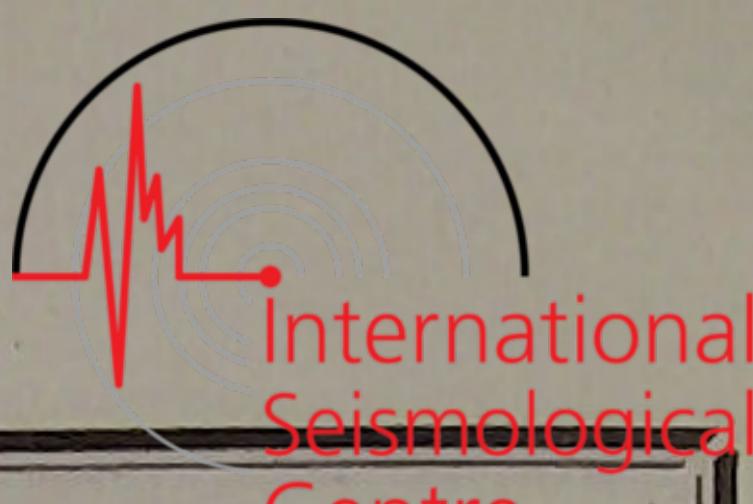
No.	Date 1936	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
221	July 13	h m s	m s	m	s	m 13 05	m s	m	s	m	s	m	s	mm	mm	m	1.4	0		
222		9	-	-	-	? 28 22	-	-	-	-	-	-	-	-	-	-	1.9	0		
223		11	-	-	-	? 43 36	? 42 59	? 54 45	? 54 47	-	-	-	-	-	-	-	121.5	0		
224		e 11 32 08	e 32 10	? 43 36	? 42 59	e 27 21	-	-	-	-	-	-	0.00	-	-	-	4.3	0		
225		e 22 26 42	-	-	-	27 20	e 27 21	-	-	-	-	-	0.01	-	-	-	4.3	0		
226	14	e 20 50 29	-	-	-	51 04	e 51 02	-	-	-	-	-	-	-	-	-	-	-		
227	15	e 1 55 39	e 55 36	i 56 12	56 09	-	-	-	-	-	-	0.21	0.25	11.5	0	Kasima-Nada				
228	15	e 11 52 20	-	-	53 42	e 53 42	-	-	-	-	-	0.01	0.02	12.2	0					
229	16	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
230	18	e 0 08 13	-	-	i 08 52	-	-	-	-	-	-	0.01	-	2.8	0					
231	18	i 17 49 06	e 49 06	i 49 27	i 49 27	-	-	-	-	-	-	0.16	0.18	7.4	1	Off Iwaki				
232	18	23	-	-	? 52 37	-	-	-	-	-	-	-	-	-	1.7	0				
233	20	c 2 07 07	-	-	e 07 36	-	-	-	-	-	-	0.00	-	2.8	0					
234	20	20	-	-	e 39 43	-	-	-	-	-	-	-	-	-	1.7	0				
235	22	e 20 47 40	e 47 39	e 48 15	e 48 12	-	-	-	-	-	-	0.03	0.03	6.1	0	Lower valley of R. Niikappu				
236	23	e 7 07 22	e 07 22	e 08 45	e 08 47	-	-	-	-	-	-	0.01	0.02	13.7	0					
237	25	7	-	-	? 46 33	-	-	-	-	-	-	-	-	-	1.5	0				
238	25	1	-	-	e 15 30	-	-	-	-	-	-	-	-	-	-	0				
239	26	e 4 15 01	-	-	e 56 48	e 56 48	-	-	-	-	-	0.01	0.02	5.0	0					
240	26	7	-	-	e 45 08	-	-	-	-	-	-	-	-	-	0.9	0				
241	27	e 18 32 20	-	-	e 32 57	-	-	-	-	-	-	-	-	-	-	2.7	0			
242	28	e 22 02 13	-	-	i 02 53	e 02 51	-	-	-	-	-	-	-	-	-	3.0	0			
243	30	8	-	-	? 04 10	-	-	-	-	-	-	-	-	-	-	1.0	0			
244	30	e 18 16 24	e 16 24	i 17 12	e 17 13	-	-	-	-	-	-	-	-	-	-	5.9	0			
245	30	23	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	0			
