

ANNUAL REPORT  
OF THE  
METEOROLOGICAL  
AND THE  
SEISMOLOGICAL OBSERVATIONS  
MADE AT THE  
INTERNATIONAL LATITUDE OBSERVATORY  
OF MIZUSAWA  
FOR  
THE YEAR 1932.

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

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PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY  
OF MIZUSAWA.

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1933.

The present report gives the results of the meteorological and seismological observations made at this observatory during the year 1932. No alteration has been made in the nature and methods of observation. The observations and the calculations were made by Messrs. M. Uchida, S. Satô, I. Kumagai, and G. Obata under the superintendence of Mr. T. Ikeda.

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

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

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

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

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

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

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

*Relative Humidity*.—is given in percentages.

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

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

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

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

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

*Barometer*—63.1m above sea level.

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

*Anemometer*.—15.4m above the ground.

*Wind vane*.—16.6m above the ground.

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

In recording meteorological phenomena the following symbols are used:—

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

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

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

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

April, 1933

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

## SEISMOLOGICAL OBSERVATIONS

### Remarks :—

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

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

2. The approximate epicentres of the chief earthquakes are given, which are extracted from the "Kishô yôran" issued monthly by the Central Meteorological Observatory of Japan.
3. The time adopted in the Seismological observations is Greenwich Local Time.

