

ANNUAL REPORT
OF THE
METEOROLOGICAL
AND THE
SEISMOLOGICAL OBSERVATIONS
MADE AT THE
INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA
FOR
THE YEAR 1938.

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.

1939.

ERRATA

SEISMOLOGICAL OBSERVATIONS (1938)

Page	No	Item	Error	Correction
34	33	S (EW)	e52	i52
34	38	" "	25	26
34	39	" "	26	29
35	91	P (EW)	22	20
36	127	Intensity	0	2
36	140	S (EW)	e56	i56
36	155	Intensity	0	4
37	207	S (EW)	?28	i28
38	221	Date	33	30
38	236	S (EW)	26	56
39	313	Duration of...	24	34
40	354	" "	28	58
40	354	Intensity	0	3
40	366	P (EW)	70	00
41	391	P (NS)	05	04
41	423	S (EW)	09 05	05 09
43	505	P (EW)	14	15
43	509	S (EW)	i23	e23
43	510	" "	53	i53
44	550	S (EW)	i16	e16
44	571	S (NS)	i31	e31
45	602	Intensity	0	1
45	604	Max. Range of...	+125	-125
45	604	Intensity	0	1
45	605	" "	0	1
45	647	S (EW)	i33	e33
46	673	S (EW)	35	33
58	1334	S (EW)	51	50
59	1391	P (EW)	11	16

SEISMOLOGICAL OBSERVATIONS

Remarks :—

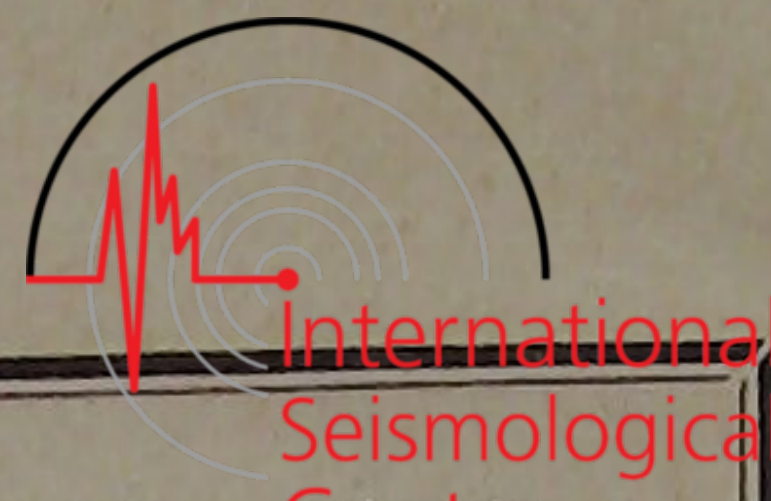
1. The intensities of the earthquakes are divided into the following seven classes according to the Central Meteorological Observatory of Japan.

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, 1938.



No.	Date 1938	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	m	s		
1	Jan. 1	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0				
2	1	7	-	-	e38	05	e38	00	-	-	-	-	-	-	4	33	0				
3	1	15	-	-	e32	56	-	-	-	-	-	-	-	-	1	06	0				
4	1	20	-	-	e07	32	-	-	-	-	-	-	-	-	2	23	0				
5	1	23 31 14	31	11	i33	32	e33	29	?34	06	?34	05	+27	+30	35	09	0	SW off Titizima			
	2	23	-	-	e59	22	-	-	-	-	-	-	-	-	1	17	0				
6	3	0	-	-	01	42	-	-	-	-	-	-	-	-	3	11	0				
7	3	12 42 05	-	-	i42	19	-	-	-	-	-	-	-	-	1	58	0				
8	4	e18 58 38	-	-	i58	50	-	-	-	-	-	-	-	-	2	06	0				
9	5	0	-	-	e05	03	-	-	-	-	-	-	-	-	3	47	0				
10	5	2	-	-	e40	44	-	-	-	-	-	-	-	-	2	41	0				
11	9	2	-	-	31	46	-	-	-	-	-	-	-	-	1	12	0				
12	9	e15 35 58	-	-	e36	20	-	-	-	-	-	-	-	-	2	42	0				
13	9	20	-	-	?47	20	-	-	-	-	-	-	-	-	0	58	0				
14	10	e20 57 29	e57	23	?60	05	?59	52	?61	55	?61	39	-7	-	19	05	0	SE off Yakusima			
15	11	i15 13 47	i13	47	15	26	15	26	-	-	-	-	-449	-658	36	42	0	Off Tanabe Bay			
16	12	e13 44 39	-	-	44	57	-	-	-	-	-	-	-	-	2	33	0				
17	13	e4 21 03	*		e21	33	*		-	-	-	-	-5	-	3	51	0				
18	13	e4 39 14	*		39	37	*		-	-	-	-	-6	-	2	31	0				
19	13	e4 45 51	-	-	e46	23	-	-	-	-	-	-	-	-	1	56	0				
20	13	18	-	-	e58	50	-	-	-	-	-	-	-	-	2	15	0				
21	16	8 55 17	55	17	i55	27	55	27	-	-	-	-	-	-	1	20	0				
22	17	? 0 02 31	-	-	?02	43	-	-	-	-	-	-	-	-	1	42	0				
23	17	7 24 16	24	14	i24	37	i24	37	-	-	-	-	+85	-73	7	17	0	Off the mouth of R. Ukedo			
24	18	e 0 56 24	-	-	i57	00	-	-	-	-	-	-	-	-	2	25	0				
25	18	4 29 37	29	36	37	22	37	23	-	-	-	-	-	-	17	52	0				
26	20	3 - -	-	-	04	38	-	-	-	-	-	-	-	-	0	45	0				
27	20	?20 59 02	-	-	?59	13	59	13	-	-	-	-	-	-	1	35	0				
28	21	?12 32 37	-	-	?32	42	-	-	-	-	-	-	-	-	0	48	0				
29	23	e 8 42 33	e42	33	-	-	?46	49	-	-	?50	10	-	-	22	17	0				
30	23	e23 47 40	-	-	48	05	-	-	-	-	-	-	-	-	2	10	0				
31	24	e 6 14 47	-	-	15	16	e15	16	-	-	-	-	+5	-	2	35	0				
32	24	e10 51 58	e51	46	e56	08	e55	58	-	-	60	02	-	-	97	30	0				
33	24	e22 52 36	-	-	e52	53	e52	53	-	-	-	-	±1.0	-	3	30	0				
34	25	e 4 18 30	e18	28	i18	54	i18	51	-	-	-	-	-23	+43	4	30	0	NNE off Cape Sioya			
35	30	11	-	-	e05	36	-	-	-	-	-	-	-	-	1	16	0				
36	Feb. 1	e19 12 29	e12	28	i19	07	i19	03	23	43	-	-	-768	⊕	44	00	0	SW off New Guinea			
37	1	e19 58 00	57	58	64	29	?64	32	-	-	?71	44	+68	-113	91	11	0	E off "Cape Erimo"			
38	2	e 1 41 34	-	-	i42	25	42	25	-	-	-	-	+9	-	3	34	0				
39	2	2	-	-	e20	26	-	-	-	-	-	-	-	-	2	39	0				
40	2	e 4 32 08	e32	09	i33	22	i33	24	-	-	-	-	+62	+85	6	10	0	N off Kunasirizima			
41	2	19 25 07	-	-	26	34	e26	32	-	-	-	-	-6	-	6	19	0	Off Etoroff			
42	3	e 0 51 01	-	-	51	40	-	-	-	-	-	-	+18	-	3	26	0				
43	5	10	-	-	?01	32	?01	33	-	-	-	-	-	-	3	36	0				
44	6	7 49 52	e49	52	51	30	e51	31	-	-	-	-	-5	-	5	37	0	S off Hatizyozima			
45	6	16	-	-	e43	14	-	-	-	-	-	-	-	-	1	20	0				
46	6	18 19 19	e19	21	19	48	19	46	-	-	-	-	-18	+28	4	20	0				
47	6	20 24 09	-	-	24	45	-	-	-	-	-	-	-	-	2	39	0				
48	7	10	-	-	56	04	-	-	-	-	-	-	-	-	1	12	0				
49	7	i14 43 53	i43	53	i44	29	i44	31	-	-	-	-	+663	+1210	29	00	2	Near Honzyo (Saitama)			
50	8	e13 02 51	-	-	03	22	-	-	-	-	-	-	-	-	4	21	0				
51	9	e23 39 30	-	-	40	18	-	-	-	-	-	-	-4	-	6	01	0				
52	10	1	-	-	e55	50	-	-	-	-	-	-	-	-	3	21	0				
53	10	e 2 21 03	-	-	22	14	-	-	-	-	-	-	-	-	4	43	0				
54	10	2 32 03	-	-	32	54	-	-	-	-	-	-	-	-	4	14	0				
55	10	e 5 52 41	-	-	e53	30	-	-	-	-	-	-	-	-	4	11	0				

EARTHQUAKES, 1938.



No.	Date 1938	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. 10	e 18	50	41	-	-	? 53	01	-	-	-	-	-	-	-	-	-	5	26	0	S off Cape Nasiappu		
57	11	e 6	57	54	57	55	58	56	i 58	55	-	-	-	-	-	-	-	+35	-60	18		05	0
58	11	e 7	23	13	-	-	24	13	-	-	-	-	-	-	-	-	-	-	-	3	34	0	ENE off Cape Sioya
59	12	e 0	05	49	-	-	06	25	-	-	-	-	-	-	-	-	-	-	-	3	06	0	
60	12	i 20	01	52	01	52	i 02	16	i 02	16	-	-	-	-	-	-	-	-67	-150	7	34	0	
61	14	e 3	04	47	-	-	05	09	-	-	-	-	-	-	-	-	-	-10	-	3	13	0	
62	14	19	-	-	-	-	? 34	11	-	-	-	-	-	-	-	-	-	-	-	3	22	0	
63	16	3	-	-	-	-	? 56	16	-	-	-	-	-	-	-	-	-	-	-	0	48	0	
64	16	14	-	-	-	-	? 10	27	-	-	-	-	-	-	-	-	-	-	-	0	37	0	
65	16	e 18	54	01	-	-	54	34	-	-	-	-	-	-	-	-	-	-	-	2	45	0	
66	17	7	-	-	e 29	21	29	49	29	51	-	-	-	-	-	-	-	-19	-40	4	28	0	
67	17	18	59	35	-	-	60	35	-	-	-	-	-	-	-	-	-	-	-	3	32	0	
68	18	e 16	51	44	-	-	52	23	52	23	-	-	-	-	-	-	-	-5	-	4	49	0	
69	21	4	-	-	-	-	e 09	58	-	-	-	-	-	-	-	-	-	-	-	1	28	0	
70	22	8	00	17	-	-	00	28	00	29	-	-	-	-	-	-	-	-	-	1	33	0	
71	23	3	38	34	-	-	e 39	36	e 39	34	-	-	-	-	-	-	-	-	-	4	20	0	S off Etoroff ENE off Cape Inubô
72	24	? 6	35	41	-	-	? 35	43	-	-	-	-	-	-	-	-	-	-	-	0	49	0	
73	25	i 1	41	25	i 41	24	41	28	41	28	-	-	-	-	-	-	-	-11	-	1	59	0	
74	27	e 1	31	10	e 31	07	i 32	26	32	25	-	-	-	-	-	-	-	+42	-50	7	35	0	
75	28	1	46	45	e 46	45	47	32	47	30	-	-	-	-	-	-	-	-45	-75	7	57	0	
76	28	e 3	54	48	*	-	55	29	*	-	-	-	-	-	-	-	-	-	-	2	33	0	
77	28	22	49	56	-	-	i 50	09	-	-	-	-	-	-	-	-	-	-	-	2	05	0	
78	Mar. 1	8	-	-	-	-	e 32	49	-	-	-	-	-	-	-	-	-	-	-	0	55	0	
79	1	e 14	38	01	-	-	38	21	38	23	-	-	-	-	-	-	-	+10	-	3	46	0	
80	2	14	-	-	-	-	e 21	55	-	-	-	-	-	-	-	-	-	-	-	1	16	0	
81	2	21	29	36	-	-	30	07	-	-	-	-	-	-	-	-	-	-9	-	4	01	0	Off Kuzi (Iwate)
82	2	21	36	00	e 35	59	36	18	36	18	-	-	-	-	-	-	-	-15	-40	4	21	0	
83	4	0	-	-	-	-	e 47	19	-	-	-	-	-	-	-	-	-	-	-	2	08	0	
84	4	11	-	-	-	-	e 11	22	-	-	-	-	-	-	-	-	-	-	-	1	36	0	
85	4	e 22	22	25	-	-	22	57	-	-	-	-	-	-	-	-	-	-	-	3	18	0	
86	5	11	-	-	-	-	e 40	12	-	-	-	-	-	-	-	-	-	-	-	2	11	0	
87	5	e 19	46	39	-	-	46	58	-	-	-	-	-	-	-	-	-	-	-	2	53	0	
88	8	e 5	43	39	e 43	37	-	-	? 50	21	-	-	-	-	-	-	-	-	-	35	39	0	
89	10	e 15	43	16	-	-	i 44	35	-	-	-	-	-	-	-	-	-	+11	-23	8	34	0	
90	13	e 9	30	16	e 30	14	i 30	56	30	54	-	-	-	-	-	-	-	+6	-	4	39	0	
91	16	22	03	50	-	-	04	03	-	-	-	-	-	-	-	-	-	-	-	3	00	0	N off Etoroff
92	18	i 2	10	50	e 10	49	i 12	19	12	22	-	-	-	-	-	-	-	+15	-	6	02	0	
93	20	e 22	36	40	-	-	36	54	-	-	-	-	-	-	-	-	-	-	-	2	04	0	
94	22	i 15	14	45	-	-	i 15	49	-	-	-	-	-	-	-	-	-	+8	-	6	02	0	
95	23	2	-	-	-	-	e 22	29	-	-	-	-	-	-	-	-	-	-	-	2	14	0	
96	27	18	-	-	-	-	e 56	04	-	-	-	-	-	-	-	-	-	-	-	1	20	0	
97	27	22	-	-	-	-	e 52	27	-	-	-	-	-	-	-	-	-	-	-	1	21	0	
98	28	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	0	
99	31	5	-	-	-	-	e 58	28	-	-	-	-	-	-	-	-	-	-	-	1	18	0	
100	31	e 19	46	40	e 46	41	47	25	47	25	-	-	-	-	-	-	-	+7	-	5	21	0	
101	Apr. 31	22	36	49	36	48	e 41	18	e 41	12	-	-	-	-	-	-	-	-	-	29	02	0	Near Etoroff
102	1	5	-	-	-	-	32	09	-	-	-	-	-	-	-	-	-	-	-	0	44	0	
103	1	? 21	36	53	? 36	51	-	-	? 41	37	-	-	-	-	-	-	-	-	-	19	49	0	
104	1	i 22	48	31	e 48	30	i 49	46	49	46	-	-	-	-	-	-	-	-5	-	4	43	0	
105	2	e 7	32	00	e 32	00	i 33	24	33	23	-	-	-	-	-	-	-	+33	+35	18	22	0	
106	2	7	-	-	-	-	e 50	55	e 50	54	-	-	-	-	-	-	-	-	-	2	28	0	Off Kinkwasan
107	4	21	-	-	-	-	? 17	00	? 17	01	-	-	-	-	-	-	-	+9	-	5	07	0	
108	4	e 22	33	32	e 33	31	33	49	33	48	-	-	-	-	-	-	-	-11	-	4	26	0	
109	5	7	27	29	27	28	27	43	27	42	-	-	-	-	-	-	-	-	-	2	26	0	
110	5	i 10	58	21	58	21	i 58	39	i 58	39	-	-	-	-	-	-	-	+15	-45	3	34	1	

EARTHQUAKES, 1938.



No.	Date 1938	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 7	h 3	m *	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	Off Miyako.
112	8	23					e58	50									3	57	0	
113	9	12					?09	26									2	08	0	
114	10	21					?31	01									1	41	0	
115	12	i11	22	22	22	21	i22	33	i22	34				±16	±33		1	24	0	
116	13	e 2	58	02	e58	06	i68	06	68	08							2	46	0	
117	14	e 1	24	17	e24	12	i30	31	i30	28							25	59	0	
118	15	e 0	06	06			i06	56						+12			35	33	0	
119	15	17	57	42	57	42	i58	07	i58	05				+45	-50		7	59	0	
120	17	21	03	41			04	30	e04	29				-5			5	23	0	
121	17	i23	02	17	02	18	i02	35	i02	35				-26			3	25	0	
122	19	e11	11	10	e11	17	e21	07	e21	06							3	45	0	
123	20	? 6	38	10	?38	14	?43	56	?44	09							51	42	0	
124	20	e23	56	35	e56	35	57	47	57	44				+19	-18		41	43	0	
125	23	e 0	31	12	e31	12	e35	41	e35	56							8	29	0	
126	24	15					e39	00									17	28	0	
127	25	i14	45	43	45	42	46	04	46	06				+265	-393		3	41	0	
128	25	15					e04	28									16	55	0	
129	25	22					e55	50									2	07	0	
130	26	e 4	15	20			i15	43	15	43				+12			2	19	0	
131	26	16					e16	02									3	45	0	
132	27	12					e36	38									2	03	0	
133	28	e 20	33	53			i34	34	34	37							3	30	0	
134	May 1	e22	22	51			23	14	e23	17							4	37	0	
135	2	6	47	46			i47	54	47	55				-10			3	49	0	
136	3	e19	18	17	e18	16	i20	01	20	01				+21	-28		2	32	0	
137	5	0	10	09			10	31						+5			10	11	0	
138	5	16															3	08	0	
139	6	0					58	00	e57	59							1	00	0	
140	6	e 5	56	21	e56	20	e56	43	e56	42				+10			3	07	0	
141	6	6					?05	43									4	32	0	
142	8	i14	48	22	e48	20	i54	37	i54	34				-7			10	11	0	
143	9	e10	47	00			47	49									3	15	0	
144	10	e14	02	34			03	04	e03	05							16	11	0	
145	11	i 3	10	18	i10	18	i10	41	i10	41				-200	-275		2	51	0	
146	11	3					36	39	e36	36				+6			4	00	0	
147	12	15	47	23	47	20	54	00	53	58				-48	-2960		10	12	0	
148	14	e10	51	28			51	47	e51	44							66	32	0	
149	14	12	10	36	10	38	?16	54	?16	34							1	27	0	
150	14	15															31	02	0	
151	15	15					e54	59									1	58	0	
152	15	19					e16	05									1	33	0	
153	19	17	16	51	16	50	23	17	23	16	29	09	29	15	-116	⊕	52	43	0	
154	20	? 2	52	44	?52	40	53	36	53	36				+11			5	19	0	
155	23	i 7	19	13	i19	13			⊕	⊕				⊕	⊕		51	15	0	
156	23	8					?27	43	?27	46				+20	-25		4	38	0	
157	23	9					?02	57	?03	02				-4			2	12	0	
158	23	e13	31	58			32	37	e32	40				+9			5	02	0	
159	23	17					?20	57									2	44	0	
160	23	21					?22	03									1	48	0	
161	24	e11	27	30			i28	11	e28	10				-15			5	36	0	
162	24	e20	19	00			i19	50						-4			5	28	0	
163	25	e14	50	05	e50	06	50	47	e50	51				-11			5	02	0	
164	25	e15	53	41			54	12									3	08	0	
165	25	20					e00	44									1	56	0	

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
166	May 25	e23	46	06	-	-	46	38	e46	38	-	-	-	-	-15	-	6	08	0		
167	26	e 8	33	40	-	-	i34	38	e34	37	-	-	-	-	-7	-	5	38	0		
168	26	e11	10	35	e10	36	e11	41	e11	38	-	-	-	-	-19	-	16	28	0		
169	27	e 0	18	10	-	-	18	46	e18	44	-	-	-	-	+6	-	4	27	0		
170	28	e 9	50	23	e50	22	50	58	50	58	-	-	-	-	-15	-25	7	19	0	Off Cape Sioya	
171	28	16	43	17	43	16	44	17	44	18	-	-	-	-354	-315	36	25	0	Near lake Kuttiaro		
172	29	e14	53	39	-	-	54	12	e54	14	-	-	-	-	-	4	19	0			
173	30	e14	40	24	e40	20	49	01	49	02	-	-	58	47	-	-	64	19	0	New Caledonia I.	
174	30	17	-	-	-	-	e05	12	-	-	-	-	-	-	-	1	30	0			
175	31	e14	52	53	-	-	53	25	53	24	-	-	-	-	-	3	57	0			
176	31	e19	24	46	-	-	25	12	e25	11	-	-	-	-	-7	-	4	13	0		
177	June 1	11	59	09	e59	05	59	55	59	54	-	-	-	-	-12	-	7	18	0	ENE off Cape Inubô	
178	1	e13	43	07	-	-	e43	36	e43	36	-	-	-	-	-13	-25	5	39	0		
179	1	21	-	-	-	-	e32	23	-	-	-	-	-	-	-	1	57	0			
180	1	e21	59	37	-	-	e60	04	e60	01	-	-	-	-	-	2	12	0			
181	2	1	-	-	-	-	e20	42	-	-	-	-	-	-	-	2	05	0			
182	2	e15	28	45	-	-	29	23	e29	23	-	-	-	-	-	3	34	0			
183	3	0	28	58	28	57	29	32	29	32	-	-	-	-	+35	-	9	03	0	Kasima-nada	
184	3	1	-	-	-	-	e17	29	e17	28	-	-	-	-	-	1	26	0			
185	4	18	00	59	-	-	01	13	01	12	-	-	-	-	-	1	56	0			
186	5	10	11	33	e11	31	12	07	12	07	-	-	-	-	+30	-43	7	02	0	Kasima-nada	
187	5	e14	23	00	-	-	23	32	-	-	-	-	-	-	-	3	48	0			
188	5	i16	32	31	i32	29	i33	11	i33	09	-	-	-	-	-222	-398	16	19	0	Near Edosaki	
189	5	19	54	40	-	-	55	11	55	11	-	-	-	-	-	4	03	0			
190	5	e22	16	02	e16	00	i16	35	i16	35	-	-	-	-	+43	+68	9	58	0	ENE off Cape Inubô	
191	6	e 1	34	52	34	54	i35	11	i35	10	-	-	-	-	-11	-23	4	47	0	E off Kinkwasan	
192	7	e 6	46	28	e46	29	i46	38	i46	39	-	-	-	-	-	3	33	0			
193	9	19	23	20	23	18	29	26	29	33	-	-	37	21	-	-	47	14	0		
194	9	21	-	-	-	-	e04	36	-	-	-	-	-	-	-	2	13	0			
195	10	3	-	-	-	-	20	49	-	-	-	-	-	-	-	3	17	0			
196	10	9	58	09	58	06	i61	59	i61	48	?63	22	?63	13	-	+4260	76	12	0	NNW off Miyakozima	
197	12	1	14	25	14	23	i14	49	i14	49	-	-	-	-	+20	-48	4	54	0	E off Hatinohe	
198	12	i 7	48	28	i48	29	i48	41	i48	43	-	-	-	-	-48	-85	6	20	0	Cape Sioya	
199	12	e 8	24	15	e24	15	24	59	e24	59	-	-	-	-	-6	-	4	43	0	Near Okusirizima	
200	15	e 2	08	46	e08	45	i09	18	09	20	-	-	-	-	-18	-18	6	12	0		
201	16	i 2	18	49	i18	50	21	55	?21	59	?29	55	?29	54	+95	+648	79	14	0	S off Amamiosima	
202	18	0	43	58	43	57	i44	34	i44	35	-	-	-	-	-212	-360	14	56	0	Kasima-nada	
203	20	i 3	28	11	-	-	i28	33	28	33	-	-	-	-	+21	+45	4	18	0	Off Miyako	
204	20	23	59	14	59	18	-	-	66	10	-	-	-	-	-	-	59	30	0		
205	21	e 6	48	22	e48	20	e53	27	e53	29	-	-	-	-	-	-	21	34	0	SE far off Taito	
206	21	14	-	-	-	-	e34	50	-	-	-	-	-	-	-	-	3	30	0		
207	22	18	27	35	27	34	?28	07	28	09	-	-	-	-	+10	+18	6	23	0	Kasima-nada	
208	22	?23	16	19	?16	22	22	39	22	41	-	-	-	-	-	-	15	39	0		
209	23	13	06	05	06	01	14	46	14	47	-	-	-	-	-6	-30	53	00	0		
210	24	13	06	49	06	50	i07	21	i07	19	-	-	-	-	+35	+73	9	08	0	Kasima-nada	
211	24	e21	54	46	-	-	55	12	55	12	-	-	-	-	-	-	4	04	0		
212	24	22	-	-	-	-	e28	46	-	-	-	-	-	-	-	-	1	09	0		
213	26	16	-	-	-	-	?10	21	-	-	-	-	-	-	-	-	1	58	0		
214	27	i 9	28	22	i28	22	i28	48	i28	46	-	-	-	-	+37	+48	5	43	0	ENE off Miyako	
215	27	e11	39	53	-	-	40	13	-	-	-	-	-	-	-	-	3	33	0		
216	27	e13	47	28	-	-	47	48	-	-	-	-	-	-	-	-	2	00	0		
217	27	20	00	24	00	25	i01	26	i01	26	-	-	-	-	+33	+38	5	43	0	N th Part of Japan Sea	
218	29	6	30	18	30	19	i30	40	i30	41	-	-	-	-	-32	-	4	39	1	E off Cape Sioya	
219	29	i14	02	12	i02	12	i02	36	i02	38	-	-	-	-	+103	+275	9	53	2	SE off Cape Sioya	
220	29	e21	50	05	-	-	i50	19	50	21	-	-	-	-	+13	-	2	12	0	Itinohe (Iwate)	

EARTHQUAKES, 1938.