246	30	23	-	-	46 10	-	-	-	-	-	-	-	-	-	-	1.2	0			
247	31	e 8 26 02	-	-	e 26 53	e 26 54	-	-	-	-	-	0.01	-	-	-	2.9	0			
248	Aug. 1	e 3 16 27	-	-	e 16 58	-	-	-	-	-	-	0.00	-	-	-	2.5	0			
249	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
250	3	e 7 58 26	-	-	59 01	e 59 03	-	-	-	-	-	0.01	-	-	-	3.4	0			
251	4	14	-	-	e 15 20	-	-	-	-	-	-	0.01	-	-	-	3.2	0			
252	7	e 18 00 32	e 00 30	i 00 58	e 00 58	-	-	-	-	-	-	0.04	-	-	-	4.8	0	Off Miyako		
253	8	11	-	-	e 18 54	-	-	-	-	-	-	-	-	-	-	3.5	0			
254	8	19	-	-	e 20 58	-	-	-	-	-	-	-	-	-	-	3.6	0			
255	9	16	-	-	? 12 43	-	-	-	-	-	-	-	-	-	-	2.1	0			
256	13	e 1 52 21	e 52 20	e 53 00	e 52 59	-	-	-	-	-	-	0.01	0.03	4.8	0					
257	13	e 20 09 20	e 09 14	e 14 23	e 14 27	-	-	-	-	-	-	-	-	-	-	39.9	0			
258	17	e 20 11 44	-	-	i 12 08	e 12 11	-	-	-	-	-	0.03	0.02	5.3	0					
259	18	e 23 47 31	-	-	e 47 52	e 47 50	-	-	-	-	-	0.01	-	-	-	3.3	0			
260	19	23	-	-	e 20 34	-	-	-	-	-	-	-	-	-	-	1.2	0			
261	20	e 5 01 31	-	01	57	-	-	-	-	-	-	-	-	-	-	4.3	0			
262	22	i 6 56 50	i 56 50	i 60 58	i 60 56	-	-	? 63 18	0.89	1.25	52.1	0							S off Daito	
263	22	? 11 14 33	? 14 31	? 14 58	? 15 00	-	-	-	0.02	0.02	5.3	0								
264	23	i 21 21 33	i 21 33	i 29 03	i 29 01	33	55	33	58	0.02	0.12	48.1	0							
265	25	e 0 33 37	-	i 35 13	-	-	-	-	0.07	-	7.6	0								Neighbourhood of Sikotan Is.
266	25	e 4 36 00	-	i 36 15	i 36 14	-	-	-	0.07	0.10	4.5	0								
267	26	e 11 37 19	e 37 19	i 39 08	39 08	-	-	-	0.01	0.03	8.3	0								
268	31	e 7 15 00	-	15	27	e 15 25	-	-	0.01	0.02	3.8	0								
269	Sept. 2	i 9 18 09	e 18 09	i 19 56	i 19 54	-	-	-	0.05	0.05	8.3	0								NE off Etoroff Is.
270	3	14	-	-	-	-	-	-	0.00	-	-	-	-	-	-	-	0			
271	3	16	-	-	e 18 16	18 17	-	-	-	-	-	-	-	-	-	5.8	0			
272	3	e 19 53 47	e 53 48	i 55 03	55 03	-	-	-												

EARTHQUAKES, 1936.

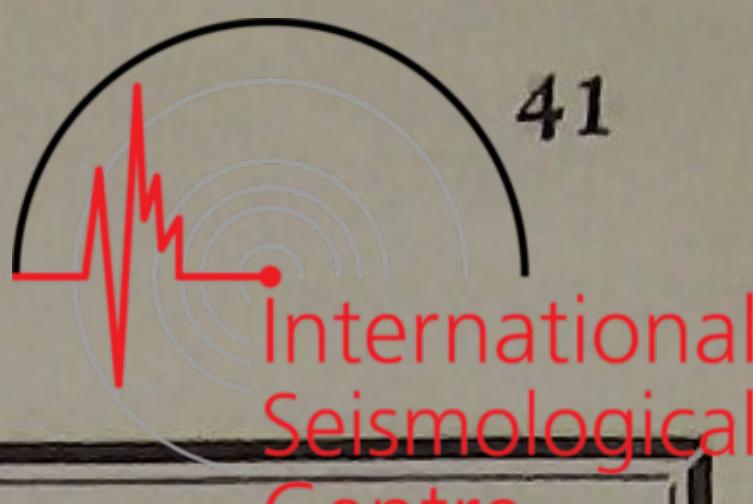


No.	Date 1936	P				S				L				Maximum Range of Motion		Duration of Total Earthquake	Intensity	Approximate Epicenter	
		E	W	N	S	E	W	N	S	E	W	N	S	E	W				
276	Sept. 4	h 16	m	s	-	m	s	m	s	m	s	m	s	mm	mm	m	2.7	0	
277		e 22	14	51	-	-	15	31	e 15	31	-	-	-	0.02	-	4.6	0		
278		i 22	48	48	e 48	47	i 49	03	49	03	-	-	-	0.03	0.03	3.0	0	Off Mouth of R. Omoto (Iwate)	
279		23	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
280		e 23	55	49	-	-	i 56	10	56	12	-	-	-	0.07	0.12	5.7	0	NE off Kuzi	
281	8	e 0	37	33	e 37	34	i 38	01	i 38	01	-	-	-	0.05	0.06	5.5	0	NE off Cape Siriya	
282	8	e 2	42	53	-	-	e 43	56	e 43	54	-	-	-	0.02	-	6.0	0		
283	12	7	-	-	-	-	e 03	28	-	-	-	-	-	0.00	-	1.9	0		
284	12	e 10	58	06	-	-	i 59	02	e 59	00	-	-	-	0.03	0.04	5.9	0	Kuzyukuri Coast	
285	14	e 0	23	32	e 23	30	i 23	51	i 23	51	-	-	-	0.17	0.19	6.1	0	E off the mouth of R. Ukedo	
286	14	e 1	22	12	-	-	e 22	33	-	-	-	-	-	0.01	-	2.5	0		
287	14	6	56	56	e 56	57	57	24	e 57	27	-	-	-	0.02	0.05	4.3	0	Neighbourhood of Ootose (Yamagata)	
288	14	? 9	21	56	? 21	55	e 22	10	e 22	09	-	-	-	-	-	3.1	0		
289	14	? 9	25	24	-	-	e 25	38	-	-	-	-	-	-	-	5.1	0		
290	15	3	-	-	? 58	03	-	-	-	-	-	-	-	-	-	2.2	0		
291	16	? 5	15	30	-	-	i 15	51	e 15	50	-	-	-	0.04	-	4.8	0		
292	16	e 10	31	29	-	-	i 31	52	e 31	49	-	-	-	0.01	-	4.3	0		
293	18	e 8	28	43	e 28	42	i 29	23	i 29	24	-	-	-	0.07	0.08	5.5	0	Neighbourhood of Urakawa	
294	18	e 18	40	28	e 40	29	i 41	52	41	52	-	-	-	0.06	0.15	33.2	0		
295	19	e 1	11	02	e 11	04	e 18	38	e 18	37	24	38	24	38	-	3.17	82.0	0	
296	20	i 6	05	12	e 05	11	i 05	26	i 05	25	-	-	-	0.21	0.23	4.8	0	Neighbourhood of Miyako	
297	22	5	-	-	? 56	42	-	-	-	-	-	-	-	-	-	2.0	0		
298	23	e 19	26	03	-	-	26	49	-	-	-	-	-	0.01	-	3.6	0		