No.	Date 1938	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	June 33	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	Kasima-nada ENE'' off Kinkwasan		
222	July 1	e	9	32	55	e	32	53	33	23	33	23	-	-	-	-	1	59	0			
223	2	e	5	00	32	e	00	32	i	00	57	i	00	58	-	-	-	-	5		05	0
224	2	i	19	57	24	57	26	i	57	57	i	57	56	-	-	-	-	6	14		0	
225	2	20	?		?	i	02	01	e	02	01	-	-	-	-	-	-	6	49		0	
226	2	23			-	-	e	37	53	-	-	-	-	-	-	-	-	2	50	0		
227	3	13			-	-	e	55	39	-	-	-	-	-	-	-	-	2	19	0		
228	4	e	4	51	38	-	-	52	07	-	-	-	-	-	-	-	-	2	45	0		
229	4	15	53	33	e	53	32	i	54	05	54	05	-	-	-	-	-	4	32	0		
230	4	21			-	-	?23	47	-	-	-	-	-	-	-	-	-	2	24	0		
231	5	5	38	37	e	38	39	i	39	08	39	09	-	-	-	-	-	5	15	0		
232	5	10	57	50	e	57	52	i	58	21	58	21	-	-	-	-	-	4	59	0		
233	6	13	01	53	01	54	i	02	28	i	02	29	-	-	-	-	-	10	08	0		
234	6	13			-	-	e	48	56	-	-	-	-	-	-	-	-	3	20	0		
235	6	14	44	11	e	44	11	i	44	47	e	44	48	-	-	-	-	4	57	0		
236	7	17	31	55	31	54	34	26	34	59	-	-	-	-	-	-	-	17	12	0		
237	7	17	57	32	57	31	60	48	60	48	-	-	-	-	-	-	-	15	08	0		
238	8	e	18	21	06	-	-	21	36	-	-	-	-	-	-	-	-	4	35	0		
239	10	11	55	39	55	37	55	57	55	58	-	-	-	-	-	-	-	3	10	0		
240	12	5			-	-	-	-	-	-	-	-	-	-	-	-	-	1	54	0		
241	12	23			-	-	-	-	-	-	-	-	-	-	-	-	-	1	34	0		
242	13	e	0	59	30	-	-	60	08	e	60	06	-	-	-	-	-	6	11	0		
243	15	e	4	57	48	-	-	i	58	46	e	58	47	-	-	-	-	6	11	0		
244	15	e	7	33	03	e	33	06	e	36	41	e	36	38	-	-	-	12	55	0		
245	15	e	23	23	04	-	-	23	28	23	28	-	-	-	-	-	-	4	29	0		
246	16	1	05	54	-	-	06	23	e	06	20	-	-	-	-	-	-	3	49	0		
247	16	21	13	31	-	-	13	59	e	14	01	-	-	-	-	-	-	4	40	0		
248	16	e	21	32	36	-	-	33	12	e	33	10	-	-	-	-	-	4	18	0		
249	16	e	22	04	39	e	04	38	i	04	52	i	04	53	-	-	-	2	45	0		
250	18	e	9	20	13	e	20	14	i	20	43	i	20	43	-	-	-	7	25	0		
251	18	12			-	-	e	44	53	-	-	-	-	-	-	-	-	1	15	0		
252	19	9	00	44	00	44	i	02	49	02	51	-	-	-	-	-	-	7	41	0		
253	19	e	12	55	15	-	-	55	42	55	43	-	-	-	-	-	-	2	48	0		
254	20	11	53	36	53	34	57	12	57	13	-	-	-	-	-	-	-	10	15	0		
255	21	e	11	47	06	-	-	47	22	47	23	-	-	-	-	-	-	4	24	0		
256	23	4	15	19	-	-	17	13	-	-	-	-	-	-	-	-	-	4	23	0		
257	23	e	23	08	26	e	08	29	14	59	15	01	-	-	-	-	-	16	26	0		
258	24	19			-	-	-	-	-	-	-	-	-	-	-	-	-	0	52	0		
259	24	22			-	-	e	37	44	-	-	-	-	-	-	-	-	1	29	0		
260	24	e	23	03	04	-	-	03	30	-	-	-	-	-	-	-	-	4	15	0		
261	25	2			-	-	?30	33	-	-	-	-	-	-	-	-	-	2	57	0		
262	25	21	38	55	e	38	57	39	28	e	39	30	-	-	-	-	-	6	25	0		
263	27	e	7	29	44	e	29	47	30	11	30	11	-	-	-	-	-	4	29	0		
264	27	e	11	48	54	-	-	49	33	49	32	-	-	-	-	-	-	4	52	0		
265	28	?17	00	31	?00	22	04	00	?03	54	?06	42	?06	34	-	-	-	28	06	0		
266	28	5			-	-	e	13	49	-	-	-	-	-	-	-	-	2	37	0		
267	28	6			-	-	e	05	39	-	-	-	-	-	-	-	-	2	25	0		
268	28	e	8	19	59	e	19	59	21	58	21	59	-	-	-	-	-	7	32	0		
269	29	13	16	10	16	10	?23	52	?23	50	-	-	-	-	-	-	-	40	10	0		
270	30	e	14	16	41	e	16	39	i	17	16	i	17	17	-	-	-	6	02	0		
271	30	e	16	16	04	-	-	16	30	e	16	32	-	-	-	-	-	3	11	0		
272	31	9			-	-	e	30	59	e	30	57	-	-	-	-	-	2	38	0		
273	31	i	21	55	46	i	55	46	i	56	59	i	56	58	-	-	-	7	45	0		
274	Aug. 1	3	43	33	43	34	i	43	57	i	43	59	-	-	-	-	-	7	10	0		
275	1	12	19	24	e	19	19	19	39	19	38	-	-	-	-	-	-	3	18	0		

North part of Japan Sea
ENE off Cape Sioya.

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
276	Aug. 1	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0				
277	1	e19	24	24	e24	23	e03	18	-	-	-	-	-	-	3	15	0				
278	1	22	-	-	-	-	e35	37	-	-	-	-	-	-	4	29	0				
279	2	18	-	-	-	-	e28	00	-	-	-	-	-	-	3	51	0				
280	2	19	12	26	e12	27	i12	51	12	51	-	-	-19	-	4	46	0	ENE off Cape Sioya			
281	3	i 8	22	51	22	52	i23	14	i23	14	-	-	+91	+153	9	41	0	E off Cape Sioya			
282	3	11	48	44	e48	46	i49	11	e49	09	-	-	+10	-	5	54	0				
283	4	e 9	14	27	?14	40	-	-	-	-	-	-	-5	-	4	04	0				
284	4	i10	49	30	i49	30	i50	08	i50	07	-	-	-18	-	6	09	0	Near Mizukaido			
285	6	6	-	-	-	-	e44	42	e44	40	-	-	-	-	3	22	0				
286	6	11	-	-	-	-	e08	03	-	-	-	-	-	-	1	33	0				
287	6	e17	16	07	-	-	16	29	e16	29	-	-	-	-	3	35	0				
288	7	i11	01	54	e01	55	i02	24	i02	23	-	-	-20	-25	5	45	0	E off Miyako			
289	9	10	-	-	-	-	01	51	-	-	-	-	-	-	1	00	0				
290	10	i10	35	19	35	17	i36	04	i36	04	-	-	-45	-48	9	38	0	SE off Kusiro			
291	11	e22	32	53	e32	55	33	31	33	35	-	-	-10	+18	6	12	0	ESE off Cape Sioya			
292	12	e 8	13	40	e13	42	14	23	e14	23	-	-	-8	-	5	24	0				
293	13	i 6	58	52	e58	53	i59	29	i59	30	-	-	-21	+48	5	28	0	Near Yûki			
294	13	i15	20	29	e20	34	i20	56	e20	55	-	-	-15	-	4	02	0	Near Numazawa			
295	16	4	35	55	36	08	42	12	42	14	45	41	45	46	-	-235	46	12	marsh		
296	16	7	-	-	-	-	18	28	-	-	-	-	-	-	2	05	0				
297	16	e13	53	00	-	-	i53	55	e53	58	-	-	+15	-	4	24	0	Near Etoroff I.			
298	16	22	-	-	-	-	?40	00	-	-	-	-	-	-	3	35	0				
299	17	i 1	47	12	e47	07	i48	25	i48	25	-	-	+132	-140	10	09	0	ENE off Cape Otiisi			
300	17	e16	55	51	-	-	56	19	-	-	-	-	-	-	3	19	0				
301	18	i 9	39	35	39	33	i47	17	47	14	-	-	-	-	18	20	0				
302	18	e19	09	54	e09	50	e13	30	e13	27	-	-	-	-	15	51	0	Near Amamiosima			
303	18	22	13	55	13	54	14	25	14	25	-	-	-11	-	5	26	0	Near Mito city			
304	19	22	-	-	-	-	29	46	-	-	-	-	-	-	3	00	0				
305	20	e 8	38	49	e38	47	e44	53	e44	49	-	-	-	-	21	42	0				
306	20	22	26	18	e26	19	i26	59	26	55	-	-	+10	-	6	12	0				
307	22	e 5	37	52	-	-	38	19	-	-	-	-	-	-	2	51	0				
308	22	11	-	-	-	-	-	-	-	-	-	-	-	-	1	24	0				
309	24	16	57	08	-	-	57	38	e57	38	-	-	-5	-	4	50	0				
310	25	1	37	56	37	53	45	55	45	50	-	-	-	-	18	07	0				
311	25	13	13	42	-	-	14	06	-	-	-	-	+4	-	4	29	0				
312	29	e 9	35	09	-	-	35	37	35	39	-	-	+5	-	3	13	0				
313	29	e15	28	44	e28	50	e35	21	e35	20	-	-	-	-	24	45	0				
314	29	17	52	29	52	29	i53	26	e53	25	-	-	-17	+23	8	54	0	N off Tyôsi			
315	30	e 5	50	36	-	-	50	49	-	-	-	-	-6	-	2	40	0				
316	30	11	57	37	57	35	66	54	66	57	-	-	-5	-	31	33	0				
317	31	e 2	20	18	e20	19	i20	37	i20	38	-	-	-11	-	3	50	0				
318	31	17	52	50	52	47	?58	57	?58	44	-	-	-	-	20	13	0				
319	Sept. 1	e 5	15	42	-	-	16	04	-	-	-	-	-	-	3	39	0				
320	1	e10	56	59	-	-	e57	44	-	-	-	-	-5	-	5	30	0				
321	3	23	58	57	58	58	i59	25	i59	27	-	-	-66	-100	8	01	0	Kasima-nada			
322	4	7	-	-	-	-	51	43	-	-	-	-	-	-	2	54	0				
323	4	e20	24	57	e24	59	i26	21	e26	18	-	-	-11	-15	10	21	0	S off Etoroff I.			
324	4	e21	13	42	-	-	i15	00	e15	00	-	-	-5	-	6	46	0	" Etoroff I.			
325	6	20	47	44	e47	44	49	03	49	02	-	-	-36	-30	11	45	0	Near Etoroff I.			
326	7	e 4	08	12	e08	10	e12	15	e12	15	-	-	+13	+450	44	24	0	Kwarenko			
327	7	e13	06	04	-	-	e07	06	-	-	-	-	-	-	6	21	0				
328	9	11	53	28	-	-	53	50	e53	52	-	-	-	-	3	00	0				
329	9	e13	10	23	-	-	11	03	e11	04	-	-	-	-	4	03	0				
330	9	e18	32	06	-	-	32	37	-	-	-	-	-	-	3	08	0				

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
331	Sept. 11	i 17	20	32	i 20	31	i 20	50	i 20	48	-	-	-	-	-260	-600	20	21	0	ESE off Kamaisi	
332	11	e 18	17	33	-	-	18	12	-	-	-	-	-	-	-	-	3	56	0		
333	11	i 19	41	52	i 41	53	i 42	12	i 42	13	-	-	-	-212	+400	14	12	0	ESE off Kamaisi		
334	11	e 23	06	37	-	-	07	04	e 07	00	-	-	-	-	-	-	3	56	0		
335	12	3	47	46	e 47	47	i 48	10	i 48	10	-	-	-	+67	+120	6	35	0	ENE off Miyako		
336	12	5	24	55	e 24	54	i 25	28	i 25	30	-	-	-	+39	+70	8	09	0	Kashima-nada		
337	12	e 5	48	50	-	-	49	12	49	12	-	-	-	-	-	-	3	52	0		
338	13	e 4	01	41	-	-	i 02	22	02	22	-	-	-	-7	-	-	4	23	0		
339	14	i 3	13	23	e 13	23	i 13	49	i 13	50	-	-	-	+77	+85	7	42	0	SE off Miyako		
340	14	8	17	37	e 17	39	i 18	30	18	30	-	-	-	-10	-	-	5	16	0		
341	14	i 13	19	00	e 19	01	i 19	24	i 19	26	-	-	-	+43	-45	6	02	0	E off Miyako		
342	14	e 21	07	08	-	-	07	44	-	-	-	-	-	-5	-	-	3	40	0		
343	17	11	-	-	-	-	?16	42	-	-	-	-	-	-	-	-	2	13	0		
344	17	20	-	-	-	-	?43	17	-	-	-	-	-	-	-	-	1	55	0		
345	17	e 22	50	26	-	-	50	52	e 50	52	-	-	-	+6	-	-	4	38	0		
346	18	1	32	02	32	03	i 33	37	i 33	37	-	-	-	-20	-25	6	43	0	N off Etoroff I.		
347	19	18	52	07	-	-	i 53	22	53	24	-	-	-	-14	-	8	35	0	ESE off Otiisi		
348	20	i 1	21	37	21	37	i 21	50	i 21	51	-	-	-	-24	-	3	54	0	Off Kinkwasan		
349	20	10	-	-	-	-	52	27	-	-	-	-	-	-	-	2	30	0			
350	20	e 22	49	12	-	-	49	29	-	-	-	-	-	-	-	1	50	0			
351	21	e 7	50	42	-	-	52	48	-	-	-	-	-	-	-	5	48	0	Off Titizima		
352	21	11	38	52	e 38	50	i 40	55	i 40	56	-	-	-	+40	+45	9	27	0			
353	21	e 12	18	46	-	-	19	40	-	-	-	-	-	-	-	5	31	0	Kashima-nada		
354	21	18	52	45	52	45	i 53	21	i 53	20	-	-	-	⊕	+1883	28	54	0			
355	22	e 8	36	34	e 36	33	36	54	36	56	-	-	-	-	-	2	02	0			
356	22	i 19	35	45	35	45	i 36	00	36	01	-	-	-	-	-	3	29	0	WSW off Urakawa		
357	24	e 21	18	51	e 18	49	i 19	26	i 19	26	-	-	-	+16	+20	5	10	0			
358	25	4	53	38	-	-	i 54	01	54	03	-	-	-	-	-	4	55	0	Off Cape Nasyappu		
359	25	e 16	35	19	-	-	i 37	10	e 37	09	-	-	-	-5	-	6	45	0			
360	26	e 2	53	16	-	-	53	54	-	-	-	-	-	-	-	3	04	0			
361	27	?10	24	10	?24	08	-	-	-	-	-	-	-	-	-	18	42	0			
362	27	18	-	-	-	-	e 09	55	-	-	-	-	-	-	-	2	04	0			
363	28	2	-	-	-	-	e 17	36	-	-	-	-	-	-	-	1	48	0			
364	28	21	34	33	-	-	i 34	57	e 34	59	-	-	-	-	-	3	08	0			
365	29	e 4	26	44	-	-	27	10	-	-	-	-	-	-	-	3	32	0			
366	Oct. 1	e 7	36	70	-	-	36	30	e 36	31	-	-	-	+5	-	3	57	0			
367	1	10	-	-	-	-	e 14	35	-	-	-	-	-	-	-	1	28	0			
368	3	9	-	-	-	-	e 08	35	-	-	-	-	-	-	-	4	08	0			
369	4	e 17	11	46	-	-	12	23	12	22	-	-	-	-7	-	6	49	0			
370	4	e 5	03	54	e 03	54	06	34	e 06	31	-	-	-	-22	-60	10	32	0			
371	4	e 6	48	21	-	-	e 49	03	-	-	-	-	-	-3	-	5	22	0			
372	4	e 6	55	18	e 55	18	55	48	55	46	-	-	-	-10	-25	6	51	0			
373	4	8	-	-	-	-	e 33	58	33	57	-	-	-	-	-	3	47	0			
374	4	14	-	-	-	-	e 03	07	-	-	-	-	-	-	-	2	32	0			
375	5	e 10	06	32	-	-	06	42	-	-	-	-	-	-	-	2	01	0			
376	5	11	-	-	-	-	e 45	27	-	-	-	-	-	-	-	3	31	0			
377	5	e 16	36	09	-	-	i 37	16	e 37	14	-	-	-	-5	-	4	50	0			
378	6	e 5	09	04	-	-	i 09	35	e 09	36	-	-	-	-13	-	6	06	0			
379	6	8	14	32	-	-	i 14	50	e 14	49	-	-	-	-4	-	2	53	0			
380	6	e 15	15	05	-	-	15	25	-	-	-	-	-	-	-	2	18	0			
381	7	0	59	19	59	18	?65	40	?65	31	-	-	-	-	-	12	49	0			
382	7	?16	32	52	?32	47	?36	28	?36	25	-	-	-	-	-	15	15	0			
383	8	e 22	40	33	-	-	40	50	-	-	-	-	-	-	-	2	15	0			
384	9	5	-	-	-	-	e 29	02	-	-	-	-	-	-	-	2	24	0			
385	9	10	-	-	-	-	e 44	06	-	-	-	-	-	-	-	1	45	0			

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
386	Oct. 9	h 20	m	s	m	s	e 48	26	m	s	m	s	m	s	μ	μ	m	s	0		
387	10	5					e 47	05									1	58	0		
388	10	i 20	55	32	i 55	33	i 61	30	i 61	32	? 66	38	? 67	18	+36		41	59	0		
389	11	0	15	13													4	02	0		
390	11	e 17	26	19			26	45									4	01	0		
391	12	e 0	34	05	e 34	05	34	43	34	44									0	E off Miyako	
392	12	i 0	35	14	i 35	12	⊕		i 35	45				⊕	⊕	30	25	2			
393	12	e 1	05	04			05	35						+6		4	24	0			
394	12	i 1	14	04	14	05	i 14	49	14	51				+110	-295	11	54	0	Off Cape Siriya		
395	12	e 1	27	02	e 27	02	i 27	38	27	40				-16		6	25	0			
396	12	e 1	39	42			e 39	59								2	52	0			
397	12	i 3	12	06	12	06	i 12	38	12	36				-48	-108	8	58	0	ENE off Hatinohé		
398	12	e 5	17	26			e 17	43								2	56	0			
399	12	e 6	38	16			38	49						+3		4	12	0			
400	12	e 8	31	42			32	14	e 32	14						3	26	0			
401	12	e 8	47	39			e 48	08								2	44	0			
402	12	e 11	00	00			e 00	16								2	31	0			
403	12	e 14	06	01			06	28								3	06	0			
404	12	22					e 15	14								2	18	0			
405	13	e 0	21	39			e 22	01								1	56	0			
406	13	e 1	57	31			58	07						-3		4	40	0			
407	13	e 3	13	39			14	09						+4		3	44	0			
408	13	i 6	38	30			i 40	10	e 40	10						5	06	0			
409	13	i 7	33	47	33	48	i 34	17	e 34	18				+19	+25	5	58	0	NE off Miyako		
410	13	i 10	10	11	10	11	i 10	34	10	36				-19	+45	5	53	0	NE off Cape Sioya		
411	13	e 11	19	19	e 19	18	i 19	47	e 19	46				+5		4	27	0			
412	13	? 15	31	48	? 31	32	? 35	44	? 35	57						20	17	0			
413	13	20	16	00			e 16	13								2	52	0			
414	14	i 6	39	35	e 39	35	i 40	06	i 40	03				+29	-83	8	16	0	E off Hatinohé		
415	15	1					e 33	43								3	31	0			
416	15	e 4	07	44			08	09								3	25	0			
417	15	e 4	54	43			55	14								3	35	0			
418	15	10					00	31								1	17	0			
419	15	e 11	19	30			20	21	e 20	20				-5	-15	5	17	0			
420	16	e 13	19	08			19	46								4	32	0			
421	17	i 15	28	16	i 28	15	i 29	14	i 29	15				+209	-275	13	19	0	North part of Japan sea		
422	18	e 4	27	00			i 28	14	28	14				-9		6	18	0			
423	18	e 8	04	38			09	05								3	14	0			
424	18	e 8	32	28			32	38								1	12	0			
425	18	e 9	01	58			02	26	e 02	22				+5		4	21	0			
426	18	21					e 38	14								1	58	0			
427	18	e 23	18	41			19	11	e 19	09				+15		4	23	0			
428	19	i 0	19	00	18	59	i 19	37	i 19	37				+38		9	45	0	E off Hatinohé		
429	19	e 4	20	41	e 20	44	27	30	27	30	? 33	32	? 33	20		38	09	0			
430	20	e 15	35	12	e 02	35	35	23								1	19	0			
431	20	i 2	28	25	i 28	23	i 35	32	i 35	31				+55	+335	42	34	0			
432	20	22					e 53	39								2	17	0			
433	20	e 23	16	48	e 16	50	i 17	15	17	15				+10		4	33	0			
434	21	i 6	48	24	i 48	24	i 49	59	i 49	59				-35	-38	9	59	0	Near Vladivostok		
435	24	13					e 02	35								1	04	0			
436	25	e 15	12	07			12	31								2	33	0			
437	26	0					e 12	30								2	32	0			
438	27	e 4	31	21			31	59								2	19	0			
439	27	e 16	37	19			37	40								2	14	0			
440	29	8	21	37	e 21	39	22	12	22	14				+6		5	15	0			

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
441	Oct. 29	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	SE off Cape Inubô			
442	29	i	13	09	24	i	09	22	i	10	05	i	10	05	-	-	0				
443	29	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
444	29	e	14	12	53	e	12	50	i	13	32	13	32	-	-	-	0				
445	29	e	14	53	19	-	-	53	49	e	53	50	-	-	-	-	0				
446	29	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
447	29	15	38	54	e	38	53	i	39	34	39	35	+33	-38	8	49	0				
448	29	e	18	29	16	-	-	29	56	e	29	59	-	-	3	14	0				
449	29	e	21	30	34	-	-	e	31	15	e	31	16	-	5	03	0				
450	29	?23	02	39	02	33	?09	32	?09	27	-	-	-	-	13	51	0				
451	30	0	-	-	-	-	-	-	-	-	-	-	-	-	1	25	0				
452	30	4	-	-	e	53	00	-	-	-	-	-	-	3	30	0					
453	Nov. 2	2	-	-	-	-	e	09	29	-	-	-	-	-	1	16	0				
454	5	8	43	56	43	56	44	20	⊕	-	-	-	⊕	⊕	?	?	4	E off Hukusima Prefectur			

Remarks

- A rather strong earthquake and a number of unfelt ones are missed between the earthquakes no. 454 and no. 454 according to the damage of the seismograph. *Qua*
- The magnification of the N-S component is reduced to 15 for the earthquakes no. 455~no. 996. *th*

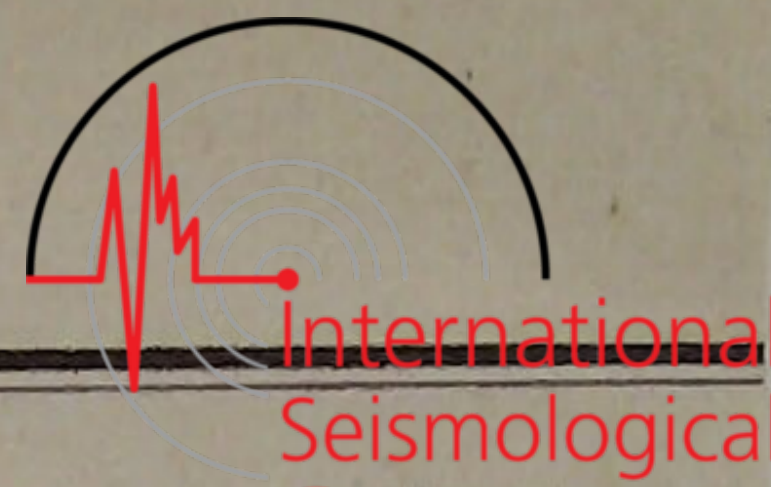
455	5	e	9	29	15	-	-	e	30	00	-	-	-	-	4	34	0	E off Hukusima Prefectur	
456	5	e	9	53	57	-	-	e	54	23	-	-	-	-	2	22	0	"	
457	5	i	10	08	58	09	00	i	09	22	09	24	-127	+290	6	57	0	"	
458	5	10	-	-	-	-	-	e	16	43	e	16	44	-7	2	29	0	"	
459	5	i	10	50	44	i	50	47	51	06	51	15	⊕	⊕	-	-	4	"	
460	5	?11	05	59	?05	57	?06	25	?06	19	-	-	-	+83	-	-	0	"	
461	5	11	-	-	?10	19	10	37	10	41	-	-	+237	+303	-	-	0	"	
462	5	11	-	-	?13	04	-	-	e	13	28	-	-110	-100	-	-	0	"	
463	5	11	-	-	?14	54	15	15	15	15	-	-	+209	-267	-	-	1	"	
464	5	11	-	-	-	-	19	25	19	28	-	-	-9	-	-	-	0	"	
465	5	11	25	44	e	25	46	26	07	26	08	-	-39	-	-	-	0	"	
466	5	e	11	31	59	-	-	32	24	e	32	27	-11	-	3	31	0	"	
467	5	e	11	38	05	-	-	38	24	38	24	-	-	-	-	-	0	"	
468	5	11	-	-	-	-	-	e	42	44	-	-	-	-	-	-	0	"	
469	5	e	11	44	53	e	44	55	e	45	15	e	45	17	-	-	0	"	
470	5	e	11	48	40	e	48	39	e	48	58	e	48	58	-	-	0	"	
471	5	11	-	-	-	-	-	e	51	33	-	-	-	-	-	-	0	"	
472	5	11	-	-	-	-	-	e	55	33	-	-	-	-	-	-	0	"	
473	5	e	11	58	46	e	58	46	e	59	13	e	59	10	-	-	0	"	
474	5	e	12	12	02	-	-	e	12	21	-	-	-	-	-	-	0	"	
475	5	12	-	-	-	-	-	e	15	36	-	-	-	-	2	36	0	"	
476	5	e	12	22	15	e	22	16	i	22	39	22	41	-11	-33	2	51	0	"
477	5	12	-	-	-	-	-	e	28	30	-	-	-	-	1	43	0	"	
478	5	e	12	41	17	-	-	e	41	53	e	41	57	-5	-	-	0	"	
479	5	12	-	-	-	-	-	e	47	54	-	-	-	-	-	-	0	"	
480	5	e	12	48	50	-	-	49	16	49	17	-	-	-7	-	3	36	0	"
481	5	12	-	-	-	-	-	e	53	29	-	-	-	-	1	41	0	"	
482	5	12	-	-	-	-	-	e	55	27	-	-	-	-	1	38	0	"	
483	5	12	59	56	e	59	55	i	60	20	i	60	21	-25	+33	4	49	0	"
484	5	13	-	-	-	-	-	e	06	38	-	-	-	-	1	23	0	"	
485	5	13	09	54	-	-	-	i	10	17	e	10	17	-	-	2	33	0	"
486	5	13	-	-	-	-	-	e	14	07	-	-	-	-	2	49	0	"	
487	5	e	13	17	26	-	-	17	52	17	51	-	-5	-	2	26	0	"	
488	5	13	20	10	e	20	11	i	20	35	20	34	-9	-	4	18	0	"	
489	5	13	28	15	-	-	-	28	39	e	28	38	-	-	2	35	0	"	
490	5	13	-	-	-	-	-	e	34	59	-	-	-	-	1	48	0	"	

EARTHQUAKES, 1938.