299	23	e 19	37	18	-	-	37	57	-	-	-	-	-	0.01	-	4.7	0		
300	25	e 5	40	52	-	-	e 42	32	-	-	-	-	-	-	-	8.2	0		
301	25	e 6	48	30	-	-	i 49	20	-	-	-	-	-	0.02	-	7.2	0		
302	25	13	-	-	-	-	-	-	-	-	-	-	-	-	-	0			
303	26	6	-	-	e 39	45	-	-	-	-	-	-	-	0.01	-	2.6	0		
304	26	e 19	25	14	-	-	25	41	-	-	-	-	-	0.01	-	4.3	0		
305	27	e 13	03	04	e 03	06	i 03	38	e 03	37	-	-	-	0.06	0.09	7.0	0	Kasima-Nada	
306	28	e 21	07	22	-	-	07	55	-	-	-	-	-	0.01	-	3.3	0		
307	Oct. 1	e 3	45	06	-	-	i 45	46	-	-	-	-	-	0.04	-	6.5	0	Neighbourhood of Torite (Ibaragi)	
308		4	38	56	-	-	i 39	13	-	-	-	-	-	0.02	-	3.2	0		
309		16	54	01	-	-	54	12	-	-	-	-	-	0.01	-	2.2	0		
310		i 5	29	29	i 29	29	29	39	29	42	-	-	-	0.51	0.45	5.4	2	Oozuti Bay	
311	5	e 7	12	35	-	-	13	35	-	-	-	-	-	0.00	-	6.3	0		
312	5	i 9	51	57	i 51	56	i 57	57	i 57	56	-	-	-	0.08	0.10	35.1	0		
313	5	e 20	21	41	-	-	22	21	-	-	-	-	-	0.01	-	3.8	0		
314	7	4	-	-	e 21	46	-	-	-	-	-	-	-	-	-	3.7	0		
315	8	e 19	28	35	-	-	29	08	-	-	-	-	-	0.01	-	3.4	0		
316	8	e 20	29	03	-	-	29	55	-	-	-	-	-	0.01	-	4.6	0		
317	9	e 1	16	59	-	-	17	32	-	-	-	-	-	-	-	3.0	0		
318	9	e 17	59	23	-	-	i 59	49	-	-	-	-	-	0.02	-	3.5	0		
319	10	e 3	25	27	-	-	25	43	-	-	-	-	-	0.01	-	3.0	0		
320	10	e 17	14	14	-	-	i 14	37	-	-	-	-	-	0.01	-	1.9	0		
321	11	e 17	17	18	-	-	17	37	-	-	-	-	-	0.01	-	1.7	0		
322	12	5	-	-	? 37	56	-	-	-	-	-	-	-	0.01	-	1.4	0		
323	12	11	-	-	? 06	42	-	-	-	-	-	-	-	-	-	1.4	0		
324	13	e 6	38	58	-	-	e 40	01	-	-	-	-	-	0.01	-	4.7	0		
325	15	15	-	-	e 47	12	-	-	-	-	-	-	-	0.01	-	2.0	0		
326	16	e 19	48	58	-	-	i 49	34	-	-	-	-	-	0.02	-	5.9	0		
327	17	8	-	-	e 52	53	-	-	-	-	-	-	-	-	-	1.5	0		
328	17	12	-	-	e 07	19	-	-	-	-	-	-	-	0.01	-	3.2	0		
329	18	i 0	48	21	-	-	i 48	37	-	-	-	-	-	0.04	-	4.7	0	Off the mouth of R. Abukuma	
330	18	e 16	26	11	-	-	26	52	-										