No.	Date 1938	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			
491	Nov. 5	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima
492	5	e13	37	45	-	-	e38	02	-	-	-	-	-	-	-	-	1	15	0	Prefecture
493	5	e13	40	19	-	-	40	43	e40	45	-	-	-	-	-	-	2	56	0	"
494	5	e13	48	24	-	-	48	49	-	-	-	-	-	-	-	-	2	06	0	"
495	5	13	-	-	-	-	e55	23	-	-	-	-	-	-	-	-	1	04	0	"
496	5	14	02	04	e02	02	i02	28	02	28	-	-	-	-	-	-	4	00	0	"
497	5	14	06	57	-	-	07	14	e07	13	-	-	-	-	-	-	2	57	0	"
498	5	14	-	-	-	-	e10	52	-	-	-	-	-	-	-	-	-	-	0	"
499	5	14	-	-	-	-	e12	27	-	-	-	-	-	-	-	-	1	31	0	"
500	5	14	-	-	-	-	e23	12	-	-	-	-	-	-	-	-	1	15	0	"
501	5	14	-	-	-	-	e34	00	-	-	-	-	-	-	-	-	1	58	0	"
502	5	e14	43	10	-	-	43	33	e43	33	-	-	-	-	-	-	1	42	0	"
503	5	14	-	-	-	-	e45	35	-	-	-	-	-	-	-	-	2	00	0	"
504	5	14	52	25	52	26	i52	57	i53	00	-	-	-	-	-	-	7	11	0	"
505	5	14	05	02	-	-	05	26	-	-	-	-	-	-	-	-	2	17	0	"
506	5	15	-	-	-	-	e10	28	-	-	-	-	-	-	-	-	1	53	0	"
507	5	i15	14	55	14	55	15	20	15	20	-	-	-	-	-	-	4	41	0	"
508	5	15	-	-	-	-	e	-	-	-	-	-	-	-	-	-	2	16	0	"
509	5	15	-	-	-	-	i23	34	-	-	-	-	-	-	-	-	2	16	0	"
510	5	15	53	02	e53	01	53	27	e53	25	-	-	-	-	-	-	5	09	0	"
511	5	16	00	37	e00	37	i01	02	01	01	-	-	-	-	-	-	5	21	0	"
512	5	e16	18	16	-	-	18	39	-	-	-	-	-	-	-	-	2	34	0	"
513	5	16	-	-	-	-	e22	31	-	-	-	-	-	-	-	-	1	54	0	"
514	5	16	-	-	-	-	e31	25	e31	24	-	-	-	-	-	-	2	05	0	"
515	5	16	-	-	-	-	e45	02	-	-	-	-	-	-	-	-	2	09	0	"
516	5	e16	49	38	-	-	i50	06	e50	05	-	-	-	-	-	-	3	03	0	"
517	5	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"
518	5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"
519	5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"
520	5	e17	09	06	-	-	09	26	-	-	-	-	-	-	-	-	2	52	0	"
521	5	17	24	07	e24	07	i24	36	i24	37	-	-	-	-	-	-	4	53	0	"
522	5	17	33	33	-	-	33	58	e33	59	-	-	-	-	-	-	3	28	0	"
523	5	17	-	-	-	-	e41	22	-	-	-	-	-	-	-	-	2	03	0	"
524	5	e17	54	18	-	-	54	35	e54	35	-	-	-	-	-	-	3	46	0	"
525	5	17	-	-	-	-	e58	57	-	-	-	-	-	-	-	-	1	24	0	"
526	5	18	-	-	-	-	e07	01	-	-	-	-	-	-	-	-	1	55	0	"
527	5	i18	10	25	10	23	i10	47	10	46	-	-	-	-	-	-	6	51	0	"
528	5	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	16	0	"
529	5	18	-	-	-	-	e22	53	-	-	-	-	-	-	-	-	2	13	0	"
530	5	18	58	25	58	24	i59	22	59	22	-	-	-	-	-	-	5	34	0	"
531	5	e19	27	07	-	-	27	26	-	-	-	-	-	-	-	-	1	31	0	"
532	5	e19	48	33	e48	33	i48	59	48	59	-	-	-	-	-	-	5	58	0	"
533	5	e20	11	03	e11	02	i11	28	e11	26	-	-	-	-	-	-	4	15	0	"
534	5	20	-	-	-	-	e16	13	-	-	-	-	-	-	-	-	1	33	0	"
535	5	20	-	-	-	-	e28	41	-	-	-	-	-	-	-	-	2	45	0	"
536	5	20	-	-	-	-	e55	28	-	-	-	-	-	-	-	-	2	12	0	"
537	5	e21	04	33	-	-	04	57	-	-	-	-	-	-	-	-	-	-	0	"
538	5	21	-	-	-	-	e06	22	-	-	-	-	-	-	-	-	3	08	0	"
539	5	e21	10	43	-	-	11	06	e11	07	-	-	-	-	-	-	3	58	0	"
540	5	i21	24	09	i24	08	i24	36	24	39	-	-	-	-	-	-	11	15	0	"
541	5	e21	35	43	e35	44	i36	10	36	10	-	-	-	-	-	-	4	53	0	"
542	5	21	-	-	-	-	e41	48	e41	46	-	-	-	-	-	-	3	14	0	"
543	5	e21	56	16	-	-	56	36	e56	36	-	-	-	-	-	-	3	25	0	"
544	5	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"
545	5	22	16	52	16	53	i17	20	i17	20	-	-	-	-	-	-	9	52	0	"

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s			
546	Nov. 5	e 22	32	05	-	-	32	30	-	-	-	-	-	-	-	-	-	4	13	0	E off Hukusima	
547	5	22			-	-	e 50	41	-	-	-	-	-	-	-	-	-	2	32	0	Prefecture	
548	5	22			-	-	-	-	-	-	-	-	-	-	-	-	-	1	17	0	"	
549	5	e 23	10	30	e 10	28	i 11	02	i 11	00	-	-	-	-	-	-	-15	-30	5	14	0	"
550	5	23			-	-	i 16	59	-	-	-	-	-	-	-	-	-	2	49	0	"	
551	5	i 23	29	13	e 29	11	i 29	34	i 29	33	-	-	-	-	-	-	+153	-150	8	46	0	"
552	5	23			-	-	e 41	39	e 41	44	-	-	-	-	-	-	-	3	02	0	"	
553	5	23			-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	0	"	
554	5	23			-	-	e 53	03	-	-	-	-	-	-	-	-	-	1	50	0	"	
555	6	0			-	-	-	-	-	-	-	-	-	-	-	-	-	1	20	0	"	
556	6	0			-	-	e 16	09	-	-	-	-	-	-	-	-	-	1	56	0	"	
557	6	0			-	-	e 28	01	-	-	-	-	-	-	-	-	-	1	51	0	"	
558	6	e 0	37	46	-	-	38	19	e 38	19	-	-	-	-	-	-	-	3	30	0	"	
559	6	e 0	46	17	-	-	46	51	-	-	-	-	-	-	-	-	-	2	03	0	"	
560	6	e 1	07	28	-	-	e 07	53	-	-	-	-	-	-	-	-	-	1	54	0	"	
561	6	1			-	-	e 10	35	-	-	-	-	-	-	-	-	-	1	51	0	"	
562	6	e 1	13	21	-	-	i 13	53	13	53	-	-	-	-	-	-	+ 9	-	3	39	0	"
563	6	1	18	13	18	14	i 18	36	i 18	37	-	-	-	-	-	-	-25	-63	-	-	0	"
564	6	e 1	21	59	-	-	22	16	-	-	-	-	-	-	-	-	+ 5	-	2	36	0	"
565	6	e 1	34	00	-	-	e 34	18	-	-	-	-	-	-	-	-	-	2	03	0	"	
566	6	1			-	-	e 47	42	-	-	-	-	-	-	-	-	-	0	53	0	"	
567	6	1	51	21	51	21	i 51	43	51	43	-	-	-	-	-	-	+24	-50	6	16	0	"
568	6	2	02	23	02	25	i 02	49	i 02	49	-	-	-	-	-	-	+26	-37	5	05	0	"
569	6	2	07	53	-	-	i 08	22	08	21	-	-	-	-	-	-	+15	-30	4	06	0	"
570	6	2			-	-	e 14	54	-	-	-	-	-	-	-	-	-	1	09	0	"	
571	6	2	30	40	-	-	i 31	07	i 31	05	-	-	-	-	-	-	+11	-	4	11	0	"
572	6	e 2	40	38	-	-	41	09	e 41	08	-	-	-	-	-	-	-	-	3	39	0	"
573	6	3	04	26	-	-	04	47	e 04	47	-	-	-	-	-	-	-	-	3	03	0	"
574	6	3	23	29	-	-	23	55	-	-	-	-	-	-	-	-	-	-	2	09	0	"
575	6	e 3	28	58	-	-	29	21	-	-	-	-	-	-	-	-	-	-	2	00	0	"
576	6	3			-	-	e 43	37	-	-	-	-	-	-	-	-	-	-	1	23	0	"
577	6	e 3	47	08	-	-	47	31	-	-	-	-	-	-	-	-	-	-	2	35	0	"
578	6	e 3	52	11	-	-	52	34	-	-	-	-	-	-	-	-	-	-	1	58	0	"
579	6	e 3	59	12	-	-	59	38	-	-	-	-	-	-	-	-	-	-	2	22	0	"
580	6	e 4	08	37	-	-	08	48	e 08	49	-	-	-	-	-	-	-	-	2	12	0	"
581	6	4			-	-	e 36	30	-	-	-	-	-	-	-	-	-	-	0	52	0	"
582	6	e 5	03	17	-	-	i 03	42	e 03	44	-	-	-	-	-	-	-6	-	4	27	0	"
583	6	e 5	08	33	-	-	e 08	54	-	-	-	-	-	-	-	-	-6	-	2	33	0	"
584	6	i 5	11	28	e 11	27	i 11	53	11	52	-	-	-	-	-	-	-11	-	4	54	0	"
585	6	e 5	50	36	-	-	51	11	e 51	11	-	-	-	-	-	-	-	-	4	14	0	"
586	6	e 5	58	27	-	-	58	48	-	-	-	-	-	-	-	-	-	-	2	30	0	"
587	6	6			-	-	e 06	10	-	-	-	-	-	-	-	-	-	-	1	40	0	"
588	6	e 6	17	40	-	-	17	58	-	-	-	-	-	-	-	-	-	-	2	10	0	"
589	6	e 6	52	32	-	-	52	54	-	-	-	-	-	-	-	-	-	-	2	28	0	"
590	6	e 7	01	41	-	-	e 02	32	e 02	35	-	-	-	-	-	-	-	-	3	14	0	"
591	6	7			-	-	e 10	28	-	-	-	-	-	-	-	-	-	-	1	44	0	"
592	6	e 7	36	20	-	-	e 36	49	e 36	51	-	-	-	-	-	-	-	-	2	59	0	"
593	6	e 7	50	41	-	-	51	02	-	-	-	-	-	-	-	-	-	-	2	19	0	"
594	6	8			-	-	e 08	04	-	-	-	-	-	-	-	-	-	-	1	20	0	"
595	6	i 8	54	25	54	25	⊕		⊕		-	-	-	-	-	-	⊕	⊕	-	-	4	"
596	6	? 9	24	37	? 24	37	? 25	03	? 25	03	-	-	-	-	-	-	+363	+193	-	-	0	"
597	6	9			? 35	46	? 36	13	? 36	12	-	-	-	-	-	-	-50	-83	-	-	0	"
598	6	? 9	39	08	? 39	07	? 39	28	? 39	27	-	-	-	-	-	-	+31	-	-	-	0	"
599	6	? 9	59	40	? 59	38	? 60	06	? 60	04	-	-	-	-	-	-	-26	-53	-	-	0	"
600	6	? 10	09	02	? 09	03	? 09	25	? 09	25	-	-	-	-	-	-	-37	-50	-	-	0	"

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
601	Nov. 6	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima	
602	6	?10	24	45	?24	46	?25	05	?25	09	-	-	-	-	-89	+90	-	-	0	Prefecture	
603	6	?10	26	51	?26	51	?27	11	?27	11	-	-	-	-	-99	-200	-	-	0	"	
604	6	?10	39	00	-	-	?39	24	-	-	-	-	-	-	-10	-	-	-	0	"	
605	6	i10	45	52	i45	52	i46	18	i46	19	-	-	-	-	+125	-163	-	-	0	"	
606	6	10	48	41	48	38	i49	00	i49	01	-	-	-	-	+145	-223	-	-	0	"	
607	6	e10	57	52	-	-	58	14	58	13	-	-	-	-	+8	-	-	-	0	"	
608	6	e11	01	52	-	-	02	20	e02	19	-	-	-	-	-8	-	-	-	0	"	
609	6	e11	07	42	e07	41	08	40	e08	38	-	-	-	-	-49	-73	-	-	0	"	
610	6	e11	13	06	e13	04	13	31	13	30	-	-	-	-	-40	-	3	15	0	"	
611	6	11	17	03	e17	02	17	28	17	30	-	-	-	-	-	-	-	-	0	"	
612	6	11	20	36	20	39	21	02	21	04	-	-	-	-	+34	+63	-	-	0	"	
613	6	11	29	25	i29	26	e23	11	e23	10	-	-	-	-	+42	-	-	-	0	"	
614	6	i11	29	25	i29	26	i29	51	i29	51	-	-	-	-	+48	-67	7	19	0	"	
615	6	e11	39	32	-	-	e39	48	-	-	-	-	-	-	-	-	-	-	0	"	
616	6	e11	41	21	-	-	e41	53	-	-	-	-	-	-	-	-	-	-	0	"	
617	6	e11	46	22	-	-	46	50	46	52	-	-	-	-	-8	-	2	36	0	"	
618	6	e11	49	46	-	-	50	05	50	06	-	-	-	-	-5	-	-	-	0	"	
619	6	11			-	-	e52	37	-	-	-	-	-	-	-	-	-	-	0	"	
620	6	12			-	-	e56	01	-	-	-	-	-	-	-	-	-	-	0	"	
621	6	12			-	-	e05	35	-	-	-	-	-	-	-	-	0	42	0	"	
622	6	e12	08	56	e08	56	i09	20	i09	21	-	-	-	-	-17	-	4	35	0	"	
623	6	e12	17	03	-	-	17	23	-	-	-	-	-	-	-	-	2	02	0	"	
624	6	e12	19	58	-	-	i20	21	e20	23	-	-	-	-	+5	-	3	11	0	"	
625	6	e12	24	53	-	-	e25	12	-	-	-	-	-	-	+5	-	3	19	0	"	
626	6	12	34	16	34	16	e30	17	-	-	-	-	-	-	-	-	1	53	0	"	
627	6	12			-	-	i34	38	i34	38	-	-	-	-	-18	-	3	42	0	"	
628	6	i12	52	45	i52	45	e47	54	-	-	-	-	-	-	-	-	2	52	0	"	
629	6	13	01	35	e01	39	i53	07	i53	06	-	-	-	-	-67	+133	6	04	0	"	
630	6	13			-	-	e01	59	-	-	-	-	-	-	-41	+90	5	23	0	"	
631	6	13	20	32	20	31	e07	45	-	-	-	-	-	-	-	-	2	58	0	"	
632	6	13			-	-	i20	54	i20	55	-	-	-	-	±25	-	-	-	0	"	
633	6	13			-	-	e25	05	-	-	-	-	-	-	-6	-	3	51	0	"	
634	6	13	32	06	32	05	e29	55	-	-	-	-	-	-	-	-	1	24	0	"	
635	6	e13	40	14	e40	14	i32	31	32	33	-	-	-	-	+36	+67	6	15	0	"	
636	6	?13	41	43	?41	42	40	40	40	39	-	-	-	-	-32	-	-	-	0	"	
637	6	e13	55	59	e55	59	i20	54	i20	55	-	-	-	-	-	-	-	-	0	"	
638	6	13			-	-	i56	21	i56	23	-	-	-	-	+19	-	-	-	0	"	
639	6	14			-	-	e00	37	-	-	-	-	-	-	-	-	2	01	0	"	
640	6	14	03	53	-	-	e04	16	e04	14	-	-	-	-	+6	-	2	39	0	"	
641	6	e14	07	41	-	-	e08	07	e08	06	-	-	-	-	+6	-	3	10	0	"	
642	6	e14	12	14	-	-	e12	32	-	-	-	-	-	-	-	-	2	12	0	"	
643	6	14			-	-	e20	22	-	-	-	-	-	-	-	-	-	-	0	"	
644	6	e14	21	40	-	-	22	00	-	-	-	-	-	-	-5	-	2	13	0	"	
645	6	e14	24	34	e24	34	e24	58	e24	57	-	-	-	-	+6	-	2	38	0	"	
646	6	e14	27	48	-	-	28	14	e28	12	-	-	-	-	+6	-	3	23	0	"	
647	6	14			-	-	i33	42	-	-	-	-	-	-	-	-	1	51	0	"	
648	6	14			-	-	e44	27	-	-	-	-	-	-	-	-	2	26	0	"	
649	6	i14	51	47	51	49	i52	11	52	12	-	-	-	-	-	-	7	44	0	"	
650	6	e15	16	47	-	-	18	12	e18	12	-	-	-	-	+51	+70	4	17	0	"	
651	6	15			-	-	e18	12	-	-	-	-	-	-	-10	-	-	-	0	"	
652	6	i15	27	14	27	12	e23	58	-	-	-	-	-	-	-	-	2	13	0	"	
653	6	15			-	-	27	40	27	43	-	-	-	-	+39	-40	6	18	0	"	
654	6	e15	50	38	-	-	e44	32	-	-	-	-	-	-	-	-	1	35	0	"	
655	6	e15	56	07	-	-	51	22	e51	21	-	-	-	-	+9	-	3	03	0	"	
					-	-	i56	30	e56	28	-	-	-	-	+7	-	5	05	0	"	

EARTHQUAKES, 1938.

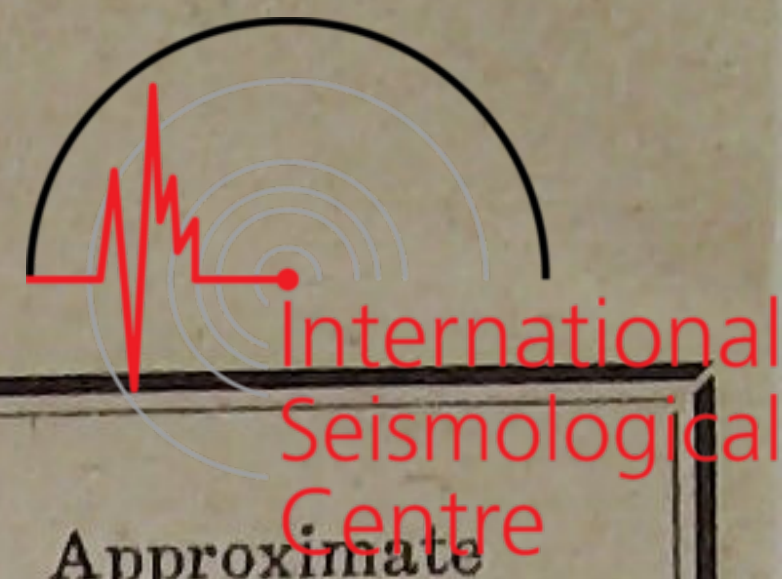
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
711	Nov. 7	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima Prefecture
712	7	0	-	-	-	-	-	-	-	-	-	-	-	+5	-	-	-	0		
713	7	0	-	-	e02	52	-	-	-	-	-	-	-	-	-	3	16	0		
714	7	0	-	-	e15	16	-	-	-	-	-	-	-	-	-	-	-	0		
715	7	e 0	17	19	-	-	17	38	-	-	-	-	-	-6	-	5	07	0		
716	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"	
717	7	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	37	0		
718	7	0	-	-	e33	40	-	-	-	-	-	-	-	-	-	1	40	0		
719	7	0	-	-	e38	49	-	-	-	-	-	-	-	-	-	2	21	0		
720	7	e 0	45	59	-	-	46	28	e46	29	-	-	-	-	-	1	51	0		
721	7	i 0	48	34	i48	34	i49	02	i49	01	-	-	-	⊕	+1300	-	-	2	"	
722	7	1	*	-	-	-	*	-	e03	07	-	-	-	*	-	3	29	0		
723	7	1	*	-	e10	59	*	-	e11	20	-	-	-	*	-33	4	37	0		
724	7	1	*	-	e34	54	*	-	e35	17	-	-	-	*	-	2	46	0		
725	7	1	*	-	e38	57	*	-	i39	27	-	-	-	*	-2327	-	-	3		
726	7	1	54	15	54	16	55	06	55	03	-	-	-	⊕	+1610	-	-	2	"	
727	7	? 2	04	56	?04	58	?05	23	?05	23	-	-	-	+51	+40	-	-	0		
728	7	2	14	57	14	56	15	21	15	23	-	-	-	+296	+520	-	-	1		
729	7	2	27	27	27	28	28	02	28	02	-	-	-	-	-	-	-	0		
730	7	2	-	-	-	-	?29	53	?29	52	-	-	-	⊕	-1100	-	-	1		
731	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"	
732	7	2	42	48	e42	48	43	06	43	07	-	-	-	-120	-170	9	23	0		
733	7	2	53	44	-	-	54	17	54	21	-	-	-	-10	-23	3	03	0		
734	7	2	-	-	-	-	e57	19	e57	20	-	-	-	-	-	3	15	0		
735	7	3	-	-	-	-	e05	54	-	-	-	-	-	-	-	2	10	0		
736	7	3	-	-	e12	44	-	-	-	-	-	-	-	-	-	-	-	0	"	
737	7	e 3	13	35	-	-	e14	17	e14	18	-	-	-	-	-	2	57	0		
738	7	3	-	-	e17	49	-	-	-	-	-	-	-	-	-	1	33	0		
739	7	3	-	-	e34	44	-	-	-	-	-	-	-	-	-	1	50	0		
740	7	e 3	37	39	-	-	38	06	38	05	-	-	-	+10	-	-	-	0		
741	7	? 3	40	03	?40	02	?40	23	?40	23	-	-	-	+155	-220	-	-	0	"	
742	7	3	-	-	?47	34	?47	33	-	-	-	-	-	-	-	-	-	0		
743	7	3	-	-	?49	36	-	-	-	-	-	-	-	-	-	3	04	0		
744	7	3	-	-	e53	31	-	-	-	-	-	-	-	-	-	3	00	0		
745	7	e 4	12	14	-	-	12	41	-	-	-	-	-	-5	-	2	12	0		
746	7	e 4	14	57	e14	57	15	28	15	30	-	-	-	⊕	+2043	-	-	3	"	
747	7	4	36	06	e36	05	36	32	36	31	-	-	-	-22	-23	4	05	0		
748	7	e 4	40	41	-	-	41	07	-	-	-	-	-	-	-	6	50	0		
749	7	e 4	49	40	-	-	50	06	-	-	-	-	-	-	-	2	24	0		
750	7	4	-	-	e52	35	-	-	-	-	-	-	-	-	-	1	59	0		
751	7	e 4	56	51	-	-	e57	11	-	-	-	-	-	-	-	3	10	0	"	
752	7	e 5	00	09	-	-	00	31	-	-	-	-	-	-	-	4	09	0		
753	7	5	06	23	-	-	e07	17	-	-	-	-	-	-	-	3	35	0		
754	7	5	12	03	-	-	12	27	e12	29	-	-	-	-	-	3	45	0		
755	7	5	17	28	-	-	e17	54	-	-	-	-	-	-	-	3	28	0		
756	7	5	-	-	e25	24	-	-	-	-	-	-	-	-	-	0	56	0	"	
757	7	e 5	29	21	-	-	29	47	-	-	-	-	-	-	-	-	-	0		
758	7	5	-	-	e31	19	-	-	-	-	-	-	-	-	-	-	-	0		
759	7	5	-	-	e33	48	-	-	-	-	-	-	-	-	-	-	-	0		
760	7	5	-	-	e38	56	-	-	-	-	-	-	-	-	-	2	53	0		
761	7	5	-	-	e42	10	-	-	-	-	-	-	-	-	-	2	04	0	"	
762	7	5	-	-	e46	50	-	-	-	-	-	-	-	-	-	3	32	0		
763	7	5	-	-	e51	41	-	-	-	-	-	-	-	-	-	2	13	0		
764	7	e 5	57	35	-	-	i58	05	e58	05	-	-	-	-	-	4	57	0		
765	7	6	-	-	e06	26	-	-	-	-	-	-	-	-12	-	2	25	0		

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
766	Nov. 7	e 6	30	25	-	-	e 30	48	e 30	49	-	-	-	-	+12	-27	5	47	0	E off Hukusima	
767	7	e 6	49	50	-	-	e 50	09	-	-	-	-	-	-	-	-	3	15	0	„ Prefecture	
768	7	e 6	54	02	e 54	03	i 54	31	54	32	-	-	-	+18	-33	5	24	0	„		
769	7	e 6	59	56	-	-	60	21	-	-	-	-	-	-	-	-	1	54	0	„	
770	7	7	-	-	-	-	e 02	19	-	-	-	-	-	-	-	-	1	35	0	„	
771	7	7	-	-	-	-	e 04	34	-	-	-	-	-	-	-	-	-	-	0	„	
772	7	7	-	-	-	-	e 11	50	-	-	-	-	-	-	-	-	2	16	0	„	
773	7	e 7	19	27	-	-	19	57	e 19	57	-	-	-	-	-	-	3	25	0	„	
774	7	e 7	24	27	-	-	24	58	e 24	59	-	-	-	-7	-	-	-	-	0	„	
775	7	i 7	26	24	26	23	i 26	49	26	50	-	-	-	-45	-77	5	38	0	„		
776	7	7	32	48	32	49	i 33	08	33	08	-	-	-	+23	+37	7	30	0	„		
777	7	7	-	-	-	-	e 45	01	-	-	-	-	-	-	-	-	1	28	0	„	
778	7	7	49	35	49	33	i 50	00	50	02	-	-	-	-60	-133	-	-	0	„		
779	7	e 8	01	38	-	-	02	02	-	-	-	-	-	-	-	-	3	09	0	„	
780	7	i 8	05	43	05	43	06	24	06	22	-	-	-	+78	-120	9	59	0	„		
781	7	8	-	-	-	-	e 21	26	-	-	-	-	-	-	-	-	1	39	0	„	
782	7	e 8	28	15	-	-	28	46	e 28	46	-	-	-	-	-	-	2	57	0	„	
783	7	e 8	31	32	-	-	i 32	05	-	-	-	-	-	-	-	-	2	59	0	„	
784	7	e 8	41	17	-	-	41	37	e 41	38	-	-	-	-6	-	-	5	18	0	„	
785	7	9	-	-	-	-	e 01	40	-	-	-	-	-	-	-	-	1	15	0	„	
786	7	e 9	03	45	-	-	e 04	02	-	-	-	-	-	-	-	-	2	22	0	„	
787	7	9	-	-	-	-	e 08	08	-	-	-	-	-	-	-	-	1	32	0	„	
788	7	e 9	10	51	-	-	e 11	05	-	-	-	-	-	-	-	-	2	07	0	„	
789	7	9	-	-	-	-	e 17	07	-	-	-	-	-	-	-	-	1	43	0	„	
790	7	e 9	21	57	-	-	i 22	32	e 22	32	-	-	-	+8	-	-	4	57	0	„	
791	7	e 9	27	48	-	-	23	20	e 23	20	-	-	-	-	-	-	4	18	0	„	
792	7	9	-	-	-	-	e 34	15	-	-	-	-	-	-	-	-	1	33	0	„	
793	7	9	-	-	-	-	e 38	54	-	-	-	-	-	-	-	-	2	45	0	„	
794	7	e 9	49	55	-	-	50	22	-	-	-	-	-	-	-	-	3	32	0	„	
795	7	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	„	
796	7	e 10	05	18	-	-	e 05	43	-	-	-	-	-	-	-	-	3	24	0	„	
797	7	10	-	-	-	-	e 17	15	-	-	-	-	-	-	-	-	1	10	0	„	
798	7	10	-	-	-	-	e 21	19	-	-	-	-	-	-	-	-	0	47	0	„	
799	7	10	-	-	-	-	e 34	13	-	-	-	-	-	-	-	-	1	04	0	„	
800	7	10	-	-	-	-	e 38	32	-	-	-	-	-	-	-	-	1	37	0	„	
801	7	e 10	43	23	-	-	i 43	47	e 43	47	-	-	-	-8	-	-	4	56	0	„	
802	7	e 11	02	27	e 02	28	02	49	02	49	-	-	-	+20	-	-	6	40	0	„	
803	7	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	17	0	„	
804	7	12	09	03	e 09	03	09	29	09	29	-	-	-	+11	-	-	4	17	0	„	
805	7	12	-	-	-	-	e 17	06	-	-	-	-	-	-	-	-	1	31	0	„	
806	7	e 12	24	35	-	-	24	59	e 25	02	-	-	-	-	-	-	4	14	0	„	
807	7	e 12	31	18	e 31	21	i 31	43	e 31	43	-	-	-	-136	-227	17	44	0	„		
808	7	13	-	-	-	-	e 02	45	-	-	-	-	-	-	-	-	2	58	0	„	
809	7	13	-	-	-	-	e 35	41	-	-	-	-	-	-	-	-	2	43	0	„	
810	7	e 13	44	40	e 44	41	45	11	e 45	11	-	-	-	-9	-	-	6	51	0	„	
811	7	14	-	-	-	-	e 00	00	-	-	-	-	-	-	-	-	1	25	0	„	
812	7	14	-	-	-	-	e 01	56	-	-	-	-	-	-	-	-	1	59	0	„	
813	7	e 14	19	01	e 19	01	i 19	25	19	24	-	-	-	-8	-	-	4	43	0	„	
814	7	14	-	-	-	-	e 27	12	-	-	-	-	-	-	-	-	1	19	0	„	
815	7	14	-	-	-	-	e 43	46	-	-	-	-	-	-	-	-	1	39	0	„	
816	7	e 14	53	37	-	-	e 53	56	-	-	-	-	-	-	-	-	1	59	0	„	
817	7	e 15	00	34	-	-	01	03	-	-	-	-	-	-	-	-	-	-	0	„	
818	7	15	02	09	e 02	11	i 02	39	02	37	-	-	-	+25	+50	6	59	0	„		
819	7	15	-	-	-	-	e 45	19	-	-	-	-	-	-	-	-	1	16	0	„	
820	7	15	-	-	-	-	e 49	22	-	-	-	-	-	-	-	-	2	17	0	„	

EARTHQUAKES, 1938.



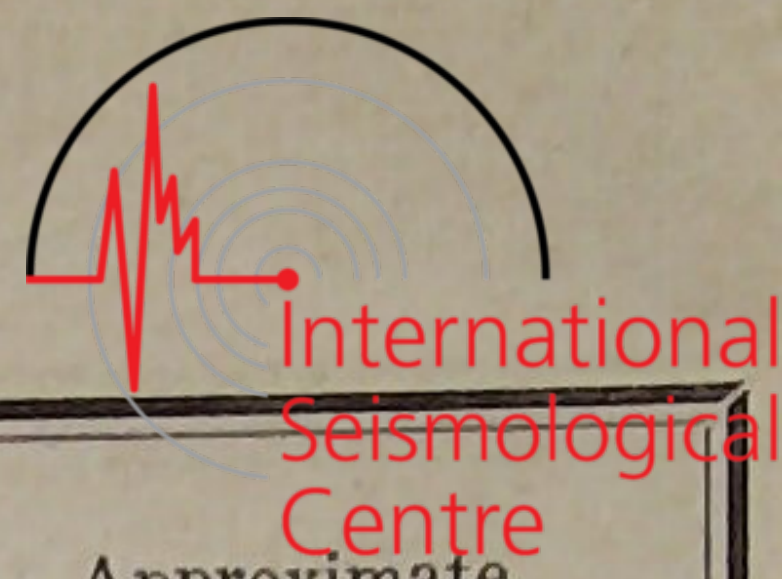
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
876	Nov. 8	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima
877	8	e 7	09	53	-	-	10	14	-	-	-	-	-	-	-	-	2	11	0	Prefecture
878	8	7	-	-	-	-	e 21	24	-	-	-	-	-	-	-	-	2	28	0	"
879	8	7	-	-	-	-	e 35	55	-	-	-	-	-	-	-	-	1	37	0	"
880	8	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	38	0	"
881	8	e 7	52	29	-	-	e 53	03	-	-	-	-	-	-	-	-	3	21	0	"
882	8	e 8	25	14	-	-	e 25	45	-	-	-	-	-	-	-	-	4	28	0	"
883	8	8	-	-	-	-	e 46	36	-	-	-	-	-	-	-	-	1	53	0	"
884	8	e 8	57	21	-	-	e 57	49	-	-	-	-	-	+ 7	-	-	4	09	0	"
885	8	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	40	0	"
886	8	9	-	-	-	-	e 30	53	-	-	-	-	-	-	-	-	1	49	0	"
887	8	9	-	-	-	-	e 39	49	-	-	-	-	-	-	-	-	1	57	0	"
888	8	9	53	49	-	-	54	23	54	23	-	-	-	-20	+37	-	6	15	0	"
889	8	10	-	-	-	-	e 33	50	-	-	-	-	-	-	-	-	-	-	0	"
890	8	e 10	35	19	-	-	35	44	e 35	46	-	-	-	-	-	-	3	42	0	"
891	8	e 10	46	09	-	-	e 46	37	-	-	-	-	-	-	-	-	2	45	0	"
892	8	10	-	-	-	-	e 52	26	-	-	-	-	-	-	-	-	2	29	0	"
893	8	i 11	02	41	i 02	42	i 03	08	i 03	09	-	-	-	+109	-233	-	9	05	2	"
894	8	e 11	14	35	e 14	34	i 15	10	i 15	09	-	-	-	-21	+33	-	6	17	0	"
895	8	e 11	42	59	e 43	01	i 43	32	43	32	-	-	-	-	-	-	7	13	0	"
896	8	e 12	19	50	-	-	e 20	14	e 20	15	-	-	-	-	-	-	3	19	0	"
897	8	12	-	-	-	-	e 28	31	-	-	-	-	-	-	-	-	2	54	0	"
898	8	13	-	-	-	-	e 06	14	-	-	-	-	-	-	-	-	2	49	0	"
899	8	i 13	14	34	i 14	33	15	00	i 14	58	-	-	-	+272	-543	-	14	59	0	"
900	8	14	00	34	e 00	36	i 01	06	i 01	05	-	-	-	+69	+110	-	8	24	0	"
901	8	e 15	29	07	-	-	29	32	e 29	33	-	-	-	-	-	-	4	47	0	"
902	8	e 16	35	27	-	-	36	01	e 36	00	-	-	-	-	-	-	2	20	0	"
903	8	e 17	32	03	-	-	e 32	32	-	-	-	-	-	-	-	-	2	53	0	"
904	8	17	-	-	-	-	e 49	56	-	-	-	-	-	-	-	-	2	08	0	"
905	8	18	-	-	-	-	e 11	30	-	-	-	-	-	-	-	-	2	07	0	"
906	8	e 19	14	32	-	-	15	07	e 15	07	-	-	-	+ 8	-	-	6	39	0	"
907	8	19	-	-	-	-	e 41	51	-	-	-	-	-	-	-	-	2	05	0	"
908	8	e 22	26	47	-	-	27	18	-	-	-	-	-	-	-	-	3	51	0	"
909	8	e 23	05	55	-	-	i 06	22	e 06	20	-	-	-	+ 8	-	-	4	33	0	"
910	9	0	-	-	-	-	e 27	00	-	-	-	-	-	-	-	-	1	58	0	"
911	9	1	-	-	-	-	e 01	39	-	-	-	-	-	-	-	-	2	06	0	"
912	9	i 2	22	51	i 22	52	i 23	11	i 23	11	-	-	-	-	-	-	7	53	2	"
913	9	e 2	32	46	-	-	33	07	e 33	06	-	-	-	-	-	-	3	05	0	"
914	9	i 4	02	36	e 02	35	i 03	03	03	03	-	-	-	+32	-70	-	7	00	0	"
915	9	4	-	-	-	-	e 35	37	-	-	-	-	-	-	-	-	2	20	0	"
916	9	4	-	-	-	-	e 54	33	-	-	-	-	-	-	-	-	3	18	0	"
917	9	5	-	-	-	-	e 17	18	-	-	-	-	-	-	-	-	2	25	0	"
918	9	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	40	0	"
919	9	e 6	05	59	-	-	06	21	-	-	-	-	-	-	-	-	2	32	0	"
920	9	6	-	-	-	-	e 20	41	-	-	-	-	-	-	-	-	2	54	0	"
921	9	e 6	35	20	-	-	e 35	41	e 35	38	-	-	-	-10	-	-	4	43	0	"
922	9	e 7	36	02	e 36	02	36	32	36	32	-	-	-	+25	-33	-	5	39	0	"
923	9	e 7	42	34	-	-	42	57	-	-	-	-	-	-5	-	-	4	08	0	"
924	9	7	49	14	e 49	13	i 49	41	49	41	-	-	-	-12	-	-	4	10	0	"
925	9	e 8	16	05	-	-	e 16	26	-	-	-	-	-	-	-	-	3	02	0	"
926	9	e 8	30	51	-	-	31	25	e 31	24	-	-	-	+ 6	-	-	4	00	0	"
927	9	8	-	-	-	-	e 35	29	-	-	-	-	-	-	-	-	2	27	0	"
928	9	i 9	09	09	i 09	10	i 09	37	i 09	39	-	-	-	-	-	-	6	02	1	"
929	9	i 9	16	39	i 16	38	i 17	12	i 17	12	-	-	-	-	-	-	57	27	0	"
930	9	? 9	35	14	-	-	? 35	40	-	-	-	-	-	-6	-	-	3	34	0	"

EARTHQUAKES, 1938.



No.	Date 1938	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			
931	Nov. 9	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima
932	9	? 9	40	53	-	-	? 41	28	-	-	-	-	-	-	-	-	3	07	0	Prefecture
933	9	e 9	48	38	-	-	e 49	04	-	-	-	-	-	-	-	-	2	18	0	"
934	9	9			-	-	e 54	43	-	-	-	-	-	-	-	-	1	42	0	"
935	9	10			-	-	e 12	25	-	-	-	-	-	-	-	-	1	33	0	"
936	9	10			-	-	e 26	45	-	-	-	-	-	-	-	-				"
937	9	11			-	-	e 00	35	-	-	-	-	-	-	-	-	1	47	0	"
938	9	e 11	42	02	-	-	e 42	29	e 42	31	-	-	-	-	-	-	3	09	0	"
939	9	e 12	05	58	-	-	06	22	e 06	19	-	-	-	-	-	-	2	39	0	"
940	9	12	37	52	37	51	i 38	14	i 38	15	-	-	-	+67	+70	7	45	0	"	
941	9	13			-	-	e 57	12	-	-	-	-	-	-	-	-	1	23	0	"
942	9	e 14	39	08	-	-	e 39	39	e 39	38	-	-	-	+10	-	5	49	0	"	
843	9	14			-	-	e 55	00	-	-	-	-	-	-	-	-	2	25	0	"
944	9	15			-	-	e 01	43	-	-	-	-	-	-	-	-	1	26	0	"
945	9	e 15	26	36	-	-	e 26	59	-	-	-	-	-	-	-	-	3	24	0	"
946	9	e 15	50	15	-	-	50	40	50	40	-	-	-	-25	-33	7	52	0	"	
947	9	e 16	01	34	-	-	e 01	59	e 01	59	-	-	-	-	-	-	3	06	0	"
948	9	16			-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	"
949	9	16	09	32	i 09	32	i 10	07	i 10	07	-	-	-	-	-	-	13	16	0	"
950	9	17			-	-	e 02	01	-	-	-	-	-	-	-	-	1	26	0	"
951	9	17			-	-	e 41	00	-	-	-	-	-	-	-	-	1	44	0	"
952	9	e 18	20	16	-	-	20	36	e 20	36	-	-	-	-	-	-	4	07	0	"
953	9	19			-	-	-	-	-	-	-	-	-	-	-	-	1	13	0	"
954	9	e 19	42	50	-	-	e 43	13	-	-	-	-	-	-	-	-	2	43	0	"
955	9	19			-	-	? 46	56	-	-	-	-	-	-	-	-	2	55	0	"
956	9	20			-	-	? 25	39	-	-	-	-	-	-	-	-	1	47	0	"
957	9	e 20	51	12	-	-	i 51	46	e 51	46	-	-	-	-6	-	4	16	0	"	
958	9	e 21	36	19	-	-	e 36	43	-	-	-	-	-	-	-	2	21	0	"	
959	9	21	50	52	50	52	i 51	17	51	16	-	-	-	-21	-	4	05	0	"	
960	9	22			-	-	e 10	45	-	-	-	-	-	-	-	1	41	0	"	
961	9	23	08	46	e 08	47	i 09	16	i 09	15	-	-	-	-25	+43	7	27	0	"	
962	9	23			-	-	e 23	10	-	-	-	-	-	-	-	-	2	59	0	"
963	10	e 23	26	09	-	-	e 26	33	-	-	-	-	-	-	-	-	3	29	0	"
964	10	e 1	04	09	-	-	04	36	-	-	-	-	-	-	-	-	3	10	0	"
965	10	e 1	18	18	-	-	e 18	44	-	-	-	-	-	-	-	-	3	05	0	"
966	10	1			-	-	e 46	22	-	-	-	-	-	-	-	-	1	45	0	"
967	10	2			-	-	e 11	15	-	-	-	-	-	-	-	-	2	20	0	"
968	10	i 2	24	24	i 24	26	i 24	53	i 24	53	-	-	-	-99	-167	11	25	0	"	
969	10	3			-	-	e 05	41	-	-	-	-	-	-	-	-	1	20	0	"
970	10	3			-	-	e 41	22	-	-	-	-	-	-	-	-	1	26	0	"
971	10	4			-	-	e 44	15	-	-	-	-	-	-	-	-	1	56	0	"
972	10	5	54	09	e 54	08	i 54	33	i 54	35	-	-	-	+21	-33	5	45	0	"	
973	10	e 6	03	12	-	-	03	42	e 03	42	-	-	-	-	-	3	57	0	"	
974	10	e 6	45	32	e 45	32	i 46	11	i 46	13	-	-	-	-55	+147	11	41	0	"	
975	10	e 7	29	45	-	-	30	24	-	-	-	-	-	-	-	3	16	0	"	
976	10	7			-	-	? 53	37	-	-	-	-	-	-	-	-	1	40	0	"
977	10	e 8	16	11	e 16	12	16	55	16	54	-	-	-	-38	-67	10	58	0	"	
978	10	e 8	42	23	-	-	42	59	e 43	00	-	-	-	-	-	3	29	0	"	
979	10	e 8	49	20	e 49	22	49	50	49	49	-	-	-	+17	-	4	20	0	"	
980	10	e 9	07	47	-	-	08	10	-	-	-	-	-	-	-	2	29	0	"	
981	10	e 9	18	24	-	-	18	55	-	-	-	-	-	-	-	4	13	0	"	
982	10	e 9	36	07	-	-	? 36	50	e 36	52	-	-	-	-	-	2	55	0	"	
983	10	e 10	48	16	e 48	16	i 49	17	e 49	17	-	-	-	⊕	-457	4	12	0	SE Off Hatizyô I.	
984	10	11	04	10	e 04	13	i 04	37	i 04	38	-	-	-	-	-	7	39	0	E off Hukusima	
985	10	12			-	-	e 20	45	-	-	-	-	-	-	-	1	57	0	"	
986	10	e 13	03	04	-	-	i 03	27	e 03	30	-	-	-	-16	-33	6	41	0	Prefecture	

EARTHQUAKES, 1938.



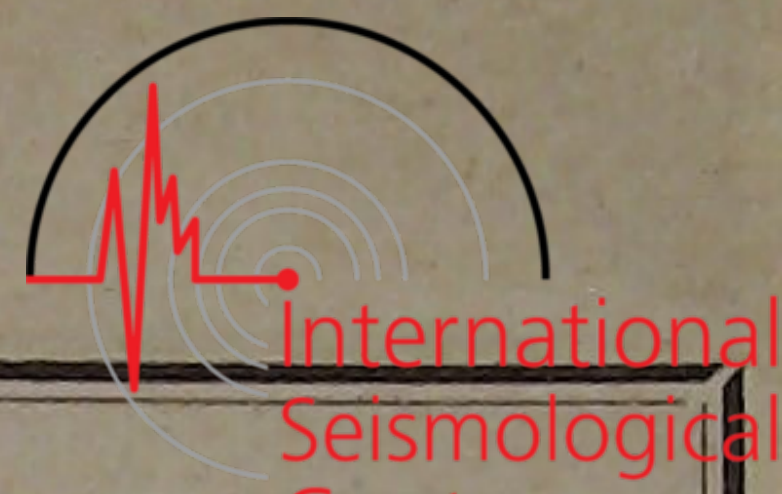
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake		Intensity	Approximate Epicenter	
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s			
986	Nov. 10	e13	20	53	-	-	m	s	21	26	e21	26	-	-	-	-	-	-	3	02	0	E off Hukusima
987	10	i16	51	05	*	-	i51	30	*	-	-	-	-	-	-	-	-	4	40	0	„ Prefecture	
988	10	17	-	-	-	-	e43	10	-	-	-	-	-	-	-	-	-	1	28	0	„	
989	10	18	-	-	-	-	e11	14	-	-	-	-	-	-	-	-	-	3	23	0	„	
990	10	e20	26	38	e26	35	i33	14	33	09	-	-	?37	33	-	-	-	9	58	0	North Pacific ocean	
991	10	i22	22	56	*	-	i23	29	*	-	-	-	-	-	⊕	*	-	-	-	0	E off Hukusima	
992	10	e23	51	12	-	-	51	40	e51	39	-	-	-	-	-	-	-	4	24	0	„ Prefecture	
993	11	0	26	28	e26	31	i27	01	i27	03	-	-	-	-	+51	+60	-	10	34	0	„	
994	11	1	-	-	-	-	e05	40	-	-	-	-	-	-	-	-	-	2	49	0	Distant	
995	11	2	-	-	-	-	e26	30	-	-	-	-	-	-	-	-	-	1	20	0	E off Hukusima Prefecture	
996	11	2	-	-	-	-	48	58	-	-	-	-	-	-	-	-	-	2	18	0	„	
997	11	e 2	58	39	-	-	i59	58	e59	56	-	-	-	-	-19	+88	-	114	29	0	Off Hatizyô I.	
998	11	? 4	39	50	-	-	?41	10	-	-	-	-	-	-	+ 5	-	-	12	46	0	„	
999	11	5	-	-	-	-	e39	59	-	-	-	-	-	-	-	-	-	2	06	0	E off Hukusima	
1000	11	e 8	18	49	-	-	i19	30	e19	32	-	-	-	-	+ 5	-	-	3	39	0	„ Prefecture	
1001	11	e 8	22	48	-	-	i23	21	-	-	-	-	-	-	- 9	-	-	3	47	0	„	
1002	11	e 8	48	02	-	-	48	32	-	-	-	-	-	-	- 3	-	-	2	54	0	„	
1003	11	e14	10	07	e10	08	i10	42	i10	43	-	-	-	-	-19	-33	-	7	29	0	„	
1004	11	14	18	01	e18	00	i18	33	i18	33	-	-	-	-	+43	-53	-	8	40	0	„	
1005	11	e17	14	10	-	-	14	46	-	-	-	-	-	-	-	-	-	2	58	0	„	
1006	11	e17	18	04	-	-	e18	32	-	-	-	-	-	-	-	-	-	4	00	0	„	
1007	11	e18	01	55	-	-	02	21	-	-	-	-	-	-	- 4	-	-	4	39	0	„	
1008	11	18	-	-	-	-	e27	47	-	-	-	-	-	-	-	-	-	2	26	0	„	
1009	11	e18	34	38	-	-	e35	06	-	-	-	-	-	-	-	-	-	3	16	0	„	
1010	11	e20	37	01	-	-	e37	32	-	-	-	-	-	-	-	-	-	2	55	0	„	
1011	11	23	-	-	-	-	e25	48	-	-	-	-	-	-	-	-	-	3	02	0	„	
1012	12	e 1	32	56	-	-	e33	13	-	-	-	-	-	-	-	-	-	1	57	0	„	
1013	12	2	-	-	-	-	e03	41	-	-	-	-	-	-	-	-	-	2	49	0	„	
1014	12	i 2	31	19	e31	19	i31	49	i31	46	-	-	-	-	-15	+25	-	4	17	0	„	
1015	12	e 4	13	21	-	-	13	51	e13	49	-	-	-	-	+ 8	-	-	4	32	0	„	
1016	12	4	-	-	-	-	e46	23	-	-	-	-	-	-	-	-	-	1	21	0	„	
1017	12	5	-	-	-	-	e14	55	-	-	-	-	-	-	-	-	-	2	16	0	Kasima-nada	
1018	12	5	-	-	-	-	e21	02	-	-	-	-	-	-	-	-	-	1	38	0	E off Hukusima	
1019	12	5	-	-	-	-	e49	36	-	-	-	-	-	-	-	-	-	1	29	0	„ Prefecture	
1020	12	e 5	57	05	-	-	e57	27	e57	25	-	-	-	-	+ 5	-	-	4	50	0	„	
1021	12	e 6	09	38	-	-	e09	58	-	-	-	-	-	-	-	-	-	2	33	0	„	
1022	12	e 7	13	56	-	-	14	23	e14	22	-	-	-	-	+ 4	-	-	4	05	0	„	
1023	12	e 7	46	28	-	-	e47	06	-	-	-	-	-	-	-	-	-	2	45	0	„	
1024	12	e 8	03	57	03	58	i04	31	i04	32	-	-	-	-	-117	-218	-	14	03	0	„	
1025	12	e 9	03	07	-	-	e03	34	e03	33	-	-	-	-	-	-	-	3	49	0	„	
1026	12	9	-	-	-	-	e15	51	-	-	-	-	-	-	-	-	-	1	20	0	„	
1027	12	14	-	-	-	-	e16	34	-	-	-	-	-	-	-	-	-	2	46	0	„	
1028	12	14	35	45	35	43	i36	06	i36	05	-	-	-	-	-26	-	-	6	08	1	E off Hukusima	
1029	12	e14	52	59	e53	01	i55	04	55	02	-	-	-	-	+13	-25	-	25	55	0	Off Etoroff I.	
1030	12	15	-	-	-	-	?29	02	e29	09	-	-	-	-	-	-	-	6	34	0	„	
1031	12	16	-	-	-	-	e07	28	e07	26	-	-	-	-	-	-	-	6	32	0	„	
1032	12	e17	06	56	-	-	e07	24	-	-	-	-	-	-	-	-	-	3	17	0	E off Hukusima	
1033	12	18	-	-	-	-	e50	20	-	-	-	-	-	-	-	-	-	1	44	0	„ Prefecture	
1034	12	19	35	15	e35	13	35	42	e35	43	-	-	-	-	-15	-	-	5	55	0	„	
1035	12	20	-	-	-	-	?28	53	-	-	-	-	-	-	-	-	-	1	43	0	Off Uruppu	
1036	12	20	-	-	-	-	?32	25	-	-	-	-	-	-	-	-	-	2	34	0	E off Hukusima	
1037	13	e 2	04	06	e04	06	i04	34	04	34	-	-	-	-	-11	-	-	4	11	0	„ Prefecture	
1038	13	3	-	-	-	-	e10	03	-	-	-	-	-	-	-	-	-	2	15	0	Off Uruppu I.	
1039	13	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	44	0	„	
1040	18	e 5	11	48	-	-	i12	13	e12	08	-	-	-	-	+ 8	-	-	4	00	0	E off Hukusima Prefecture	

EARTHQUAKES, 1938.