EARTHQUAKES, 1936.



No.	Date 1936	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	
331	Oct. 19	h 12 12 25	m 12 26	i 18 54	e 18 51	m 18 54	e 18 51	m 26	s 23	m 18 54	e 18 51	m 26	s 23	m 0.04	mm 0.04	m 33.3	0	Off the mouth of R. Kuzuryu (Hukui) (deep)
332		i 19 57 21	i 57 21	58 25	58 25	58 25	58 25	26 03	26 03	58 23	58 23	—	—	0.03	0.03	6.9	0	
333		14 25 00	—	—	—	—	—	—	—	—	—	—	—	0.02	0.02	6.8	0	
334		10	—	—	—	? 49	48	—	—	—	—	—	—	0.01	0.01	1.4	0	
335		12	—	—	—	? 23	36	—	—	—	—	—	—	0.01	0.01	1.9	0	
336	22	12	—	—	—	? 02	29	—	—	—	—	—	—	—	—	1.6	0	
337	22	15	—	—	—	? 59	33	—	—	—	—	—	—	0.01	0.01	0.9	0	
338	23	e 6 32 48	—	—	—	e 40	08	—	—	—	—	—	—	—	—	43.8	0	
339	24	4	—	—	—	? 41	32	—	—	—	—	—	—	—	—	1.7	0	
340	24	8	—	—	—	e 10	01	—	—	—	—	—	—	—	—	2.0	0	
341	24	e 16 04 38	—	—	—	06	01	e 06	02	—	—	—	—	0.02	0.02	10.5	0	
342	25	e 5 00 16	—	—	—	e 01	19	—	—	—	—	—	—	0.01	0.01	7.3	0	
343	25	9	—	—	—	e 51	04	—	—	—	—	—	—	0.01	0.01	2.0	0	
344	25	11	—	—	—	e 21	18	—	—	—	—	—	—	0.01	0.01	2.0	0	
345	25	15 31 35	e 31	34	32	24	i 32	23	—	—	—	—	—	0.29	0.30	11.0	0	SSE off Cape Nozima
346	26	e 5 51 26	—	—	—	52	18	—	—	—	—	—	—	0.00	0.00	4.3	0	
347	26	i 9 35 05	e 35	05	i 36	15	i 36	12	—	—	—	—	—	0.18	0.20	7.4	0	
348	26	22	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	0	
349	27	? 3 52 10	—	—	—	52	41	—	—	—	—	—	—	0.03	0.03	4.6	0	
350	27	? 5 58 43	—	—	i 60	22	—	—	—	—	—	—	—	0.03	0.03	5.4	0	
351	28	23	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	0	
352	29	i 16 48 03	i 48	05	48	24	48	26	—	—	—	—	—	0.02	0.02	2.1	0	
353	29	e 18 44 24	e 44	20	e 48	50	e 48	43	—	—	—	—	—	—	—	52.4	0	
354	30	e 6 30 42	—	—	e 31	27	e 31	28	—	—	—	—	—	0.00	0.00	2.8	0	
355	30	e 13 28 13	—	—	i 29	19	i 29	18	—	—	—	—	—	0.04	0.03	4.4	0	
356	Nov. 31	e 6 11 18	—	—	11	38	—	—	—	—	—	—	—	0.00	0.00	1.9	0	
357		e 17 53 29	—	—	54	33	—	—	—	—	—	—	—	0.01	0.01	5.7	0	
358		e 15 00 44	e 00	44	i 02	56	02	56	—	—	—	—	—	0.12	0.12	29.6	0	
359		i 20 46 16	i 46	16	⊕	⊕	⊕	⊕	—	—	—	—	—	⊕	⊕	56.0	4	Okhotsk sea
360		i 22 43 57	43	56	i 44	13	44	16	—	—	—	—	—	0.15	0.15	6.5	0	E off Kinkazan
361	3	0	—	—	e 29	56	—	—	—	—	—	—	—	0.01	0.01	1.4	0	
362	3	1	—	—	e 18	54	—	—	—	—	—	—	—	0.00	0.00	2.3	0	
363	3	e 4 48 13	e 48	13	e 51	56	e 51	56	—	—	—	—	—	—	—	17.4	0	
364	3	e 12 02 28	—	—	02	59	—	—	—	—	—	—	—	0.04	0.04	3.4	0	
365	3	e 12 26 12	—	—	26	37	—	—	—	—	—	—	—	—	—	2.1	0	
366	3	22	—	—	e 19	48	—	—	—	—	—	—	—	0.02	0.02	2.0	0	
367	5	? 7 40 43	? 40	43	—	—	? 42	57	—	—	—	—	—	0.01	0.01	10.7	0	
368	6	e 3 00 53	—	—	01	32	—	—	—	—	—	—	—	—	—	3.6	0	
369	6	e 23 56 25	e 56	26	i 57	05	57	07	—	—	—	—	—	0.04	0.04	5.6	0	
370	7	i 5 27 44	e 27	43	28	04	28	05	—	—	—	—	—	0.07	0.07	7.0	0	NE off Kinkazan
371	7	? 8 44 44	—	—	e 45	20	—	—	—	—	—	—	—	0.01	0.01	5.0	0	
372	8	e 6 33 53	e 33	49	34	23	34	23	—	—	—	—	—	0.04	0.10	6.1	0	
373	8	e 9 20 25	—	—	21	06	21	05	—	—	—	—	—	0.07	0.10	6.5	0	Kasima-Nada
374	10	i 15 17 33	i 17	32	i 17	48	i 17	48	—	—	—	—	—	0.10	0.18	7.3	1	E off Kinkazan
375	11	9 48 54	e 48	54	49	17	49	16	—	—	—	—	—	0.03	0.05	5.0	0	S off Kinkazan
376	11	11	—	—	? 26	26	—	—	—	—	—	—	—	—	—	1.5	0	
377	11	11	—	—	? 46	58	—	—	—	—	—	—	—	—	—	5.3	0	
378	12	i 2 20 40	20	39	i 24	42	24	44	—	—	—	—	—	0.01	0.01	14.0	0	
379	12	i 20 06 43	i 06	44	i 08	09	i 08	10	—	—	—	—	—	0.15	0.10	13.7	0	
380	13	12 36 27																