No.	Date 1938	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	m	s		
1041	Nov. 13	e 5	41	10	-	-	41	51	e 41	51	-	-	-	-	+ 5	-	3	58	0	E off Hukusima	
1042	13	e 6	37	12	-	-	37	48	-	-	-	-	-	+ 8	-	4	25	0	" Prefecture		
1043	13	? 7	00	12	-	-	? 00	34	-	-	-	-	-	-	-	2	27	0	"		
1044	13	8	-	-	-	-	? 17	19	-	-	-	-	-	-	-	1	57	0	"		
1045	13	9	40	34	e 40	35	i 41	00	40	57	-	-	-	- 6	-	4	36	0	"		
1046	13	10	-	-	-	-	e 08	14	-	-	-	-	-	-	-	1	39	0	"		
1047	13	11	31	35	-	-	32	13	e 32	14	-	-	-	- 10	- 23	4	51	0	"		
1048	13	e 12	32	40	-	-	33	02	-	-	-	-	-	-	-	3	07	0	"		
1049	13	13	15	43	15	44	i 17	04	i 17	07	-	-	-	+ 118	- 115	8	18	1	"		
1050	13	e 14	56	05	-	-	56	36	-	-	-	-	-	-	-	3	35	0	"		
1051	13	e 16	24	21	-	-	e 24	52	-	-	-	-	-	-	-	3	46	0	Off Miyako		
1052	13	e 18	08	01	-	-	e 08	24	-	-	-	-	-	-	-	3	18	0	E off Hukusima		
1053	13	e 20	51	15	e 51	20	51	41	51	43	-	-	-	+ 6	-	4	35	0	" Prefecture		
1054	13	e 21	37	21	-	-	i 37	49	37	47	-	-	-	- 5	-	6	46	0	"		
1055	13	e 22	14	33	-	-	e 14	46	-	-	-	-	-	-	-	2	21	0	"		
1056	13	22	32	08	e 32	07	i 32	41	i 32	39	-	-	-	⊕ - 1908	-	-	-	0	"		
1057	13	e 22	59	59	e 59	59	e 60	47	e 60	45	-	-	-	+ 28	-	-	-	0	"		
1058	13	e 23	14	57	-	-	15	30	e 15	31	-	-	-	- 7	-	6	29	0	"		
1059	13	e 23	21	59	-	-	22	32	e 22	30	-	-	-	+ 11	-	5	32	0	"		
1060	13	e 23	33	19	-	-	e 33	45	-	-	-	-	-	- 4	-	7	04	0	"		
1061	14	e 0	25	56	-	-	e 26	19	-	-	-	-	-	-	-	5	02	0	"		
1062	14	e 0	31	55	-	-	32	23	e 32	20	-	-	-	-	-	2	51	0	"		
1063	14	e 0	44	28	-	-	e 44	54	-	-	-	-	-	-	-	3	46	0	"		
1064	14	e 1	00	20	-	-	00	51	e 00	51	-	-	-	+ 5	-	4	17	0	"		
1065	14	e 1	17	34	-	-	e 17	57	-	-	-	-	-	+ 6	-	4	37	0	"		
1066	14	e 1	58	43	-	-	59	04	-	-	-	-	-	-	-	3	06	0	"		
1067	14	e 2	25	41	-	-	26	11	-	-	-	-	-	-	-	3	23	0	"		
1068	14	i 2	36	59	i 37	01	i 37	47	i 37	49	-	-	-	- 504	- 553	6	05	0	"		
1069	14	e 2	51	07	-	-	51	33	e 51	32	-	-	-	-	-	2	55	0	"		
1070	14	e 3	13	02	-	-	e 13	29	-	-	-	-	-	-	-	2	55	0	"		
1071	14	4	15	48	e 15	47	i 16	21	i 16	22	-	-	-	- 110	- 173	8	16	0	"		
1072	14	4	-	-	-	-	e 30	06	-	-	-	-	-	-	-	2	30	0	"		
1073	14	4	-	-	-	-	e 39	38	-	-	-	-	-	-	-	1	52	0	"		
1074	14	e 5	19	35	-	-	e 19	49	-	-	-	-	-	-	-	2	23	0	"		
1075	14	e 5	46	57	e 46	58	i 47	23	i 47	26	-	-	-	+ 19	- 48	9	58	0	"		
1076	14	e 6	36	44	-	-	e 37	10	-	-	-	-	-	-	-	2	39	0	"		
1077	14	e 6	51	56	-	-	52	31	-	-	-	-	-	-	-	2	56	0	"		
1078	14	6	-	-	-	-	e 56	03	-	-	-	-	-	-	-	2	53	0	"		
1079	14	e 6	59	55	-	-	e 60	24	-	-	-	-	-	- 5	-	4	27	0	"		
1080	14	7	-	-	-	-	e 29	55	-	-	-	-	-	-	-	2	23	0	"		
1081	14	e 7	56	31	-	-	56	53	e 56	57	-	-	-	- 10	-	4	10	0	"		
1082	14	e 8	58	17	e 58	17	i 58	57	58	59	-	-	-	- 11	- 20	6	45	0	"		
1083	14	12	-	-	-	-	? 15	03	-	-	-	-	-	-	-	3	22	0	"		
1084	14	e 13	35	35	-	-	36	08	e 36	12	-	-	-	-	-	3	10	0	Distant		
1085	14	e 14	25	01	e 24	59	i 25	38	e 25	41	-	-	-	- 16	- 33	6	05	0	E off Hukusima		
1086	14	17	34	47	e 34	47	i 35	08	i 35	08	-	-	-	- 27	- 28	4	07	0	" Prefecture		
1087	15	e 0	39	03	-	-	e 39	38	e 39	32	-	-	-	-	-	4	09	0	"		
1088	15	0	-	-	-	-	e 57	59	-	-	-	-	-	-	-	2	18	0	"		
1089	15	e 1	59	07	e 59	08	i 59	41	i 59	41	-	-	-	+ 16	- 20	5	58	0	"		
1090	15	2	16	21	16	19	i 16	53	i 16	50	-	-	-	+ 54	+ 95	-	-	0	"		
1091	15	? 2	20	46	20	47	i 21	23	i 21	24	-	-	-	+ 35	- 53	6	25	0	"		
1092	15	3	-	-	-	-	e 30	27	-	-	-	-	-	-	-	2	24	0	"		
1093	15	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	32	0	"		
1094	15	e 4	02	04	-	-	i 02	39	e 02	41	-	-	-	-	-	3	46	0	"		
1095	15	4	-	-	-	-	e 19	36	-	-	-	-	-	-	-	2	07	0	"		

EARTHQUAKES, 1938.



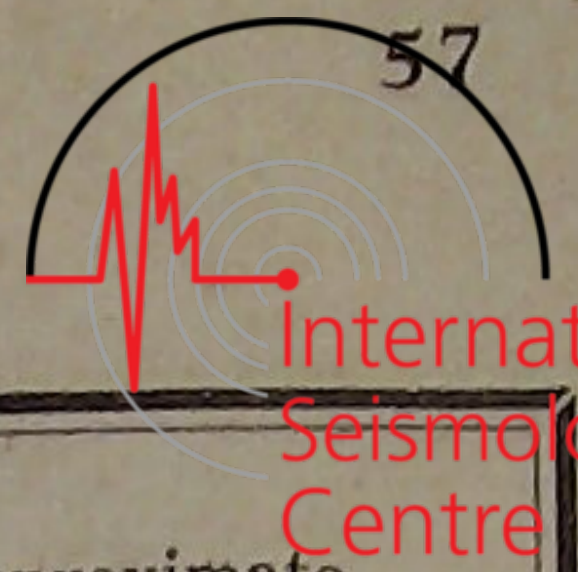
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
1096	Nov. 15	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima		
1097	15	e 6	26	18	-	-	e 21	23	-	-	-	-	-	-	3	19	0	Prefecture		
1098	15	8	-	-	-	-	-	-	-	-	-	-	-	-	1	16	0	"		
1099	15	e 8	38	56	-	-	e 39	19	-	-	-	-	-	-	1	51	0	"		
1100	15	e 9	59	36	-	-	59	55	e 59	53	-	-	-	-	2	27	0	"		
1101	15	e 10	38	02	-	-	e 38	28	-	-	-	-	-	-	2	26	0	"		
1102	15	e 15	23	41	e 23	39	24	47	e 24	45	-	-	-	-	25	32	0	ENE off Hatizyô I.		
1103	15	e 17	25	52	e 25	50	i 26	26	26	23	-	-	+13	-20	4	46	0	E off Hukusima		
1104	15	e 17	40	49	e 40	48	i 41	12	e 41	09	-	-	+5	-	2	51	0	Prefecture		
1105	15	17	-	-	-	-	e 44	05	e 44	05	-	-	-	-	2	43	0	"		
1106	15	e 18	01	13	e 01	14	02	09	e 02	08	-	-	-13	-	6	00	0	"		
1107	15	21	10	17	e 10	15	i 10	48	e 10	48	-	-	-20	-25	7	05	0	"		
1108	15	21	-	-	-	-	e 18	23	-	-	-	-	-	-	3	41	0	"		
1109	16	e 0	13	30	-	-	13	51	-	-	-	-	-	-	2	24	0	"		
1110	16	e 7	20	30	-	-	20	53	-	-	-	-	-	-	3	23	0	"		
1111	16	e 8	07	35	-	-	08	00	e 07	54	-	-	-	-	3	45	0	"		
1112	16	e 11	05	20	-	-	05	53	-	-	-	-	-	-	2	33	0	"		
1113	16	i 11	08	37	i 08	37	i 08	58	i 08	57	-	-	⊕	+2298	28	46	3	"		
1114	16	e 11	50	46	-	-	e 51	08	-	-	-	-	-	-	2	20	0	"		
1115	16	e 12	59	38	-	-	59	56	e 59	54	-	-	-5	-	3	19	0	"		
1116	16	13	32	57	e 32	54	i 33	31	i 33	28	-	-	-39	+48	4	28	0	"		
1117	16	e 14	46	54	-	-	47	26	-	-	-	-	-	-	2	55	0	"		
1118	16	e 16	19	17	-	-	19	43	-	-	-	-	-	-	2	49	0	"		
1119	16	e 19	51	52	-	-	52	15	-	-	-	-	-	-	2	38	0	"		
1120	16	e 23	18	45	-	-	19	12	-	-	-	-	-	-	2	02	0	"		
1121	16	* 23	-	-	-	-	e 21	18	-	-	-	-	-	-	2	37	0	"		
1122	17	3	00	20	e 00	22	i 00	48	e 00	48	-	-	-16	-25	6	15	0	"		
1123	17	3	-	-	-	-	? 16	43	-	-	-	-	-	-	3	07	0	"		
1124	17	4	02	38	02	38	09	01	09	01	14	07	14	17	+9	-	40	18	0	Distant
1125	17	4	-	-	-	-	? 17	53	-	-	-	-	-	-	3	32	0	"		
1126	17	4	-	-	-	-	-	-	-	-	-	-	-	-	3	04	0	E off Hukusima		
1127	17	e 6	43	08	-	-	43	21	e 43	19	-	-	-	-	2	17	0	Prefecture		
1128	17	7	09	14	e 09	14	i 09	40	09	39	-	-	+15	-18	4	53	0	"		
1129	17	e 8	59	07	-	-	e 59	34	-	-	-	-	-	-	4	02	0	"		
1130	17	e 9	54	52	-	-	55	14	-	-	-	-	-	-	1	18	0	"		
1131	17	e 12	36	25	-	-	36	54	-	-	-	-	-	-	3	06	0	"		
1132	17	e 13	48	30	-	-	48	55	-	-	-	-	-	-	3	31	0	"		
1133	17	18	-	-	-	-	-	-	-	-	-	-	-	-	2	06	0	"		
1134	17	22	-	-	-	-	? 55	15	-	-	-	-	-	-	1	01	0	"		
1135	18	6	55	25	e 55	27	i 55	47	i 55	48	-	-	-10	-	3	05	0	"		
1136	18	e 7	26	13	-	-	26	30	e 26	29	-	-	-	-	1	55	0	"		
1137	18	e 7	53	05	-	-	53	32	e 53	32	-	-	+6	-	4	27	0	"		
1138	18	e 9	48	31	-	-	48	54	e 48	53	-	-	-	-	2	29	0	"		
1139	18	11	-	-	-	-	? 10	04	-	-	-	-	-	-	1	49	0	"		
1140	18	e 14	57	38	-	-	58	02	e 57	59	-	-	+6	-	3	51	0	"		
1141	18	e 15	30	15	-	-	30	53	e 30	56	-	-	-11	-	5	24	0	"		
1142	18	e 17	50	32	e 50	28	i 51	03	e 50	59	-	-	-28	+25	5	45	0	"		
1143	18	e 18	34	34	-	-	35	10	e 35	10	-	-	-	-	6	10	0	Off Uruppu I.		
1144	18	e 18	40	37	-	-	41	01	e 41	05	-	-	-5	-	4	03	0	Off Hatinohe		
1145	18	20	-	-	-	-	? 43	42	-	-	-	-	-	-	2	29	0	Off Uruppu I.		
1146	18	e 23	50	44	-	-	51	10	e 51	04	-	-	-6	-	3	51	0	E off Hukusima		
1147	19	0	-	-	-	-	e 21	43	-	-	-	-	-	-	2	21	0	Prefecture		
1148	19	? 2	54	14	-	-	e 54	34	-	-	-	-	-	-	2	48	0	"		
1149	19	2	-	-	-	-	e 55	25	-	-	-	-	-	-	2	28	0	"		
1150	19	e 4	36	37	-	-	e 37	21	-	-	-	-	-	-	2	18	0	"		

EARTHQUAKES, 1938.



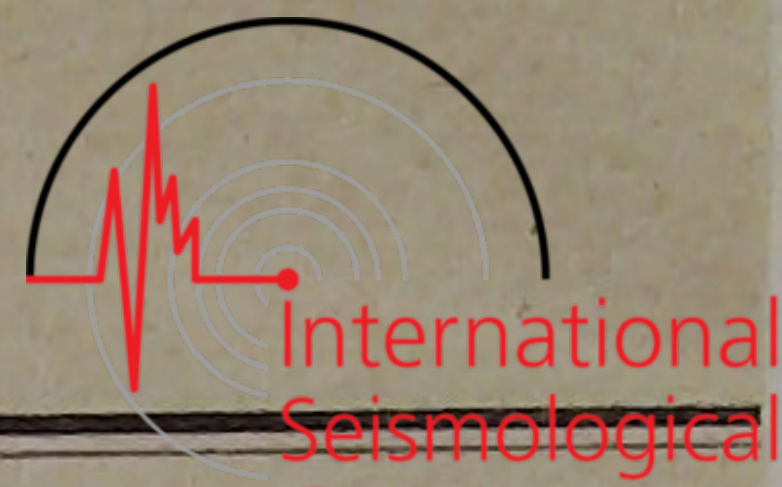
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
1206	Nov. 22	e 4 38 43				e 39 15											3 41	0	E off Hukusima	
1207	22	e 4 47 47	e 47 50			48 20	e 48 20							-11		4 38	0	„ Prefecture		
1208	22	4				e 58 10										2 29	0	„		
1209	22	6				e 45 31										1 20	0	„		
1210	22	8 14 08	14 09			i 14 39	i 14 40							-256	+375	14 21	0	„		
1211	22	e 8 35 58				e 37 06										4 39	0	Off Bôsô Pen.		
1212	22	e 9 21 07				21 38	e 21 39									3 31	0	E off Hukusima		
1213	22	9 33 36	e 33 35			i 34 05	34 04							+35	-53	6 34	0	„ Prefecture		
1214	22	10				e 13 58	e 13 57									3 03	0	„		
1215	22	e 10 55 50	e 55 51			56 11	e 56 15							+10		5 27	0	„		
1216	22	e 11 39 02	e 39 04			i 39 33	39 35							-23	-25	7 42	0	„		
1217	28	e 13 00 58				e 01 24										3 08	0	„		
1218	22	e 14 45 02				45 22										1 56	0	„		
1219	22	e 15 42 11				e 42 37										2 51	0	„		
1220	22	17				e 31 25										1 21	0	„		
1221	22	e 17 37 23				e 37 46										2 49	0	„		
1222	22	e 18 29 15				29 41	e 29 38									2 42	0	„		
1223	22	18 34 43	e 34 45			i 35 11	i 35 13							+35	+48	6 55	0	„		
1224	22	e 20 15 04				15 29										2 01	0	„		
1225	22	23				e 52 43										1 15	0	„		
1226	23	0 16 46	e 16 47			i 17 12	i 17 15							+111	-175	5 27	0	„		
1227	23	1				e 15 03										3 08	0	„		
1228	23	1				e 46 27										2 07	0	„		
1229	23	2														1 13	0	„		
1230	23	e 2 18 50				e 19 18										3 54	0	„		
1231	23	2				e 34 02										2 27	0	„		
1232	23	e 3 30 38				31 05								+3		3 05	0	„		
1233	23	3				e 43 38										2 25	0	„		
1234	23	e 3 57 35				i 58 00	e 57 59							-7	-15	?	0	„		
1235	23	? 3 59 26	e 59 26			i 59 48	59 48							+13	-25	4 13	0	„		
1236	23	e 4 54 11				55 07	e 55 11									5 01	0	Off Urakawa		
1237	23	e 5 14 52				15 17	e 15 19							-11	-25	6 07	0	E off Hukusima		
1238	23	5				e 58 34										2 07	0	Prefecture		
1239	23	e 8 12 25				12 51										2 49	0	„		
1240	23	e 8 19 52	e 19 52			i 21 40	e 21 39									7 07	0	Off Etoroff		
1241	23	e 12 04 53				05 20								-4		3 16	0	E off Hukusima		
1242	23	e 13 18 47				e 19 28	e 19 29							+2		4 29	0	„ Prefecture		
1243	23	14 00 12	00 14			i 00 47	i 00 48							+115	+210	8 42	0	„		
1244	23	e 14 24 20	e 24 25			i 24 53	i 24 55							-21		5 01	0	„		
1245	23	e 16 45 03				45 25										2 47	0	„		
1246	23	e 18 04 15				e 04 55										4 01	0	Neighbourhood of		
1247	23	e 19 28 37				e 29 04										2 16	0	Tiba		
1248	23	e 19 41 37				42 02										3 21	0	E off Hukusima		
1249	23	e 19 48 06				e 48 33										3 09	0	Prefecture		
1250	23	e 20 52 55				53 32	e 53 33							-11		4 56	0	„		
1251	23	20				e 58 22										1 17	0	„		
1252	23	22				e 26 05										1 37	0	„		
1253	24	0														?	0	„		
1254	24	1				e 27 18										2 18	0	„		
1255	24	1				e 48 34										2 08	0	„		
1256	24	e 2 40 14				40 28										1 58	0	„		
1257	24	2				e 42 40										2 07	0	„		
1258	24	3				e 38 48										1 28	0	„		
1259	24	4														0 56	0	„		
1260	24	e 7 50 45				51 22										3 38	0	„		

EARTHQUAKES, 1938.



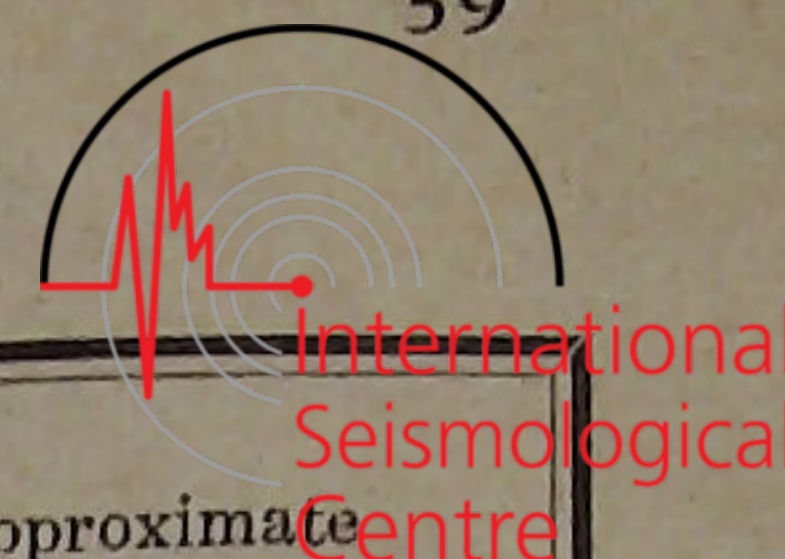
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
1261	Nov. 24	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	E off Hukusima Prefecture
1262	24	10	-	-	-	-	e11	31	-	-	-	-	-	-	-	1	29	0		
1263	24	10	-	-	-	-	e20	20	-	-	-	-	-	-	-	2	05	0		
1264	24	13	-	-	-	-	e44	25	-	-	-	-	-	-	-	1	56	0		
1265	24	i13	48	08	i48	07	i48	32	i48	31	-	-	-	-101	-130	9	44	2		
1266	24	18	-	-	-	-	?01	31	-	-	-	-	-	-	-	1	13	0		
1267	25	?19	55	58	-	-	56	11	-	-	-	-	-	-	-	2	32	0	NE off cape Siriya	
1268	25	e2	02	41	-	-	e03	07	e03	07	-	-	-	-	-	4	29	0		
1269	25	i2	08	50	08	50	i09	15	i09	16	-	-	-	+20	-28	6	08	0		
1270	25	e2	29	41	-	-	30	06	-	-	-	-	-	-	-	2	30	0		
1271	25	e3	40	31	-	-	i40	51	e40	52	-	-	-	-	-	3	04	0		
1272	25	e4	11	15	-	-	11	43	e11	44	-	-	-	-	-	4	17	0	E off Hukusima Prefecture	
1273	25	?5	49	28	-	-	?50	34	-	-	-	-	-	-	-	5	09	0		
1274	25	i8	21	00	i20	59	i21	25	i21	25	-	-	-	⊕	-1613	?	?	3		
1275	25	?8	35	37	-	-	?36	01	-	-	-	-	-	-	-	2	56	0		
1276	25	e10	04	27	e04	26	i04	53	i04	51	-	-	-	-10	-18	4	21	0		
1277	25	e10	32	23	-	-	e32	42	-	-	-	-	-	-	-	2	21	0	"	
1278	25	e10	49	11	-	-	e49	28	-	-	-	-	-	-	-	1	55	0		
1279	25	e11	05	56	-	-	06	19	-	-	-	-	-	-	-	2	33	0		
1280	25	e11	31	19	-	-	31	42	e31	43	-	-	-	-	-	3	45	0		
1281	25	e11	55	35	-	-	55	55	-	-	-	-	-	-	-	2	05	0		
1282	25	e12	52	27	-	-	52	50	-	-	-	-	-	-	-	1	44	0	Naighbourhood of Edosaki	
1283	25	12	-	-	-	-	e55	10	-	-	-	-	-	-	-	1	35	0		
1284	25	e16	37	55	-	-	38	16	e38	18	-	-	-	-	-	3	26	0		
1285	25	e21	38	23	-	-	e38	51	-	-	-	-	-	-	-	4	07	0		
1286	25	e22	32	39	-	-	e32	55	-	-	-	-	-	-	-	2	24	0		
1287	26	e23	00	13	-	-	e00	34	-	-	-	-	-	-	-	2	32	0	E off Hukusima Prefecture	
1288	26	i3	36	39	i36	39	i37	06	i37	03	-	-	-	+187	-178	11	42	0		
1289	26	e7	31	08	-	-	31	27	e31	28	-	-	-	-	-	2	17	0		
1290	26	e8	37	59	e37	58	38	24	e38	23	-	-	-	-9	-	?	?	0		
1291	26	e8	40	47	e40	47	i41	13	i41	10	-	-	-	+29	-40	7	24	0		
1292	26	8	-	-	-	-	e56	02	-	-	-	-	-	-	-	2	28	0	"	
1293	26	i10	01	39	i01	41	i02	02	i02	06	-	-	-	+176	+313	1	18	0		
1294	26	e14	01	33	-	-	01	59	-	-	-	-	-	-	-	2	23	0		
1295	26	16	-	-	-	-	e01	56	-	-	-	-	-	-	-	2	05	0		
1296	26	e19	08	48	-	-	09	11	-	-	-	-	-	-	-	2	19	0		
1297	27	e20	08	57	-	-	09	15	-	-	-	-	-	-	-	2	17	0	Kumagaya E off Katuura	
1298	27	e2	43	38	-	-	e44	24	-	-	-	-	-	-	-	3	40	0		
1299	27	e4	20	16	-	-	e20	40	-	-	-	-	-	-	-	3	05	0		
1300	27	e6	50	23	-	-	50	47	-	-	-	-	-	-	-	2	33	0		
1301	27	e11	54	32	-	-	e55	07	-	-	-	-	-	-	-	2	41	0		
1302	27	e13	26	56	-	-	i27	30	e27	29	-	-	-	-	-	3	10	0	E off Cape Esan	
1303	28	e20	04	30	-	-	i04	56	e04	56	-	-	-	+6	-	4	25	0		
1304	28	e2	03	53	-	-	04	32	e04	31	-	-	-	-18	+20	7	34	0		
1305	28	4	27	37	×	×	i28	13	×	×	-	-	-	+50	×	6	20	0		
1306	28	?16	09	01	-	-	09	20	-	-	-	-	-	-	-	2	33	0		
1307	28	e17	59	05	-	-	59	25	-	-	-	-	-	-	-	3	30	0	E off Hukusima Yûki Prefecture	
1308	29	e18	46	43	-	-	i47	20	-	-	-	-	-	-	-	4	23	0		
1309	29	i13	40	14	i40	15	i40	48	i40	49	-	-	-	⊕	-1713	?	?	0		
1310	29	e13	58	32	-	-	59	06	e59	02	-	-	-	-	-	5	12	0		
1311	29	14	-	-	-	-	e10	04	-	-	-	-	-	-	-	2	06	0		
1312	29	?14	12	30	-	-	?12	42	e12	42	-	-	-	+6	-	5	51	0	"	
1313	29	e14	33	20	-	-	33	56	e33	52	-	-	-	-	-	3	13	0		
1314	29	e15	06	34	-	-	e06	56	-	-	-	-	-	-	-	2	30	0		
1315	29	15	-	-	-	-	?21	36	-	-	-	-	-	-	-	2	06	0		
1315	29	15	28	57	29	01	i29	28	i29	28	-	-	-	-95	+200	9	21	0		

EARTHQUAKES, 1938.



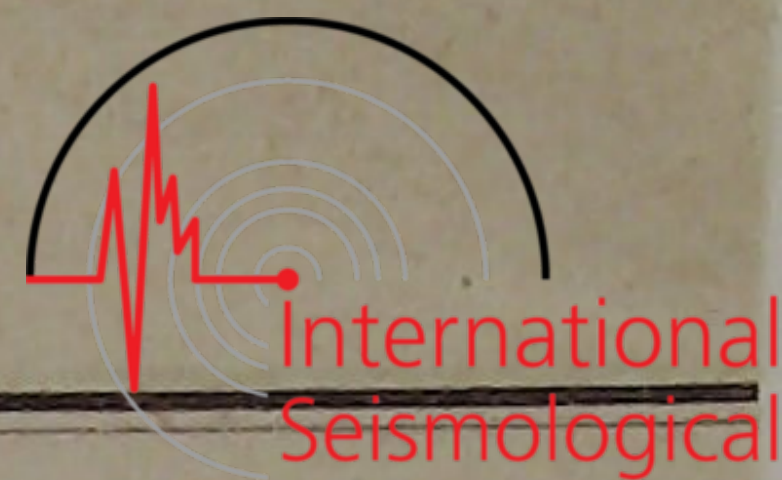
No.	Date 1938	P				S				L				Maximum Range of Motion				Duration of Total Earthquake		Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s		
1316	Nov. 29	e 16	17	49	-	-	18	17	e 18	17	-	-	-	-	-10	-	4	48	0	E off Hukusima	
1317	30	i 2	30	24	30	25	i 30	49	30	50	-	-	-	-	⊕	⊕	?		3	" Prefecture	
1318	30	e 3	03	49	-	-	04	12	-	-	-	-	-	-	-	-	3	49	0	"	
1319	30	3			-	-	e 19	19	-	-	-	-	-	-	-	-	2	31	0	"	
1320	30	e 3	26	56	-	-	e 27	27	-	-	-	-	-	-	-	-	4	03	0	"	
1321	30	3			-	-	e 50	52	-	-	-	-	-	-	-	-	1	58	0	"	
1322	30	4			-	-	e 16	27	-	-	-	-	-	-	-	-	2	34	0	"	
1323	30	e 4	40	03	-	-	40	35	-	-	-	-	-	-	-	-	4	07	0	"	
1324	30	4			-	-	e 46	05	-	-	-	-	-	-	-	-	1	56	0	"	
1325	30	5			-	-	e 08	53	-	-	-	-	-	-	-	-	2	52	0	"	
1326	30	5			-	-	e 15	45	-	-	-	-	-	-	-	-	1	59	0	"	
1327	30	7			-	-	e 27	43	-	-	-	-	-	-	-	-	1	34	0	"	
1328	30	10			-	-	e 22	05	-	-	-	-	-	-	-	-	1	38	0	"	
1329	30	15	01	34	01	37	i 01	59	i 02	03	-	-	-	-59	-70	7	58	0	"		
1330	30	15	16	50	16	51	i 17	17	i 17	19	-	-	-	+422	-573	12	19	2	"		
1331	30	15	31	29	31	30	i 31	57	i 31	59	-	-	-	-238	-298	10	37	0	"		
1332	30	e 17	08	16	-	-	e 08	46	-	-	-	-	-	-5	-	4	10	0	"		
1333	30	e 20	28	04	-	-	28	24	-	-	-	-	-	-	-	2	28	0	"		
1334	30	e 23	30	20	-	-	30	51	e 30	54	-	-	-	+7	-	3	51	0	"		
1335	Dec. 1	e 2	17	17	17	17	i 21	25	i 21	26	-	-	-	-57	+98	44	01	0	Mariana Is.		
1336	1	12			-	-	24	00	e 23	59	-	-	-	-	-	1	21	0	E off Hukusima		
1337	1	23			-	-	e 39	36	-	-	-	-	-	-	-	1	52	0	Prefecture		
1338	1	23	52	42	e 52	41	i 53	05	53	04	-	-	-	+14	-25	6	11	0	"		
1339	2	11			-	-	e 40	48	-	-	-	-	-	-	-	0	51	0	"		
1340	2	12			-	-	e 29	07	-	-	-	-	-	-	-	1	34	0	"		
1341	2	e 4	42	21	-	-	42	46	e 42	44	-	-	-	-	-	4	02	0	"		
1342	2	e 18	13	39	-	-	14	06	e 14	04	-	-	-	+6	-	4	34	0	E off Hukusima		
1343	3	e 0	09	53	-	-	10	18	-	-	-	-	-	-	-	3	15	0	Prefecture		
1344	3	i 0	43	49	43	47	i 44	18	i 44	16	-	-	-	+260	-402	17	42	0	"		
1345	3	e 1	02	08	-	-	02	37	-	-	-	-	-	-	-	3	39	0	"		
1346	3	6			-	-	e 47	45	-	-	-	-	-	-	-	1	23	0	"		
1347	3	i 12	12	20	i 12	20	i 12	50	i 12	49	-	-	-	⊕	-1058	33	19	2	"		
1348	3	16	32	39	-	-	33	06	-	-	-	-	-	-	-	3	35	0	"		
1349	3	18	09	17	e 09	18	i 09	47	09	50	-	-	-	+19	-	5	59	0	"		
1350	3	22			-	-	e 33	16	-	-	-	-	-	-	-	3	17	0	"		
1351	3	23			-	-	e 56	15	-	-	-	-	-	-	-	2	19	0	"		
1352	4	e 1	04	55	-	-	e 05	42	e 05	41	-	-	-	-	-	3	44	0	Mutuai, Yamanasi		
1353	4	1	23	45	e 23	44	24	36	e 24	40	-	-	-	+10	-	5	44	0	Prefecture		
1354	4	e 3	04	36	-	-	05	03	-	-	-	-	-	-	-	2	54	0	"		
1355	4	3			-	-	58	23	-	-	-	-	-	-	-	1	20	0	"		
1356	4	i 6	12	42	i 12	41	i 13	04	i 13	06	-	-	-	+230	-325	13	41	0	E off Hukusima		
1357	4	e 18	21	53	e 21	52	i 22	21	e 22	20	-	-	-	-	-	3	34	0	Prefecture		
1358	4	18			-	-	e 58	33	-	-	-	-	-	-	-	1	33	0	"		
1359	4	e 19	05	30	-	-	e 06	02	-	-	-	-	-	-	-	3	00	0	"		
1360	4	20			-	-	e 44	14	-	-	-	-	-	-	-	1	15	0	"		
1361	4	20			-	-	-	-	-	-	-	-	-	-	-	1	50	0	Off Kinkwasan		
1362	4	21			-	-	-	-	-	-	-	-	-	-	-	1	47	0	E off Hukusima		
1363	5	i 15	34	18	i 34	19	i 34	37	i 34	39	-	-	-	±78	-110	6	21	1	" Prefecture		
1364	5	i 18	54	29	i 54	23	i 54	52	i 54	53	-	-	-	-289	-400	11	57	2	"		
1365	9	e 9	58	43	-	-	59	04	-	-	-	-	-	-	-	3	07	0	"		
1366	6	12			-	-	-	-	-	-	-	-	-	-	-	?		0	"		
1367	6	14			-	-	e 06	42	-	-	-	-	-	-	-	1	54	0	"		
1368	6	i 23	06	01	i 05	59	i 10	06	i 10	05	-	-	-	-	-	42	21	0	NE Off Taito		
1369	7	e 0	03	04	-	-	03	49	-	-	-	-	-	+115	-103	3	39	0	E off Hukusima		
1370	7	8	40	27	-	-	i 40	56	e 40	55	-	-	-	-	-	4	03	0	" Prefecture		

EARTHQUAKES, 1938.

International
Seismological
Centre

No.	Date 1938	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			
1371	Dec. 7	e 9 31 32				i 31 50								+ 7				3 14	0	E off Hukusima
1372	7	i 13 04 44				i 05 09								⊕ +1375			17 35	0	ENE off Kinkwasan	
1373	7	? 13 32 23				? 39 41											33 39	0	Distant	
1374	7	e 15 05 51				? 09 42											3 44	0	NE off Taito	
1375	7	e 19 56 36				57 17								- 3			4 37	0	NNE off Cape Inubô	
1376	7	22				? 47 44											1 19	0	SE off Cape Inubô	
1377	7	e 22 50 28				e 50 55											4 24	0	Off Kinkwasan	
1378	8	i 0 03 58				i 04 18								+86	-178		11 23	0	Off Kinkwasan	
1379	9	e 2 19 10				e 19 44											3 34	0	E off Hukusima Prefect.	
1380	9	e 5 07 57				? 12 09											2 10	0	NE off Taito	
1381	9	e 9 36 01				i 36 32								-182	-203		14 29	0	E off Hukusima	
1382	9	e 10 17 27				i 18 01								-19			5 48	0	„ Prefecture	
1383	9	e 16 26 47				27 11											2 51	0	„	
1384	9	i 17 41 56				i 42 18								-15			3 54	0	Off Kinkwasan	
1385	9	e 18 53 09				53 25											2 24	0	„	
1386	10	e 16 04 17				e 04 57											2 55	0	Mouth of R. Edo	
1387	11	2 01 00				i 01 31								+41	+50		10 30	0	ESE off Cape Sioya	
1388	11	i 3 20 39				i 21 15								+40	-53		8 46	0	ENE off Cape Inubô	
1389	11	e 3 54 24				54 39											1 26	0	Off Kinkwasan	
1390	11	e 12 46 19				46 40											3 19	0	Off Hukusima	
1391	11	11				e 49 58											1 01	0	„	
1392	12	e 0 28 08				i 28 29								-24	-48		6 33	0	„	
1393	12	2 42 51				i 43 27								+94	+125		10 39	0	„	
1394	12	e 8 07 05				e 07 26											3 38	0	„	
1395	12	e 9 19 42				i 20 08								- 8	-10		3 53	0	„	
1396	12	e 11 57 20				i 57 43								-31	+45		8 15	0	Kasima-Nada	
1397	12	13				e 44 10											1 52	0	„	
1398	12	e 19 02 05				02 33								- 5			3 57	0	„	
1399	12	20				e 37 09											1 59	0	„	
1400	12	e 21 13 02				i 13 33								+16	-28		6 35	0	ESE off Cape Sioya	
1401	12	e 23 39 24				i 39 52								-139	+178		9 28	0	ESE off Cape Sioya	
1402	12	23				e 49 21											2 14	0	„	
1403	12	23 59 54				i 60 21								-49	+53		8 56	0	ESE off Cape Sioya	
1404	13	e 3 17 30				17 57											3 08	0	E off Hukusima	
1405	13	7															1 08	0	„	
1406	13	e 15 12 22				12 56								- 5			3 13	0	„	
1407	13	16															2 50	0	„	
1408	13	i 17 26 01				i 26 25								⊕ -1020			23 24	0	E off Kinkwasan	
1409	13	18 ✕				e 38 54								✕ -45			5 39	0	„	
1410	13	e 23 22 25				22 40											2 07	0	E off Hukusima	
1411	14	2				e 26 05											0 54	0	„	
1412	14	3 00 58				i 01 35								+18	-33		5 14	0	„	
1413	14	5 53 52				i 54 29								-45	-63		6 00	0	„	
1414	14	e 6 57 53				58 15											2 32	0	Off Kinkwasan	
1415	14	e 7 07 57				08 16								- 5			5 02	0	„	
1416	14	e 11 53 37				i 54 19								-54	-90		8 08	0	E off Hukusima Prefect.	
1417	14	15				e 40 39											1 15	0	„	
1418	14	16				e 29 10											1 40	0	„	
1419	15	e 15 04 45				i 05 18								+ 6			4 30	0	E off Hukusima	
1420	15	e 17 58 53				i 59 16											2 47	0	„	
1421	15	e 18 33 47				34 00											1 37	0	„	
1422	16	e 4 36 27				i 37 19								-22	+28		15 29	0	SE off Cape Inubô	
1423	16	6				i 11 52								- 4			1 58	0	„	
1424	16	16				33 03											1 00	0	E off Hukusima	
1425	16	e 16 48 03				48 26											3 37	0	„	

EARTHQUAKES, 1938.



No.	Date 1938	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	m		
1426	Dec. 16	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	Distant
1427	17	?17	34	13	?34	19	?44	44	?44	19	-	-	-	-	-	-	46	20	0	E off Hukusima
1428	17	1	-	-	-	-	12	05	-	-	-	-	-	-	-	-	2	24	0	Prefect.
1429	17	e 5	44	06	-	-	44	34	-	-	-	-	-	-	-	-	2	47	0	"
1430	17	i 20	11	47	?45	40	?55	35	?55	46	-	-	-	-	-	-	28	06	0	Distant
1431	18	i 21	46	09	i 46	10	i 46	48	i 46	46	-	-	-	⊕	-840	29	18	1	ESE off Kinkwasan	
1432	18	?21	55	53	-	-	56	14	?56	13	-	-	-	+14	-	3	37	0	Off Hukusima	
1433	18	22	×	-	e 43	27	?43	57	i 44	00	-	-	-	-55	-70	9	13	0	Off Kinkwasan	
1434	19	? 4	58	12	-	-	?59	08	-	-	-	-	-	-	-	5	24	0	"	
1435	19	9	40	26	e 40	25	i 40	47	e 40	46	-	-	-	+13	-	3	59	0	Off Hukusima	
1436	19	10	37	01	-	-	37	23	e 37	24	-	-	-	-4	-	3	22	0	"	
1437	19	?12	05	10	?05	06	?06	09	?06	12	-	-	-	-	-	4	50	0	Middle part of Japan	
1438	19	16	20	12	-	-	20	23	-	-	-	-	-	-	-	1	24	0	Off Hukusima Sea	
1439	19	e 17	29	48	e 29	49	i 30	17	30	13	-	-	-	+5	-	4	35	0	"	
1440	19	i 18	25	25	i 25	25	i 26	35	i 26	38	-	-	-	-94	-125	21	04	0	SE off Cape Nasyappu	
1441	20	e 0	06	24	-	-	06	50	-	-	-	-	-	-15	-	5	09	0	Off Hukusima	
1442	20	e 2	29	50	-	-	30	14	e 30	15	-	-	-	-5	-	4	19	0	"	
1443	20	i 7	55	02	55	01	i 55	33	i 55	36	-	-	-	-31	-58	7	34	0	E off Miyako	
1444	20	10	43	39	e 43	39	i 44	03	i 44	03	-	-	-	-14	-23	4	32	0	Off Hukusima	
1445	20	i 14	51	47	i 51	45	i 52	05	i 52	07	-	-	-	-306	+510	13	37	0	ENE off Kinkwasan	
1446	20	e 15	47	58	-	-	48	27	e 48	26	-	-	-	-6	-	5	37	0	Off Hukusima	
1447	20	21	-	-	-	-	e 57	20	-	-	-	-	-	-	-	2	24	0	"	
1448	20	e 23	09	09	-	-	e 09	38	-	-	-	-	-	-	-	3	30	0	Off Hukusima	
1449	21	e 12	01	45	-	-	i 02	13	e 02	14	-	-	-	-4	-	2	59	0	"	
1450	21	12	-	-	-	-	e 36	12	-	-	-	-	-	-	-	3	55	0	"	
1451	21	18	-	-	-	-	e 23	55	-	-	-	-	-	-	-	1	24	0	"	
1452	21	19	-	-	-	-	e 08	24	-	-	-	-	-	-	-	2	56	0	"	
1453	22	e 15	22	01	-	-	i 22	32	e 22	33	-	-	-	+13	-	5	04	0	"	
1454	22	e 18	06	00	-	-	i 06	26	e 06	25	-	-	-	-7	-	5	06	0	"	
1455	22	e 23	54	59	-	-	i 55	24	e 55	26	-	-	-	-9	-	3	53	0	"	
1456	23	i 1	52	13	i 52	13	i 52	37	i 52	37	-	-	-	+274	+440	11	59	2	"	
1457	23	15	25	03	-	-	i 25	20	i 25	21	-	-	-	-14	-	2	35	0	Off Kuzi	
1458	23	20	28	02	e 28	03	i 28	24	i 28	25	-	-	-	+15	-23	3	08	0	Off Hukusima	
1459	24	20	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39	0	"	
1460	25	7	30	53	-	-	i 31	37	e 31	37	-	-	-	-10	-	3	29	0	Off Kusiro	
1461	25	e 13	44	31	-	-	44	54	-	-	-	-	-	-	-	2	03	0	Off Hukusima	
1462	25	15	46	09	-	-	i 46	32	e 46	29	-	-	-	-8	-	2	48	0	"	
1463	26	e 13	48	35	-	-	i 49	13	-	-	-	-	-	-	-	2	52	0	Simozuma	
1464	26	15	37	12	37	12	i 37	32	i 37	34	-	-	-	-14	-	3	51	0	ESE off Kinkwasan	
1465	26	17	-	-	-	-	e 47	34	-	-	-	-	-	-	-	1	49	0	Off Hukusima	
1466	27	e 15	18	47	-	-	e 19	14	-	-	-	-	-	-	-	3	29	0	"	
1467	27	e 15	29	53	-	-	30	19	-	-	-	-	-	-	-	3	15	0	"	
1468	27	16	05	47	e 05	48	i 06	13	i 06	13	-	-	-	+20	-15	6	10	0	Kasima-nada	
1469	27	19	30	17	-	-	i 30	40	e 30	42	-	-	-	+11	-	4	36	0	Off Hukusima	
1470	27	23	-	-	-	-	e 27	51	-	-	-	-	-	-	-	1	20	0	Hakodate	
1471	28	5	-	-	-	-	e 11	53	-	-	-	-	-	-	-	1	03	0	"	
1472	28	5	-	-	-	-	e 15	08	-	-	-	-	-	-	-	3	18	0	"	
1473	28	15	-	-	-	-	-	-	-	-	-	-	-	-	-	1	32	0	Off Hukusima	
1474	29	e 7	12	27	e 12	28	i 12	51	e 12	53	-	-	-	+8	-	3	30	0	"	
1475	29	e 23	11	06	e 11	08	i 11	35	i 11	36	-	-	-	+60	+55	4	25	0	"	
1476	29	e 23	15	39	-	-	i 16	03	16	02	-	-	-	+13	-	5	39	0	"	
1477	30	e 2	40	14	-	-	i 40	38	e 40	38	-	-	-	-5	-	3	03	0	"	
1478	30	e 7	22	43	-	-	23	19	-	-	-	-	-	-	-	4	02	0	"	
1479	30	e 11	41	50	-	-	i 42	07	e 42	08	-	-	-	+8	-	3	17	0	"	
1480	30	14	-	-	-	-	e 41	46	-	-	-	-	-	-	-	2	10	0	"	

EARTHQUAKES, 1938.



No.	Date 1938	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			
1481	Dec. 30	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0	SE off Cape Sioya		
1482	31	e	17	54	13	-	-	i	54	39	e	54	40	+ 9	-13	5	31	0	ESE off Kinkwasan	
1483	31	i	6	03	09	i	03	08	i	03	35	i	03	35	+ 46	+73	7	12	0	Off Cape Sioya
1484	31	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	49	0	Off Cape Sioya
1485	31	19	-	-	-	-	-	-	33	07	-	-	-	-	-	-	1	13	0	Off Kinkwasan
1485	31	20	-	-	-	-	-	-	58	47	-	-	-	-	-	-	0	54	0	Off Kinkwasan

CHIEF EARTHQUAKES OBSERVED WITH NASU'S SEISMOGRAPH, 1938.



Instrument; Nasu's seismograph with three components.

Remarks:

Instrumental constants

Component	V	T ₀	γ/T_0^2	Mass
E-W	25	5.7	0.011	7.2 kgr.
N-S	25	6.0	0.025	7.2
Vertical	25	5.3	0.051	4.4

1. Direction of the earth's displacement; positive towards north, east, and upward respectively.

2. ⊕ Out of the range of the instrument.

3. × Too feeble to measure.

4. ✕ 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	$\lambda_{,0}E$	$\varphi_{,0}N$
		h	m	s	m	s	μ	μ	μ	μ	μ	μ		
15	Jan. 11	15	13	45.8	15	23.0	+1440	-980	+456	-8	-12	-12	135.17	33.72
23	17	7	24	15.8	24	35.0	+70	+90	-56	×	×	×	141.5	37.4
49	Feb. 7	14	43	54.0	44	29.3	+1862	+2150	+898	+16	+32	+48	139.22	36.25
127	Apr. 25	14	45	41.7	46	04.9	-590	-600	-180	×	×	×	141.8	37.1
145	May. 11	3	10	17.8	10	41.7	-310	-320	+122	-8	-8	+20	142.9	40.6
155	23	7	19	12.9	19	46.9	⊕	⊕	⊕	-24	+108	+60	141.45	36.70
171	28	16	43	16.7	44	19.5	-406	+304	+70	×	×	×	144.3	43.6
188	June 5	16	32	29.3	33	10.0	-566	+440	+140	×	×	×	140.28	35.92
202	18	0	43	58.0	44	33.7	-330	+340	+170	×	×	×	141.1	36.5
233	July 6	13	01	51.9	02	31.2	-200	+236	+80	×	×	×	141.5	36.3
299	Aug. 17	1	47	11.8	48	25.6	-240	-200	+80	×	×	×	147.6	43.7
331	Sept. 11	17	20	31.7	20	50.4	-520	+570	+300	-40	+8	+32	142.8	39.0
384	21	18	52	45.3	53	21.8	+1368	-1580	+640	×	×	×	141.05	36.35
392	Oct. 12	0	35	13.1	35	44.9	⊕	⊕	⊕	-152	-28	+104	144.3	39.8
421	17	15	28	16.8	29	15.3	-496	-300	-190	×	×	×	140.0	44.4
442	29	13	09	23.9	10	07.3	+884	+760	+200	-8	+24	+16	141.0	35.4
454	Nov. 5	8	43	55.2	⊕		⊕	⊕	⊕	+4	-12	-8	141.65	37.10
457	5	10	09	00.7	09	23.3	×	-342	-120	×	×	×	141.7	37.1
459	5	10	50	48.6	51	09.7	×	⊕	⊕	×	×	×	141.70	37.15
540	5	21	24	08.0	24	40.4	×	-740	-200	×	×	×	142.3	37.0
545	5	22	16	52.7	17	23.5	×	+170	+760	×	×	×	142.1	37.0
551	5	23	29	12.4	29	33.5	×	-162	-60	×	×	×	141.9	37.0
595	6	8	54	23.6	54	43.1	×	⊕	⊕	×	+908	+416	141.75	37.55
667	6	17	19	46.5	20	14.8	×	⊕	+330	×	-24	-20	141.8	37.4
690	6	21	04	35.2	05	04.4	×	+1974	+480	×	-36	-32	141.75	36.9
696	6	21	39	20.2	39	40.3	×	⊕	⊕	×	+80	+48	141.85	37.15
708	6	23	16	02.0	16	28.9	×	+742	-224	×	×	×	142.0	36.9
721	7	0	48	33.7	49	06.2	×	+1800	-508	×	+44	+40	141.9	37.1
725	7	1	38	55.2	39	24.4	×	⊕	-3300	×	×	×	141.9	37.0
730	7	2	29	20.4	29	53.8	×	-1810	-460	×	×	×	142.0	37.0
833	7	19	34	14.2	34	48.7	⊕	⊕	⊕	×	×	×	141.8	37.0
893	8	11	02	40.7	03	06.6	-152	+302	+90	-4	+10	+8	141.8	37.0
899	8	13	14	33.7	14	59.6	-570	-660	-230	+8	-8	-12	142.1	37.2
912	9	2	22	48.8	23	08.3	+184	-182	-80	-12	+24	+24	141.5	37.5
929	9	9	16	38.0	17	15.3	⊕	⊕	⊕	-4	+32	+4	141.85	36.75
1056	13	22	32	06.3	32	38.4	-1414	+2200	+1116	×	×	×	141.5	37.0
1068	14	2	36	59.6	37	38.1	+820	-1022	-226	-8	+32	+28	141.6	37.1
1113	16	11	08	36.4	08	59.2	⊕	⊕	⊕	-40	+200	+136	141.8	37.35
1152	19	5	54	59.9	55	25.8	-604	-622	-212	-8	+30	+20	141.75	37.00
1264	24	13	48	08.2	48	30.9	-152	-184	-68	+8	-24	-20	141.7	37.4
1273	25	8	20	53.8	21	24.7	+2108	⊕	-1120	-4	+20	+16	141.9	37.0
1308	29	13	40	14.6	40	48.0	⊕	⊕	-1244	+8	-20	-20	142.00	36.75
1317	30	2	30	24.5	30	51.8	⊕	⊕	⊕	-28	-28	+8	141.8	37.0
1347	Dec. 3	12	12	18.0	12	48.5	-1860	-2390	-660	×	+6	×	141.9	36.9
1356	4	6	12	40.2	13	03.2	+432	-440	+140	-4	+28	+28	141.9	37.1
1364	5	18	54	29.6	54	52.3	-596	+482	+192	-12	+40	+24	141.7	37.2
1372	7	13	04	43.2	05	05.9	-1590	+2760	-1240	×	+48	+84	143.1	38.6
1408	13	17	25	59.1	26	23.6	-1520	⊕	+1680	-144	+52	+108	143.1	38.4
1431	18	21	46	09.1	46	35.4	-36	-65	-20	×	×	×	142.9	38.3
1445	20	14	51	46.0	52	04.6	+616	-800	+340	-40	+24	+48	142.9	38.7
1456	23	1	52	13.6	52	37.4	+280	+233	+90	×	×	×	141.9	36.9

PULSATORY OSCILLATIONS, 1938 (EW Component.)