EARTHQUAKES, 1936.

No.	Date 1936	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		
386	Nov. 15	h 13 02 02	m 02 03	e 02 03	s 02 41	m 02 39	s 02 39	m - -	s - -	m - -	s - -	m - -	s - -	mm 0.03	mm 0.05	m 4.9	0	Off Kinkazan	
387		e 22 26 11	e 26 09	e 30 37	e 30 32	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.05	0.08	16.9	0		
388		i 3 22 59	e 22 58	i 23 13	i 23 13	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	0.08	3.9	0		
389		3	- -	e 27 02	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	2.6	0		
390		i 15 51 08	e 51 07	i 51 24	i 51 23	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.03	0.05	4.0	0	SSE off Kinkazan	
391	17	e 5 28 27	- -	e 28 50	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.3	0	E off Kinkazan	
392	17	i 19 54 07	i 54 07	i 54 21	i 54 20	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.20	0.28	7.0	2		
393	19	e 13 11 43	e 11 41	i 12 04	i 12 05	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.03	0.05	4.6	0		
394	19	e 13 58 02	e 58 03	i 58 53	i 58 51	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.04	0.06	6.6	0		
395	19	e 17 45 43	- -	46 07	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.02	-	2.8	0		
396	20	12	- -	? 41 43	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	1.8	0	SE off Kinkazan	
397	20	19	- -	e 52 30	e 52 29	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.00	-	2.9	0		
398	21	i 21 48 25	i 48 27	⊕	i 48 43	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	⊕	0.18	17.1	2		
399	25	10	- -	? 56 49	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	3.3	0		
400	25	11 45 24	45 24	46 43	46 41	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.05	0.06	9.2	0	ESE off Cape Nasyappu	
401	26	i 15 18 58	e 18 56	i 19 12	i 19 13	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.02	0.04	3.5	0	Off Kinkwazan	
402	26	15	- -	? 43 16	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.4	0	ENE off Miyako	
403	27	17	- -	? 04 27	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	2.0	0		
404	28	23 20 02	e 20 02	i 20 30	i 20 29	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.07	0.12	6.7	0		
405	29	0	i 16 16	- -	? 16 23	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.03	-	1.5	0		
406	29	e 1 21 46	- -	e 22 24	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	3.3	0	S off Kinkwzan ^v _a	
407	29	? 22 55 07	- -	e 55 48	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	5.0	0		
408	30	i 2 34 55	i 34 55	i 35 25	i 35 25	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.07	0.09	5.6	0		
409	30	6	- -	e 31 39	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	1.5	0		
410	30	e 10 56 26	- -	e 56 46	e 56 46	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.03	-	3.0	0		
411	30	e 16 18 19	- -	i 19 06	e 19 07	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.02	0.03	4.8	0	NW off Amami-Oshima NW off Yakushima (deep)	
412	30	18	- -	e 02 10	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.4	0		
413	30	i 23 53 51	i 53 51	i 60 15	i 60 15	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.02	0.05	19.6	0		
414	Dec. 1	i 6 12 14	i 12 13	i 14 33	i 14 31	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.17	0.10	5.7	0		
415	3	? 7 15 47	- -	? 16 29	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	4.4	0		
416	3	e 19 24 27	e 24 26	e 24 55	e 24 57	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.02	0.03	5.6	0	E off Cape Erimo	
417	4	e 4 06 15	- -	i 06 37	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.6	0		
418	4	e 13 33 03	- -	33 44	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.6	0		
419	4	e 23 50 50	- -	51 41	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.7	0		
420	8	4	- -	? 45 31	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.2	0		
421	8	e 12 49 10	- -	49 53	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	3.0	0		
422	9	e 18 53 34	e 53 34	i 53 56	i 53 56	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.03	0.05	4.7	0		
423	10	e 13 27 01	e 27 05	i 27 54	i 27 52	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.03	0.04	7.5	0		
424	10	16	- -	e 03 34	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.1	0		
425	13	e 21 36 24	36 23	e 41 01	40 45	- - -	- - -	- - -	- - -	44 11	- -	- - -	- - -	0.07	-	33.5	0		
426	17	12	- -	e 43 08	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	2.6	0		
427	18	? 19 06 14	- -	? 06 26	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	3.9	0		
428	20	8	- -	e 26 50	e 26 51	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	1.9	0		
429	21	20	- -	e 23 46	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	1.4	0		
430	23	6	- -	e 19 17	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	-	-	1.9	0		
431	23	8	- -	e 55 01	- -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	0.01	-	2.0	0	Off Cape Sioya	
432	23	e 12 15 42	- -	i 16 44	- -	- - -													