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

ERRATA

APPENDIX

Page	Item	Year	Month	Error	Correction
70	MEAN DIRECTION AND VELOCITY	1924	Annual	53°W	N53°W
70	" "	1935	Oct.	N36°W	S36°W



APPENDIX

GENERAL MEAN OF THE METEOROLOGICAL OBSERVATIONS
DURING THIRTY FIVE YEARS
FROM 1902 TO 1936

GENERAL RESULTS

Month	AIR PRESSURE (mm) (700 mm+)							AIR TEMPERATURE (°C)								CLOUD		
	Mean	Absolute						Mean	Absolute							AMOUNT Mean	RESULTANT MOTION (Upper)	
		Max.	Day	Year	Min.	Day	Year		Max.	Day	Year	Min.	Day	Year	Range		Direction	%
January	56.9	71.8	9	28	30.1	20	21	-2.8	11.7	9	10	-22.6	24	36	34.3	7.3	s78°W	84
February	56.6	72.8	24	11	34.5	17	21	-2.1	13.0	8	24	-20.5	2	19	33.5	7.4	s88°W	83
March	56.8	73.9	7	30	31.5	21	34	1.4	22.2	23	31	-16.8	3	36	39.0	7.2	s85°W	80
April	56.2	72.0	13	03	26.7	21	29	8.1	27.3	24,28	11,22	-10.3	6	16	37.6	6.8	s85°W	85
May	54.2	68.8	5	05	33.1	18	08	13.1	29.9	28	22	-2.6	4	10	32.5	7.2	s84°W	81
June	52.1	64.0	5	26	33.7	19	11	17.7	32.5	10	16	0.4	4	21	32.1	7.8	s81°W	81
July	52.4	62.6	31	34	34.9	27	04	21.8	37.0	12	24	9.4	20,8 1,9	07,08 15,26	27.6	8.3	s88°W	67
August	52.6	63.2	29	05	16.2	27	13	23.1	35.2	10	24	8.9	16	19	26.3	7.8	w	60
September	55.2	67.2	21	20	28.5	23	12	18.7	33.5	3	03	3.1	27	06	30.4	8.0	s74°W	76
October	57.8	71.7	28	16	19.5	1	17	12.1	29.4	5	02	-3.6	26	18	33.0	6.9	s78°W	87
November	58.5	75.1	30	13	35.8	27	08	5.9	22.2	2	20	-8.8	29	14	31.0	6.8	s78°W	82
December	57.2	74.4	1	13	28.7	22	25	0.2	17.7	17	29	-15.9	20	07	33.6	7.0	s79°W	84
Annual	55.5	75.1	30	XI 13	16.2	27	VIII 13	9.8	37.0	12	VII 24	-22.6	24	I 36	59.6	7.4	s82°W	78

Month	TENSION OF VAPOUR (mm)						HUMIDITY %			PRECIPITATION (mm)						SUNSHINE DURATION				
	Mean	Absolute					Mean	Absolute		Mean	Maximum					Mean (in hours)	%			
		Max.	Day	Year	Min.	Day		Year	Min.		Day	Year	in 24h	Day	Year			in 4h	Day	Year
January	3.1	7.5	13	20	0.8	24	36	80.5	42	15,21	22,25	64.9	33.5	12	11	23.1	2	16	99.6	33
February	3.1	9.5	28	12	1.0	10,2	13,29	78.9	36	28	11	55.8	78.3	16	23	25.3	28	15	113.9	38
March	3.9	10.7	13	32	1.3	21,3	08,36	75.5	27	29	02	67.3	52.7	9	27	25.0	25	26	156.6	42
April	5.8	13.9	24,25	22	2.0	6,2	16,30	72.0	22	2	30	91.1	97.2	4	11	28.0	4	11	185.8	47
May	8.3	17.7	14	36	3.0	2,3	10	74.6	19	7	31	103.3	82.6	13	34	47.9	13	34	184.7	42
June	12.0	21.8	29	35	5.1	3	21	79.9	26	14	11	118.8	92.5	6	10	47.2	6	10	156.5	35
July	16.3	24.0	24	30	6.6	9	26	83.9	26	9	26	163.8	103.9	8	27	58.5	6	35	135.3	30
August	17.6	24.8	15	22	8.1	3	13	84.5	33	5	05	146.0	128.8	27	13	75.1	23	08	148.9	35
September	13.8	22.7	4	22	5.8	24	27	85.2	30	17	33	157.4	86.8	17	02	48.9	17	02	115.5	31
October	8.8	19.3	8	15	3.6	26	18	82.6	34	23	08	109.8	85.6	8	15	43.0	8	15	134.3	39
November	5.7	14.9	2	34	2.1	28,25	14,21	80.4	33	2	20	84.0	58.4	24	11	53.5	24	11	111.7	37
December	3.8	11.7	17	29	1.4	20,20	07,22	80.8	30	4	08	66.7	39.5	21	25	18.4	21	25	99.2	34
Annual	8.5	24.8	15	VIII 22	0.8	24	I 36	79.9	19	7	V 31	1228.9	128.8	27	VIII 13	75.1	23	VIII 08	136.8	37

Month	WIND										NO. OF DAYS WITH.										
	Velocity (m.p.s.)					Resultants					☉*	*	△△	☼	≡	Clear	Cloudy	☂	☐	Sunless 1906-1936	☉
	Mean	Max.	Dir	Day	Year	Dir	Vel.	Dir	%	△△											
January	2.8	21.6	N	7	12	N31°W	1.6	N25°W	40	21.5	22.1	0.9	-	0.9	0.5	15.5	5.5	8.8	5.2	1.7	
February	2.7	18.4	NW	23	12	N33°W	1.6	N28°W	41	18.5	19.2	0.5	-	0.5	0.8	14.1	3.8	8.1	3.9	1.4	
March	3.1	21.8	NW	4	28	N43°W	1.5	N40°W	34	18.3	15.3	0.8	0.0	0.4	1.4	14.6	5.3	9.3	4.9	2.4	
April	3.4	29.2	SSE	3	21	N76°W	0.9	N80°W	19	13.8	2.4	0.5	0.3	0.8	2.5	13.1	5.8	6.7	4.5	1.3	
May	3.0	19.2	SSE	7	16	S46°W	0.7	S44°W	17	13.4	0.0	0.1	1.3	1.6	1.7	15.7	3.8	1.4	5.0	1.4	
June	2.5	13.7	WNW N,S	14 10,7	09 23,33	S14°W	0.9	S15°W	25	14.4	-	0.1	1.3	1.8	1.1	18.5	0.8	0.0	6.3	1.4	
July	2.2	15.8	W	2	16	S 6°W	1.0	S 5°W	30	17.1	-	-	1.6	2.0	0.5	21.1	0.5	-	7.1	1.2	
August	2.1	20.3	S	16	11	S 1°E	1.0	S 2°W	32	15.1	-	-	2.1	3.3	0.7	18.5	0.5	-	4.5	1.3	
September	1.9	29.7	S	23	12	S25°W	0.3	S52°W	10	16.7	-	-	1.4	3.4	1.0	19.0	1.1	0.1	6.8	1.4	
October	2.0	17.5	NW	17	24	N47°W	0.6	N37°W	20	15.8	0.1	0.1	0.6	4.6	2.2	14.0	1.1	3.2	6.1	1.6	
November	2.5	20.6	NW	30	25	N39°W	1.1	N31°W	28	17.3	4.6	0.8	0.4	2.7	1.9	11.8	3.5	10.1	4.3	1.3	
December	2.7	22.3	NW	7	07	N32°W	1.6	N24°W	38	19.9	16.4	1.2	0.2	1.1	1.1	12.7	4.7	13.1	5.4	1.5	
Annual	2.6	29.7	S	23	X 12	N65°W	0.6	N65°W	14	201.8	80.1	5.0	9.2	23.0	15.6	188.6	36.3	60.8	63.9	17.6	

Month Hour	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
TENSION OF VAPOUR (mm)													
2	3.0	3.0	3.7	5.6	7.9	11.5	15.8	17.2	13.4	8.5	5.5	3.7	8.2
6	2.9	2.9	3.6	5.5	7.9	11.6	15.8	17.1	13.1	8.1	5.3	3.6	8.1
10	3.1	3.1	3.9	6.0	8.6	12.2	16.4	17.8	14.0	9.0	5.8	3.8	8.6
14	3.2	3.3	4.0	6.1	8.6	12.4	16.8	18.0	14.0	9.1	6.0	4.0	8.8
18	3.1	3.2	4.0	6.1	8.6	12.4	16.9	18.2	14.4	9.3	5.9	3.9	8.8
22	3.0	3.2	3.9	5.9	8.3	12.0	16.3	17.6	13.7	8.8	5.7	3.8	8.5
Mean	3.1	3.1	3.9	5.8	8.3	12.0	16.3	17.6	13.8	8.8	5.7	3.8	8.5
RELATIVE HUMIDITY %													
2	86.2	86.0	84.5	84.9	88.7	92.1	94.3	94.9	94.8	92.4	88.4	86.2	89.5
6	87.1	87.0	85.7	85.8	87.7	90.8	93.5	95.2	95.3	93.0	89.1	86.6	89.7
10	78.0	74.4	69.4	63.5	65.6	72.8	77.2	77.1	77.3	76.3	76.0	77.6	73.8
14	69.5	66.6	62.3	55.1	57.0	64.3	69.9	68.3	68.6	63.9	65.5	69.9	65.1
18	78.4	76.1	71.2	64.8	66.6	72.9	78.8	80.2	83.5	80.8	78.4	80.0	76.0
22	83.5	83.2	79.8	77.8	81.8	86.6	89.8	91.3	91.8	89.5	85.3	84.6	85.4
Mean	80.5	78.9	75.5	72.0	74.6	79.9	83.9	84.5	85.2	82.6	80.4	80.8	79.9
AMOUNT OF CLOUD (0-10)													
2	7.2	7.1	7.0	6.3	7.0	7.7	8.2	8.0	7.8	6.6	6.4	6.8	7.1
6	7.7	7.7	7.6	7.1	7.7	8.5	9.0	8.9	8.8	7.7	7.3	7.4	8.0
10	7.8	7.7	7.6	6.9	7.4	8.0	8.5	7.9	7.9	7.0	7.2	7.4	7.6
14	7.8	7.9	7.5	7.0	7.4	7.8	8.2	7.5	8.1	7.1	7.4	7.6	7.6
18	6.9	7.4	7.1	7.1	7.3	7.8	8.1	7.6	8.0	6.3	6.1	6.5	7.2
22	6.6	6.8	6.4	6.1	6.3	7.0	7.8	7.1	7.4	6.4	6.3	6.5	6.7
Mean	7.3	7.4	7.2	6.8	7.2	7.8	8.3	7.8	8.0	6.9	6.8	7.0	7.4
AMOUNT OF PRECIPITATION (mm)													
2	11.3	9.3	11.8	15.6	16.0	17.3	26.0	22.1	24.6	18.1	16.2	13.1	201.4
6	11.2	11.0	13.9	15.6	16.1	19.1	31.3	27.5	26.6	17.9	14.8	11.3	216.3
10	11.7	9.3	11.2	14.3	14.3	19.5	25.2	23.8	26.9	16.8	12.8	10.7	196.5
14	9.3	8.6	8.7	14.4	16.9	20.9	24.3	18.2	25.9	16.9	12.4	8.9	185.4
18	10.1	8.9	10.9	15.4	17.6	21.1	32.7	29.2	29.4	18.4	14.7	10.6	219.0
22	11.2	8.6	10.7	15.6	22.5	20.8	24.3	25.4	24.0	21.8	13.0	12.1	210.0
Mean	64.9	55.8	67.3	91.1	103.3	118.8	163.8	146.0	157.4	109.8	84.0	66.7	1228.9
NO. OF DAYS WITH AMOUNT > 30 (mm) IN A DAY													
Mean	0.0	0.2	0.2	0.4	0.7	0.7	1.5	1.2	1.3	0.7	0.3	0.0	7.4
FREQUENCY OF PRECIPITATION WITH AMOUNT > 0.1 (mm) IN 4 HOURS													
Mean	10.6	8.8	8.2	6.1	6.1	6.6	7.9	6.5	8.1	7.0	8.1	9.7	93.7
FREQUENCY OF PRECIPITATION WITH AMOUNT < 0.1 (mm) IN 4 HOURS													
Mean	24.1	23.1	20.3	8.7	8.7	9.5	12.7	9.7	9.1	8.7	12.8	20.0	167.6

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual				
Hour																	
AIR PRESSURE (700 mm+)																	
2	56.9	56.6	56.8	56.3	54.4	52.2	52.5	52.6	55.3	57.8	58.4	57.1	55.6				
6	56.9	56.7	57.0	56.7	54.8	52.5	52.8	53.0	55.6	58.1	58.6	57.2	55.8				
10	57.5	57.2	57.3	56.7	54.6	52.4	52.7	53.0	55.7	58.3	59.0	57.8	56.0				
14	56.0	55.8	56.1	55.4	53.4	51.4	51.9	52.0	54.5	56.9	57.6	56.4	54.8				
18	56.8	56.5	56.6	55.6	53.6	51.6	52.0	52.2	54.9	57.6	58.5	57.1	55.3				
22	57.0	56.8	57.2	56.5	54.6	52.5	52.8	53.0	55.6	58.2	58.7	57.3	55.9				
Mean	56.9	56.6	56.8	56.2	54.2	52.1	52.4	52.6	55.2	57.8	58.5	57.2	55.5				
AIR TEMPERATURE (°C)																	
2	-4.1	-3.9	-0.7	4.8	9.2	14.5	19.2	20.5	16.3	9.6	3.9	-1.1	7.4				
6	-4.7	-4.6	-1.4	4.3	9.5	14.9	19.3	20.4	15.8	8.8	3.2	-1.5	7.0				
10	-2.2	-1.3	2.7	10.2	15.4	19.3	23.2	24.6	20.5	13.7	7.0	0.9	11.2				
14	0.0	0.9	4.8	12.9	18.0	21.8	25.4	26.9	22.6	16.8	9.7	2.9	13.6				
18	-2.1	-1.2	2.5	10.0	15.1	19.6	23.4	24.3	19.6	13.2	6.7	0.7	11.0				
22	-3.4	-2.8	0.6	6.7	11.2	16.2	20.5	21.6	17.3	10.7	4.9	-0.5	8.6				
Mean	-2.8	-2.1	1.4	8.1	13.1	17.7	21.8	23.1	18.7	12.1	5.9	0.2	9.8				
FIVE DAY MEANS																	
Month	Period	Air Press.	Air Temp.	Tension of Vapour	Relative Humidity	Amount of Cloud	Velocity of Wind	Amount of Precipi.	Month	Period	Air Press.	Air Temp.	Tention of Vapour	Relative Humidity	Amount of Cloud	Velocity of Wind	Amount of Precipi.
January	1-5	56.1	-2.4	3.2	81.3	7.4	2.8	11.7	July	30-4	51.6	19.9	14.3	82.7	8.5	2.4	31.4
	6-10	57.9	-2.6	3.1	80.6	7.2	2.7	10.2		5-9	52.0	20.1	14.7	83.5	8.5	2.3	31.8
	11-15	57.1	-2.2	3.1	79.5	7.6	3.0	10.1		10-14	52.6	21.2	15.9	84.6	8.5	2.2	27.8
	16-20	55.7	-2.8	3.1	80.7	7.6	2.8	12.9		15-19	52.9	22.4	16.9	84.7	8.4	2.2	27.2
	21-25	57.0	-3.2	2.9	80.2	7.3	2.8	10.0		20-24	52.7	22.8	17.2	83.8	7.9	2.2	22.4
	26-30	57.3	-3.3	3.0	80.6	7.3	2.5	7.8		25-29	52.5	23.5	17.8	83.8	7.9	2.1	20.9
February	31-4	56.6	-2.9	3.0	81.2	7.5	2.4	10.1	August	30-3	52.1	23.4	17.9	84.4	8.2	2.2	23.1
	5-9	56.8	-2.8	3.0	79.9	7.6	2.5	7.3		4-8	51.6	23.9	18.4	84.2	8.0	2.3	24.6
	10-14	56.4	-2.5	3.0	78.8	7.4	2.8	7.6		9-13	51.9	23.8	18.2	83.2	7.4	2.0	22.1
	15-19	56.4	-1.7	3.2	79.0	7.7	2.9	15.6		14-18	52.6	22.9	17.3	83.5	7.7	2.3	21.5
	20-24	56.7	-1.8	3.2	77.9	7.1	2.7	7.8		19-23	53.2	22.6	17.4	85.0	7.8	1.8	17.6
	25-1	56.6	-1.2	3.3	78.1	7.3	2.9	12.1		24-28	53.7	22.3	17.0	85.4	7.9	2.0	29.2
March	2-6	56.5	-0.9	3.3	76.6	7.3	3.0	8.5	September	29-2	53.9	21.9	16.8	85.5	7.9	1.9	24.6
	7-11	57.1	0.6	3.6	75.5	6.9	3.0	12.2		3-7	54.3	21.2	16.3	87.0	8.4	1.8	28.6
	12-16	56.0	0.9	3.8	76.5	7.6	3.0	12.9		8-12	54.7	20.3	15.1	85.1	8.0	2.0	18.2
	17-21	56.7	1.9	4.0	75.2	7.1	3.1	9.0		13-17	54.9	18.9	13.9	85.3	8.2	2.0	30.5
	22-26	56.6	2.7	4.1	74.1	7.2	3.4	11.5		18-22	55.6	17.4	12.6	85.1	7.9	1.8	25.2
	27-31	58.1	3.8	4.4	73.3	6.7	3.3	10.6		23-27	56.6	16.4	11.7	84.2	7.7	1.8	29.7
April	1-5	57.7	5.6	5.1	74.2	6.9	3.4	17.3	October	28-2	56.3	15.5	10.7	83.0	7.5	2.0	23.8
	6-10	56.7	6.9	5.2	71.8	6.6	3.5	12.6		3-7	57.3	14.3	10.2	83.8	7.6	1.8	22.9
	11-15	56.1	7.5	5.6	72.2	6.9	3.5	17.6		8-12	57.1	13.1	9.3	81.6	7.1	2.0	20.9
	16-20	56.0	8.5	5.8	71.0	6.4	3.5	13.0		13-17	58.3	12.6	9.1	84.1	6.7	1.9	19.5
	21-25	55.4	9.7	6.5	71.8	6.7	3.4	16.5		18-22	57.5	11.4	8.4	82.8	6.9	1.9	14.1
	26-30	55.2	10.8	6.9	71.3	7.0	3.4	14.1		23-27	59.1	10.2	7.6	81.7	6.0	2.1	14.2
May	1-5	56.1	11.3	7.2	72.3	7.0	3.2	19.2	November	28-1	58.4	9.2	7.3	80.2	6.6	2.1	10.7
	6-10	54.6	12.1	7.6	73.2	7.1	3.3	15.0		2-6	58.5	8.1	6.9	81.3	6.5	2.3	14.7
	11-15	54.1	12.4	8.0	74.8	7.6	3.0	21.1		7-11	57.5	6.9	6.1	80.9	6.9	2.4	15.6
	16-20	54.0	13.7	8.6	75.1	7.0	3.1	20.2		12-16	58.9	6.2	5.7	80.2	6.6	2.5	13.4
	21-25	53.2	13.6	8.6	75.3	6.8	2.9	13.2		17-21	58.9	5.3	5.5	80.8	7.0	2.4	14.6
	26-30	53.7	14.9	9.6	76.7	7.5	2.7	11.5		22-26	58.9	4.5	5.3	80.0	6.6	2.6	13.5
June	31-4	53.4	15.9	10.2	77.0	7.0	2.7	9.7	December	27-1	58.0	3.5	4.7	79.5	7.2	2.8	12.5
	5-9	52.5	16.6	10.8	77.7	6.9	2.5	19.8		2-6	58.1	2.0	4.3	81.2	6.8	2.7	10.9
	10-14	53.0	17.3	11.5	79.6	7.9	2.5	18.9		7-11	57.8	1.5	4.1	79.8	6.8	3.0	10.3
	15-16	51.4	17.8	12.2	80.9	8.0	2.5	20.1		12-16	57.2	0.6	4.0	80.9	6.8	2.7	10.5
	20-24	51.9	18.6	12.7	79.8	8.1	2.6	18.0		17-21	56.5	-0.3	3.7	80.2	7.3	2.8	12.8
	25-29	50.9	19.3	13.7	82.7	8.5	2.3	31.0		22-26	56.2	-1.0	3.4	80.2	7.2	2.6	8.7
										27-31	56.9	-1.4	3.4	81.7	7.1	2.5	11.4

VELOCITY OF WIND (m.p.s.)

Month Hour	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
2	2.4	2.4	2.4	2.2	1.7	1.5	1.3	1.2	1.2	1.4	2.1	2.4	1.9
6	2.4	2.3	2.4	2.1	1.7	1.4	1.3	1.2	1.3	1.3	1.9	2.5	1.8
10	2.7	2.7	3.3	3.8	3.3	2.4	2.1	2.1	2.1	2.2	2.7	2.8	2.7
14	3.6	3.6	4.4	5.2	4.7	3.7	3.2	3.1	2.9	3.2	3.7	3.6	3.7
18	2.9	2.9	3.4	4.3	4.2	3.8	3.1	2.8	2.3	2.1	2.6	2.7	3.1
22	2.5	2.5	2.7	2.8	2.3	2.2	2.1	1.9	1.6	1.5	2.2	2.4	2.2
Mean	2.8	2.7	3.1	3.4	3.0	2.5	2.2	2.1	1.9	2.0	2.5	2.7	2.6

MEAN DIRECTION AND VELOCITY (m.p.s.) OF WIND

Month Year	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1902	N30°W 2.3	N55°W 1.2	N43°W 1.5	N78°W 2.2	S66°W 1.2	S27°W 1.2	S15°W 1.1	S17°W 0.8	S 4°W 1.2	N47°W 0.7	N31°W 1.2	N27°W 2.3	N71°W 0.9
1903	N31°W 1.8	N29°W 2.1	N44°W 1.4	S67°W 0.7	S67°W 0.9	S34°W 0.9	S45°W 0.6	S42°W 0.4	S40°W 0.6	N38°W 0.5	N53°W 0.8	N63°W 1.4	N69°W 0.7
1904	N59°W 1.1	N59°W 1.6	N62°W 2.3	S84°W 0.9	S29°W 1.0	S43°W 0.8	S15°W 1.5	S30°W 0.5	S71°W 0.4	N32°W 1.2	N38°W 1.1	N42°W 1.6	N79°W 0.8
1905	N31°W 1.6	N43°W 2.0	N59°W 1.2	N60°W 1.5	S34°W 1.2	S22°W 0.9	S12°W 1.5	S16°W 0.9	S42°W 0.4	N61°W 0.3	N33°W 1.4	N41°W 1.6	N75°W 0.7
1906	N37°W 2.2	N35°W 2.3	N44°W 1.8	N51°W 1.5	S82°W 1.0	S16°W 0.9	S 7°W 0.2	S21°W 1.0	S73°W 0.3	N88°W 0.6	N36°W 1.8	N47°W 1.3	N67°W 0.9
1907	N26°W 1.8	N35°W 1.5	N51°W 1.0	N75°W 1.1	S54°W 1.0	S69°W 0.5	S15°W 1.2	S12°E 2.3	W 0.4	N54°W 0.9	N35°W 1.5	N53°W 2.0	N73°W 0.7
1908	N34°W 1.8	N39°W 1.6	N59°W 1.7	N58°W 1.2	S69°W 0.8	S16°W 0.7	S 5°W 1.3	S 3°W 1.7	S24°W 0.4	N58°W 0.6	N52°W 1.7	N48°W 3.0	N73°W 0.9
1909	N29°W 2.5	N44°W 1.8	N47°W 1.5	S15°W 1.0	N81°W 0.7	S18°W 1.3	S18°W 0.9	S 2°W 1.4	S88°W 0.4	N43°W 1.2	N60°W 1.2	N27°W 2.1	N67°W 0.8
1910	N31°W 1.9	N37°W 1.7	N54°W 1.8	N72°W 1.1	W 0.8	S21°W 1.0	S 6°W 1.2	S21°E 0.6	N48°W 0.5	N33°W 0.9	N39°W 1.5	N33°W 2.2	N56°W 0.9
1911	N34°W 2.2	N35°W 2.2	N27°W 2.5	N48°W 1.6	S42°W 1.0	S28°W 0.8	S35°W 0.9	S10°W 1.5	S29°W 0.5	N56°W 0.7	N45°W 0.9	N23°W 2.1	N58°W 0.9
1912	N14°W 2.1	N15°W 1.6	N19°W 2.4	N50°W 1.4	S28°W 0.8	S13°W 0.5	S36°W 0.8	S32°W 0.8	S75°W 0.1	N27°W 0.5	N 4°W 1.5	N17°W 1.6	N34°W 0.8
1913	N47°W 1.8	N47°W 2.0	N66°W 1.6	S87°W 0.8	N85°W 0.7	S11°W 0.8	S 3°E 1.0	S23°E 0.6	S31°W 0.4	N53°W 0.8	N59°W 1.5	N56°W 1.1	N74°W 0.7
1914	N69°W 0.9	N48°W 1.4	N73°W 1.3	N50°W 1.5	S29°W 0.9	S43°W 0.7	S 6°W 0.6	S 1°E 0.9	S 2°W 0.8	N59°W 0.4	N85°W 0.4	N40°W 1.0	W 0.5
1915	N54°W 1.9	N52°W 1.5	N59°W 1.5	S77°W 1.4	S80°W 0.7	S 4°E 0.7	S 5°W 1.2	S18°E 1.5	S18°E 0.8	N63°W 0.6	N52°W 1.0	N49°W 1.4	W 0.6
1916	N29°W 1.8	N40°W 1.8	N59°W 1.2	S70°W 0.8	S36°W 0.9	S 3°E 1.7	S 4°E 1.4	S16°E 0.9	S24°W 0.2	N59°W 0.5	N20°W 1.1	N36°W 1.7	N80°W 0.5
1917	N47°W 1.0	N29°W 1.4	N33°W 0.9	S75°W 0.8	S48°W 0.5	S21°W 0.8	S 2°W 1.0	S12°E 1.2	S 5°W 0.7	N69°W 0.3	N43°W 0.8	N36°W 0.7	S85°W 0.4
1918	N55°W 0.8	N39°W 1.3	N50°W 1.3	S35°W 0.7	S36°W 1.0	S 3°W 1.1	S 3°E 1.2	S 2°E 0.9	S12°E 0.6	N22°W 0.3	N30°W 1.0	N38°W 1.6	S83°W 0.4
1919	N56°W 1.4	N31°W 1.3	N60°W 1.5	S80°W 1.0	S 8°W 0.6	S 1.2	S15°E 1.4	S 4°W 0.6	S43°E 0.4	N60°W 0.3	N40°W 0.5	N38°W 1.6	N89°W 0.4
1920	N51°W 1.3	N35°W 1.6	N71°W 0.7	N82°W 0.8	N59°E 0.4	S 4°W 1.0	S 3°W 1.0	S19°E 2.0	S14°W 0.5	N84°W 0.5	N46°W 1.1	N42°W 1.5	N89°W 0.4
1921	N32°W 1.4	N45°W 1.4	N49°W 1.5	S16°W 0.9	S12°W 0.8	S 9°E 1.0	S17°E 1.2	S23°E 0.8	S17°W 0.3	N26°W 0.8	N46°W 1.0	N36°W 1.5	N77°W 0.4
1922	N24°W 1.6	N20°W 1.0	N19°W 1.2	N83°W 0.7	S26°W 0.7	S 8°W 0.8	S 1°E 1.3	S16°W 0.4	S11°W 0.7	S60°W 0.2	N38°W 1.3	N25°W 1.7	N64°W 0.4
1923	N41°W 1.1	N24°W 0.8	N43°W 1.2	N83°W 1.0	S24°W 1.1	S66°W 0.2	S 4°E 0.7	S 4°W 1.1	S54°E 0.1	N53°W 0.7	N48°W 1.6	N33°W 1.8	N67°W 0.6
1924	N33°W 1.9	N28°W 2.1	N17°W 1.9	S37°W 0.8	S80°W 0.9	S 6°W 1.2	S 7°W 0.8	S19°W 0.7	N88°W 0.3	N42°W 0.4	N44°W 1.1	N20°W 1.9	N53°W 0.7
1925	N25°W 2.0	N26°W 1.6	N54°W 1.7	N44°W 1.0	S15°W 0.6	S 4°W 1.4	S 9°W 1.5	S 4°E 2.2	N88°W 0.3	N23°W 0.8	N44°W 1.8	N45°W 1.1	N73°W 0.6
1926	N40°W 1.6	N39°W 2.2	N46°W 1.7	N53°W 1.9	S24°W 0.9	S10°W 1.1	S45°W 0.5	S 3°W 0.9	S63°W 0.7	N45°W 0.9	N19°W 1.6	N39°W 1.7	N60°W 0.9
1927	N21°W 1.8	N28°W 2.0	N28°W 2.2	N25°W 0.9	S84°W 0.7	S39°W 0.7	S 0.8	S 6°E 0.7	N35°W 0.3	N30°W 0.4	N19°W 1.4	N17°W 1.7	N36°W 0.8
1928	N16°W 1.2	N22°W 2.0	N35°W 1.8	N42°W 1.2	S23°W 1.4	S 3°E 1.1	S 3°E 1.1	S 8°E 1.1	S 6°W 1.0	N16°W 0.6	N28°W 1.3	N14°W 2.4	N50°W 0.5
1929	N14°W 2.6	N10°W 1.5	N33°W 1.4	N56°W 0.8	S12°W 0.4	S 8°W 0.8	S11°W 0.8	S14°W 0.8	S58°W 0.1	N40°W 0.2	N 8°W 0.8	N 1°E 1.8	N30°W 0.5
1930	N 5°W 2.4	N22°W 2.2	N15°W 1.5	N33°W 0.8	S63°W 0.6	N25°W 0.4	S 1°W 1.0	S 1°W 1.5	N37°W 0.4	N25°W 0.8	N58°W 0.6	N18°W 1.8	N31°W 0.7
1931	N13°W 2.2	N15°W 1.7	N36°W 2.0	N58°W 1.0	N69°W 0.6	S16°W 1.3	S51°W 0.5	S 8°W 0.8	S22°E 0.3	N47°W 0.6	N46°W 0.8	N22°W 2.0	N43°W 0.7
1932	N20°W 1.4	N10°W 1.7	N29°W 1.8	N76°W 1.2	S54°W 0.9	S 7°E 1.6	S 3°W 0.3	S 1.7	N33°W 0.1	N42°W 0.2	N36°W 1.0	N32°W 1.9	N57°W 0.5
1933	N34°W 1.3	N31°W 1.3	N30°W 1.8	S80°W 0.6	S 1°W 1.0	S 3°E 0.8	S 6°E 1.0	S18°E 1.1	S 6°W 0.3	N31°W 1.0	N31°W 1.2	N23°W 1.8	N54°W 0.4
1934	N25°W 1.0	N19°W 1.7	N61°W 1.1	N80°W 1.4	S36°W 0.3	S18°W 0.5	S 5°E 1.2	S16°E 0.3	S16°E 0.6	N72°W 0.3	N87°W 0.6	N39°W 1.5	N72°W 0.5
1935	N32°W 1.6	N34°W 1.1	N59°W 1.8	S59°W 0.8	S34°W 0.9	S24°W 0.9	S 8°E 0.6	S 3°E 1.0	S25°E 0.2	N36°W 0.2	N31°W 1.6	N27°W 1.3	N74°W 0.5
1936	N39°W 1.8	N32°W 1.8	N41°W 1.3	N73°W 1.0	S 8°W 0.7	S15°W 0.7	S 8°E 0.3	S 3°E 0.6	S18°W 0.6	N57°W 0.8	N39°W 0.9	N13°W 1.1	N58°W 0.6
Mean	N31°W 1.6	N33°W 1.6	N43°W 1.5	N76°W 0.9	S46°W 0.7	S14°W 0.9	S 6°W 1.0	S 1°E 1.0	S25°W 0.3	N47°W 0.6	N39°W 1.1	N32°W 1.6	N65°W 0.6

MEAN DIRECTION AND FREQUENCY OF WIND

Year	Month												Annual	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.		
1902	N26°W	41 N53°W	26 N51°W	31 S89°W	36 S44°W	27 S31°W	33 S17°W	33 S22°W	32 S10°W	29 N43°W	22 N34°W	28 N17°W	39 N87°W	17
1903	N34°W	41 N30°W	50 N43°W	31 S65°W	18 S48°W	23 S25°W	29 S36°W	17 S37°W	14 S48°W	25 N39°W	16 N45°W	16 N62°W	28 N78°W	17
1904	N67°W	22 N57°W	35 N66°W	49 S79°W	22 S29°W	28 S41°W	17 S22°W	32 S34°W	20 S88°W	13 N33°W	33 N41°W	27 N39°W	35 N82°W	20
1905	N41°W	40 N50°W	42 N61°W	29 N66°W	23 S53°W	24 S27°W	32 S17°W	41 S19°W	39 S74°W	10 N56°W	15 N33°W	37 N47°W	31 N85°W	19
1906	N34°W	46 N36°W	54 N46°W	31 N67°W	26 S65°W	26 S24°W	28 S15°W	62 S26°W	37 N61°W	13 N74°W	18 N39°W	33 N36°W	27 N78°W	20
1907	N33°W	47 N41°W	38 N41°W	29 S86°W	24 S54°W	23 S52°W	15 S17°W	37 S10°E	61 N71°W	24 N42°W	23 N31°W	42 N31°W	27 N75°W	17
1908	N28°W	43 N44°W	33 N80°W	33 N64°W	26 S65°W	18 S10°W	23 S 6°W	49 S 5°W	44 N72°W	15 N57°W	17 N47°W	37 N42°W	43 N83°W	18
1909	N29°W	62 N40°W	36 N50°W	38 S54°W	19 N89°W	21 S11°W	41 S22°W	26 S10°W	46 S83°W	12 N42°W	32 N68°W	19 N20°W	55 N72°W	19
1910	N25°W	52 N38°W	36 N54°W	48 N78°W	25 S87°W	17 S28°W	29 S12°W	39 S16°E	21 S41°W	21 N32°W	48 N34°W	42 N29°W	51 N61°W	22
1911	N22°W	59 N27°W	59 N25°W	61 N44°W	32 S32°W	30 S31°W	20 S48°W	27 S21°W	43 S33°W	21 N49°W	30 N32°W	24 N12°W	44 N55°W	22
1912	N	33 N11°W	40 N 2°W	43 N38°W	23 S27°W	17 S18°W	10 S29°W	26 S44°W	33 N38°W	4 N11°W	15 N 4°E	41 N11°W	38 N27°W	15
1913	N46°W	49 N40°W	56 N52°W	38 N75°W	17 S89°W	10 S26°W	17 S 1°W	29 S29°E	22 S51°W	11 N66°W	29 N54°W	28 N53°W	32 N69°W	18
1914	N46°W	21 N48°W	45 N72°W	26 N33°W	33 S26°W	21 S22°W	20 S 2°E	15 S12°W	25 S12°W	18 N50°W	17 N75°W	9 N27°W	30 N81°W	13
1915	N45°W	34 N36°W	35 N36°W	25 S71°W	24 S67°W	10 S 4°W	23 S 2°W	44 S10°E	40 S 7°E	19 N70°W	14 N51°W	24 N41°W	28 S79°W	11
1916	N16°W	38 N32°W	43 N41°W	31 S52°W	14 S42°W	19 S 2°E	41 S 6°E	45 S13°E	29 S39°W	8 N83°W	8 N20°W	45 N32°W	45 N75°W	10
1917	N31°W	29 N27°W	47 N29°W	26 S60°W	16 S72°W	13 S22°W	23 S 2°W	26 S12°E	44 S14°W	22 S41°W	5 N38°W	24 N23°W	28 N89°W	9
1918	N28°W	20 N33°W	38 N45°W	36 S53°W	20 S34°W	26 S 5°E	34 S 6°E	35 S 8°W	32 S47°W	8 N 4°W	18 N27°W	38 N41°W	42 N83°W	11
1919	N54°W	53 N30°W	40 N50°W	38 S70°W	24 S28°W	14 S 6°W	43 S18°E	51 S 8°W	25 N10°W	1 N30°W	18 N25°W	24 N30°W	53 N77°W	14
1920	N37°W	40 N27°W	62 N70°W	31 N79°W	28 N54°E	9 S13°W	36 S 5°W	44 S19°E	62 S35°W	22 S86°W	17 N39°W	33 N41°W	53 N85°W	15
1921	N23°W	51 N34°W	51 N47°W	51 S27°W	27 S16°W	25 S 1°W	35 S17°E	45 S23°E	39 S55°W	12 N22°W	48 N37°W	31 N19°W	46 N64°W	13
1922	N16°W	50 N12°W	37 N11°W	38 N76°W	18 S60°W	15 S21°W	20 S 4°W	45 S16°W	16 S14°W	29 N85°W	8 N14°W	17 N17°W	31 N60°W	10
1923	N35°W	33 N32°W	22 N34°W	28 N85°W	17 S18°W	33 S47°W	8 S 9°E	25 S 3°E	34 S58°E	5 N38°W	19 N34°W	28 N28°W	29 N73°W	10
1924	N16°W	40 N20°W	33 N17°W	45 S37°W	18 S84°W	12 S11°W	44 S 1°W	18 S23°W	25 N88°W	9 N 2°E	14 N21°W	23 N10°W	49 N46°W	12
1925	N15°W	49 N20°W	42 N48°W	27 N43°W	27 S18°W	21 S 4°W	40 S11°W	39 S 4°E	58 N89°W	9 N17°W	27 N38°W	38 N51°W	36 N73°W	13
1926	N34°W	40 N33°W	40 N44°W	31 N54°W	28 S51°W	21 S15°W	31 S40°W	12 S	28 S50°W	20 N45°W	21 N12°W	40 N33°W	38 N62°W	17
1927	N11°W	48 N20°W	44 N27°W	48 S89°W	12 S84°W	11 S39°W	24 S 9°E	28 S 6°E	26 N40°W	22 N29°W	16 N14°W	39 N 5°W	37 N34°W	16
1928	N 9°W	31 N 8°W	45 N24°W	34 N54°W	21 S29°W	33 S 8°E	23 S 3°W	34 S 1°E	31 S14°W	24 N 9°W	28 N15°W	29 N 2°W	48 N43°W	9
1929	N 9°W	52 N 7°W	37 N35°W	37 N45°W	18 S23°W	13 S14°W	25 S19°W	15 S19°W	21 N54°W	4 N21°W	10 N 5°W	25 N 5°E	51 N27°W	14
1930	N 1°W	57 N21°W	41 N13°W	40 N42°W	18 S63°W	13 N17°W	15 S 3°W	36 S 5°W	44 N36°W	26 N27°W	45 N65°W	26 N14°W	59 N33°W	20
1931	N 1°W	58 N13°W	52 N45°W	35 N61°W	27 N38°W	15 S25°W	42 S62°W	22 S10°W	31 S40°W	3 N39°W	16 N22°W	20 N15°W	41 N44°W	17
1932	N16°W	36 N 6°W	46 N24°W	36 N82°W	22 S42°W	19 S 3°E	41 S16°E	8 S 1°W	46 N15°W	13 N13°E	12 N23°W	19 N19°W	43 N43°W	10
1933	N27°W	41 N27°W	45 N22°W	45 N66°W	18 S	17 S 1°E	23 S 9°E	35 S15°E	34 S 9°W	1 N21°W	41 N17°W	31 N13°W	43 N36°W	13
1934	N15°W	28 N 7°W	47 N46°W	19 N75°W	27 S33°W	2 S28°W	11 S10°E	37 S24°E	14 S 9°W	10 N52°W	13 N76°W	12 N30°W	34 N55°W	9
1935	N22°W	34 N18°W	34 N50°W	30 S86°W	14 S30°W	20 S18°W	21 S14°E	24 S 1°W	23 S49°E	4 N63°W	6 N25°W	39 N17°W	33 N58°W	10
1936	N28°W	30 N26°W	40 N27°W	28 N69°W	19 S 8°W	21 S 9°W	26 S39°E	14 S 3°E	26 S22°W	21 N40°W	16 N33°W	21 N 5°W	37 N57°W	9
Mean	N25°W	40 N28°W	41 N40°W	34 N80°W	19 S44°W	17 S15°W	25 S 5°W	30 S 2°W	32 S52°W	10 N37°W	20 N31°W	28 N24°W	38 N65°W	14

EARTH TEMPERATURE (°C) Measured by the thermometers directly earthed

Depth	Period	Month													
		Hour	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Surface	1905-1936	2	-1.4	-1.2	0.8	5.6	10.8	16.1	20.7	22.2	18.0	11.1	4.6	0.3	9.0
		6	-1.6	-1.4	0.3	4.8	10.4	16.1	20.5	21.8	17.4	10.4	4.1	0.1	8.6
		16	-1.0	-0.6	3.5	12.5	19.1	23.7	27.1	28.4	23.0	15.3	7.2	0.8	13.3
		14	-0.2	0.9	7.9	16.5	22.7	27.6	30.9	32.3	25.9	18.3	10.2	2.4	16.3
		18	-0.7	-0.2	3.6	11.1	16.6	21.7	25.6	26.7	21.5	14.2	6.8	1.0	12.3
		22	-1.1	-0.8	1.6	7.5	12.6	17.9	22.1	23.4	19.0	12.1	5.3	0.5	10.0
		Mean	-1.0	-0.6	3.0	9.7	15.4	20.5	24.5	25.8	20.8	13.6	6.4	0.9	11.6
0.05m	1932-1936	0.7	0.8	3.2	8.9	15.1	20.2	23.7	25.2	21.7	14.9	8.3	2.8	12.1	
0.1m	1917-1936	0.2	0.0	2.7	9.2	14.8	19.8	24.3	25.6	21.4	14.3	7.3	2.2	11.8	
0.2m	1917-1936	1.4	0.8	2.6	8.5	13.8	18.6	23.0	24.8	21.4	14.9	8.5	3.5	11.8	
0.3m	1916-1936	1.2	0.8	2.7	8.4	13.7	18.6	23.1	24.8	21.3	14.8	8.3	3.2	11.8	

EARTH TEMPERATURE Continued Measured by the thermometers
inserted in iron tubes

Depth	Period	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
m	1905-1915	1.8	1.3	3.1	8.3	13.5	18.1	21.8	23.9	21.1	15.4	9.4	4.2	11.8
0.3	1923-1936													
0.5	1932-1936	3.6	2.8	3.5	7.1	12.2	16.7	20.5	22.7	21.2	16.4	11.0	6.2	12.0
1.0	1905-1936	5.9	4.6	4.5	7.0	10.8	14.3	17.8	20.5	20.3	17.2	13.0	8.8	12.1
2.0	1932-1936	11.2	9.7	8.7	8.3	9.0	10.7	12.6	14.4	15.8	16.0	14.8	13.1	12.0
3.0	1905-1936	12.7	11.5	10.6	9.9	9.8	10.4	11.3	12.6	13.8	14.5	14.5	13.8	12.1
5.0	1932-1936	13.0	12.6	12.1	11.6	11.1	10.9	11.0	11.4	11.9	12.5	12.9	13.1	12.0
6.0	1905-1936	12.8	12.7	12.4	12.0	11.7	11.4	11.4	11.5	11.8	12.2	12.6	12.8	12.1

MAXIMUM CONTINUANCE OF DAYS
WITH PRECIPITATION

MAXIMUM CONTINUANCE OF DAYS
WITHOUT PRECIPITATION

Years	From		To		No. of Days	Remarks	Year	From		To		No. of Days	Remarks
	Day	Month	Day	Month				Day	Month	Day	Month		
1902	2	Jan.	21	Jan.	20		1902	3	June	10	June	8	
1903	22	July	4	Aug.	14		1903	26	Sept.	7	Oct.	12	1, 3, 7 < 0.1
1904	26	Oct.	11	Nov.	17	27 < 0.1	1904	14	Aug.	29	Aug.	16	19, 21, 22 < 0.1
1905	28	Nov.	16	Dec.	19	5 < 0.1	1905	9	Apr.	15	Apr.	7	
1906	25	Jan.	18	Feb.	25	4, 8 < 0.1	1906	19	May	26	May	8	
1907	31	Aug.	10	Sept.	11		1907	20	July	1	Aug.	13	24 < 0.1
1908	11	Jan.	29	Jan.	19	12, 14, 26 < 0.1	1908	12	Oct.	24	Oct.	13	
1909	11	Feb.	15	Feb.	15		1909	15	July	24	July	10	21 < 0.1
1900	3	Aug.	16	Aug.	14		1910	15	Apr.	24	Apr.	10	24 < 0.1
1911	8	Oct.	19	Oct.	12	11, 14 (≡) < 0.1	1911	18	Feb.	28	Feb.	11	18, 21, 23 < 0.1
1912	11	July	22	July	12		1912	17	Oct.	23	Oct.	7	22, 23 < 0.1
1913	8	Jan.	20	Jan.	13		1913	1	Aug.	9	Aug.	9	
1914	9	Dec.	22	Dec.	14		1914	31	Aug.	10	Sept.	11	2, 7, 8 < 0.1
1915	18	Aug.	29	Aug.	12		1915	15	July	22	July	8	
1916	29	Feb.	17	Mar.	18	3, 15, 16, 17 < 0.1	1916	11	Aug.	22	Aug.	12	
1917	18	Feb.	11	Mar.	22	26, 8, 11 < 0.1, 3-	1917	16	July	2	Aug.	18	22 (≡) 0.1
1918	5	Nov.	29	Nov.	25	17, 20, 21, 29 < 0.1, 24-	1918	23	July	29	July	7	
1919	2	Jan.	30	Jan.	29	10, 18, 24-	1919	9	July	18	July	10	18 < 0.1
1920	4	May	14	May	11	12 < 0.1	1920	27	May	3	June	8	
1921	12	Mar.	26	Mar.	15		1921	2	June	10	June	9	
1922	11	Dec.	25	Dec.	15		1822	13	Aug.	22	Aug.	10	
1923	19	Feb.	14	Mar.	24	24 -	1923	20	Apr.	28	Apr.	9	20, 22, 28 < 0.1
1924	13	Feb.	28	Feb.	16		1924	6	July	15	July	10	
1925	20	Feb.	19	Mar.	28	27 < 0.1	1925	13	Apr.	22	Apr.	10	
1926	14	Dec.(1925)	7	Jan.(1926)	25		1926	9	May	17	May	9	
1927	23	Dec.(1927)	1	Jan.(1928)	10		1927	22	Apr.	1	May	10	
1928	12	Feb.	27	Feb.	16	21 < 0.1	1928	8	Apr.	18	Apr.	11	
1929	29	Dec.(1928)	12	Jan.(1929)	15	4, 5 < 0.1	1929	30	July	13	Aug.	15	
	20	Aug.	1	Sept.	13		1930	12	Oct.	19	Oct.	8	
1930	9	Nov.	18	Nov.	10								
1931	9	Jan.	15	Jan.	7		1931	2	May	8	May	7	
	4	Feb.	10	Feb.	7			27	July	2	Aug.	7	
	25	Oct.	31	Oct.	7		1932	24	July	30	July	7	
1932	6	Mar.	18	Mar.	13	11 -	1933	23	May	31	May	9	
1933	11	Jan.	21	Jan.	11		1934	5	Dec.	13	Dec.	9	
	16	Dec.	26	Dec.	11		1935	18	Nov.	24	Nov.	7	
1934	8	Feb.	24	Feb.	17	13 < 0.1							
1935	15	Jan.	7	Feb.	24	29 -	1936	5	Oct.	12	Oct.	8	8, 12 < 0.1
1936	31	Dec.(1935)	5	Feb.	37	11 -							
Absolute	31	Dec.(1935)	5	Feb.(1936)	37	11 -	Absolute	16	July(1917)	2	Aug.(1917)	18	22 (≡) 0.1

NO. OF DAYS WITH MINIMUM AIR TEMP. $< 0^{\circ}\text{C}$

Month Year	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Sum	First Date	Last Date	Interval Days
Mean	1.1	10.6	26.7	30.0	27.4	24.5	8.0	0.9	129.3	28.4 Oct.	1.4 May	1865

NO. OF DAYS WITH MEAN AIR TEMP. $< 0^{\circ}$

Mean	-	0.9	14.5	24.8	22.2	10.2	0.3	-	72.7	3.4 Dec.	20.8 Mar.	109.2
------	---	-----	------	------	------	------	-----	---	------	----------	-----------	-------

NO. OF DAYS WITH MAXIMUM AIR TEMP. $< 0^{\circ}$

Mean	-	0.1	3.6	10.8	7.0	1.7	-	-	22.6	14.4 Dec.	27.5 Feb.	76.0
------	---	-----	-----	------	-----	-----	---	---	------	-----------	-----------	------

NO. OF DAYS WITH MAXIMUM AIR TEMP. $> 25^{\circ}$

Month Year	Apr.	May	June	July	Aug.	Sept.	Oct.	Sum.	First Date	Last Date	Interval Days
Mean	0.2	2.7	9.0	20.3	25.7	10.5	0.2	68.5	14.9 May	24.8 Sept.	133.3

NO. OF DAYS WITH MAXIMUM AIR TEMP. $< 30^{\circ}$

Mean	-	0.0	0.5	6.1	8.7	0.8	-	16.1	7.6 July	28.9 Aug.	53.9
------	---	-----	-----	-----	-----	-----	---	------	----------	-----------	------

NO. OF DAYS WITH MEAN AIR TEMP. $> 25^{\circ}$

Mean	-	-	-	5.1	7.4	0.5	-	13.0	17.2 July	23.6 Aug.	38.4
------	---	---	---	-----	-----	-----	---	------	-----------	-----------	------

HOAR FROST

Month Year	First Day		Last Day		Interval	Month Year	First Day		Last Day		Interval Days
	Day	Month	Day	Month			Day	Month	Day	Month	
Mean	17.3	Oct.	7.2	May	203.1	Absolute	11	Sept. (1902)	4	June (1921)	267

SNOW

Mean	14.2	Nov.	9.6	Apr.	147.3	Absolute	25	Oct. (1919)	10	May (1917)	198
------	------	------	-----	------	-------	----------	----	----------------	----	---------------	-----

SNOW ON GROUND

Mean	2.4	Dec.	24.3	Mar.	112.6	Absolute	25	Oct. (1919)	30	Apr. (1934)	188
------	-----	------	------	------	-------	----------	----	----------------	----	----------------	-----

AMOUNT OF EVAPORATION (mm)

Month Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
---------------	------	------	------	------	-----	------	------	------	-------	------	------	------	--------

Open Air (1916-1936)

Mean	2.0	2.4	3.0	4.5	5.2	5.5	5.6	5.2	3.8	2.7	1.9	1.8	3.6
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

in the Shelter (1917-1936)

Mean	1.0	1.0	1.2	1.6	1.7	1.5	1.4	1.4	1.1	1.0	0.9	1.0	1.2
------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----