EARTHQUAKES, 1936.



No.	Date 1936	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			
441	Dec. 27	h m s	m s	m s	e 12 33 12	e 34 17	e 34 15	m s	m s	m s	m s	mm	mm	m	5.9	0	After Shock of No. 438	
442	27	e 13 45 43	e 45 42	e 47 00	e 46 56	e 46 56	e 46 56	- -	- -	- -	- -	0.01	-	9.3	0	"	"	
443	28	e 14 02 59	e 03 02	i 04 10	i 04 10	i 04 10	i 04 10	- -	- -	- -	- -	0.07	0.07	6.8	0	Off Sikotan Is.		
444	28	e 17 21 13	e 21 14	e 22 23	e 22 22	e 22 22	e 22 22	- -	- -	- -	- -	0.04	0.07	14.3	0	After shock of No. 438		
445	29	e 8 29 00	- -	e 29 23	- -	- -	- -	- -	- -	- -	- -	0.01	-	3.6	0	Off Cape Sioya		
446	29	e 14 25 59	- -	? 26 27	- -	- -	- -	- -	- -	0.01	-	-	-	3.6	0			
447	29	e 14 55 51	e 55 53	e 56 55	e 56 53	e 56 53	e 56 53	- -	- -	- -	- -	0.02	-	20.8	0			
448	30	4	- -	e 12 00	- -	- -	- -	- -	- -	- -	- -	-	-	4.0	0			

CHIEF EARTHQUAKES OBSERVED WITH NASU'S SEISMOGRAPH, 1936.

Instrument; Nasu's seismograph with three components.

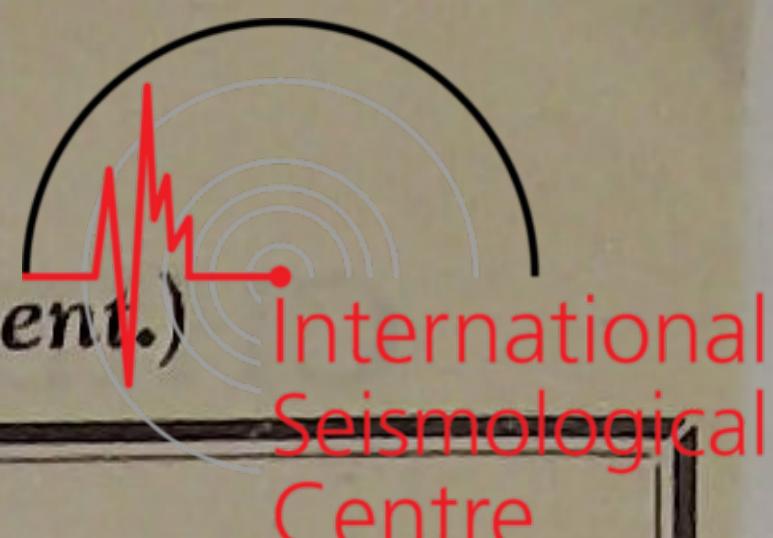
Remarks:

Component	V	T ₀	γ/T_0^2	Mass
E-W	25	6.1	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. \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	E-W	N-S	
10	Jan. 8	22 20 55	21 07	- 40	- 52	μ	μ	μ	μ	μ	μ	Isinomaki Bay
26	29	18 28 02	28 23	- 130	+ 190	\times	\times	\times	\times	\times	\times	SE off Cape Siriya
45	Feb. 21	1 09 41	11 23	+ 124	- 140	+ 60	\times	\times	\times	\times	\times	Kawati (Yamato)
56	Mar. 1	10 24 05	25 48	+ 130	+ 100	+ 52	\times	\times	\times	\times	\times	N off Cape Siretoko (deep)
58	2	3 20 01	20 41	>2900	+ 1550	- 528	- 24	- 26	+ 28			SE off Cape Erimo
72	11	0 44 25	44 49	- 1280	- 2640	- 500	- 84	- 20	+ 84			E off Miyako
73	11	1 50 41	51 06	+ 60	+ 100	+ 40	\times	\times	\times			E off Miyako
108	Apr. 15	19 19 23	19 50	- 140	+ 268	+ 142	\times	\times	\times			E off Cape Siriya
166	June 3	2 56 18	56 49	+ 900	- 708	+ 544	\times	\times	\times			E off Cape Siriya
172	8	6 27 01	27 12	- 214	- 160	- 74	+ 16	- 28	- 40			Sizugawa Bay
195	July 27	21 14 57	16 02	- 98	- 222	- 70	\times	\times	\times			Off Cape Otiisi
226	15	1 55 38	56 10	+ 200	+ 468	- 60	\times	\times	\times			Kasima-Nada
230	18	15 49 06	49 27	+ 104	+ 120	- 64	\times	\times	\times			Off Iwaki
262	Aug. 22	6 56 49	61 04	+ 244	- 170	+ 120	- 40	- 44	- 44			Off Daito
285	Sept. 14	0 23 32	23 50	+ 80	- 100	+ 64	\times	\times	\times			E off the mouth R. Ukedo
296	Oct. 20	6 05 11	05 24	- 98	+ 112	+ 86	\times	\times	\times			Neighbourhood of Miyako
310	5	5 29 29	29 40	- 240	- 220	- 184	+ 42	+ 32	- 48			Ozuti Bay (Iwate)
312	5	9 51 56	57 53	- 80	+ 86	+ 48	- 20	- 41	- 48			Distance
345	25	15 31 34	32 29	- 242	+ 204	+ 68	\times	\times	\times			SSE off Cape Nozima
359	Nov. 2	20 46 16	\oplus	>4000	>3600	>4200	+ 280	- 320	- 308			E off Kinkwazan
374	10	15 17 32	17 48	- 118	- 100	+ 40	\times	\times	\times			S off Kinkwazan
378	12	2 20 41	24 42	+ 138	- 54	+ 14	\times	\times	\times			Mariana Is.
379	12	20 06 43	08 10	- 122	+ 138	- 60	\times	\times	\times			Neighbourhood of Etoroff Is.
392	17	19 54 07	54 20	+ 132	+ 138	+ 72	+ 20	- 26	- 48			E off Kinkwazan
398	21	21 48 25	48 42	- 870	- 774	- 218	+ 38	- 60	- 44			SE off Kinkwazan
435	Dec. 23	22 56 17	56 42	+ 74	- 74	- 60	\times	\times	\times			Off Cape Sioya
438	27	0 15 59	16 58	- 470	- 452	+ 78	\times	\times	\times			Niisima

PULSATORY OSCILLATIONS, 1936 (EW Component.)



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