## EARTHQUAKES, 1932.

No.	Date 1932	P				S				L				Maximum Range of Motion				Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
1	Jan. 2	h	m	s	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	Valley of the R. Kuji	
2	3	10	06.4	?	06	49	?	-	-	-	-	-	-	0.02	0.01	1.3	0			
3	3	6	28	49	?	28	53	28	50	-	-	-	-	0.02	0.03	1.3	0			
4	4	8	?	-	-	49	43	-	-	-	-	-	-	0.01	-	2.5	0			
5	6	13	39	48	39.8	40	05	40	05	-	-	-	-	0.05	0.02	2.4	0			
6	7	14	00	20	00.3	00	25	00	23	-	-	-	-	0.02	0.03	2.4	0			
6	7	11	29	39	29.4	31	22	31	18	-	-	-	-	0.03	0.03	4.6	0	Off Kinkwazan Distant		
7	7	12	04	23	?	04	30	?	-	-	-	-	-	0.02	?	0.8	0			
8	8	14	04	40	?	04	47	?	-	-	-	-	-	0.03	0.04	1.0	0			
9	9	1	51	57	51	56	52	10	52	07	-	-	-	0.06	0.06	3.1	0			
10	9	10	29	40	29	40	35	51	35	52	?	?	-	?	?	23.2	0			
11	14	1	38	15	38.2	38	21	38	21	-	-	-	-	0.09	0.09	2.6	0	Off Miyako		
12	14	1	54	57	54.9	55	06	55	07	-	-	-	-	0.05	0.04	1.9	0			
13	14	5	?	-	?	?	-	?	-	-	-	-	-	0.01	?	?	0			
14	14	16	?	-	-	28	13	-	-	-	-	-	-	0.01	-	-	0			
15	14	17	?	-	-	09	21	-	-	-	-	-	-	0.01	-	-	0			
16	14	18	?	-	?	18	20	?	-	-	-	-	-	0.02	0.01	?	0	Off Miyako		
17	19	4	04	53	04	52	05	13	05	14	-	-	-	0.06	0.06	3.7	0			
18	20	5	?	-	-	?	-	-	-	-	-	-	-	?	-	-	0			
19	20	8	?	-	-	?	-	-	-	-	-	-	-	0.01	-	-	0			
20	20	15	?	-	?	14	18	?	-	-	-	-	-	0.01	?	-	0			
21	24	3	54.7	-	54.7	63.0	62.3	?	70	22	-	-	-	?	0.02	-	0	Distant		
22	25	4	49.9	-	-	50	14	-	-	-	-	-	-	0.01	-	-	0	Distant		
23	26	18	39.0	-	-	39	19	-	-	-	-	-	-	0.01	-	-	0			
24	28	11	?	-	-	?	-	-	-	-	-	-	-	0.01	-	-	0			
25	29	13	49	58	49.8	56.4	56.5	61.0	60.9	-	-	-	-	0.01	0.20	109.7	0			
26	31	9	19	22	19.3	20	09	20.2	-	-	-	-	-	0.01	0.03	4.4	0		Neighbourhood of Tokamachi N off Hachijojima NW off Chichijima	
27	31	19	46	37	?	47	29	47.6	-	-	-	-	-	0.02	0.02	6.5	0			
28	Feb. 2	11	00	29	00.5	01	46	01	45	-	-	-	-	0.01	0.02	5.1	0			
29	3	4	?	-	-	27.8	-	-	-	-	-	-	-	0.02	-	-	0			
30	3	7	36	58	36	57	38	52	38	53	-	-	-	0.13	0.05	6.9	0			
31	3	18	?	-	-	05.6	-	-	-	-	-	-	-	0.01	-	-	0	Off Kinkwazan		
32	4	5	44	53	?	45	27	?	-	-	-	-	-	0.01	?	3.8	0			
33	5	7	14.1	-	-	14	21	?	-	-	-	-	-	0.01	?	-	0			
34	7	22	?	-	-	57	23	57	25	-	-	-	-	0.02	0.02	-	0			
35	8	15	22	49	22	50	23	02	23	02	-	-	-	0.27	0.29	5.5	1			
36	11	4	27.5	-	-	28	02	-	-	-	-	-	-	0.00	-	-	0	E off the R. Abukuma SE off Hachijojima		
37	12	22	?	-	-	24.6	-	-	-	-	-	-	-	?	-	-	0			
38	12	6	18.7	-	-	19	24	?	-	-	-	-	-	0.01	?	-	0			
39	12	16	19.4	-	-	19	32	?	-	-	-	-	-	?	?	-	0			
40	13	21	13.3	-	-	13	53	-	-	-	-	-	-	0.00	-	-	0			
41	14	3	28	06	28.2	28	40	28	42	-	-	-	-	0.02	0.02	3.2	0	E off the R. Abukuma SE off Hachijojima		
42	14	16	02	12	02	10	02	27	02	27	-	-	-	0.08	0.14	3.4	1			
43	16	14	11.0	-	-	10.6	13	50	13	56	-	-	-	0.02	?	-	0			
44	19	13	26	59	27.0	28	01	28	01	-	-	-	-	0.07	0.10	5.2	0			
45	26	6	?	-	-	13.1	?	-	-	-	-	-	-	0.01	0.03	-	0			
46	27	1	?	-	-	?	-	-	-	-	-	-	-	0.01	-	-	0	Mouth of the R. Nobu		
47	28	3	00.2	-	-	00.3	01	34	01.5	-	-	-	-	0.04	0.03	-	0			
48	28	12	21.1	-	-	21.5	-	-	-	-	-	-	-	?	-	-	0			
49	Mar. 1	17	38.9	-	-	39	33	-	-	-	-	-	-	0.01	-	-	0			
50	2	1	32.5	-	-	32	42	-	-	-	-	-	-	0.02	-	-	0			
51	2	2	49	40	49	42	50	01	50	01	-	-	-	0.12	0.10	5.9	0	ESE off Miyako E off Miyako		
52	2	5	06	00	06.0	06	27	06.5	-	-	-	-	-	0.02	0.02	3.0	0			
53	4	5	09.0	-	-	09	20	-	-	-	-	-	-	?	-	-	0			
54	4	9	?	-	-	?	-	-	-	-	-	-	-	0.01	-	-	0			
55	7	9	02.1	-	-	?	02	35	?	-	-	-	-	0.00	?	-	0			

## EARTHQUAKES, 1932.

No.	Date 1932	P				S				L				Maximum Range of Motion			Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N			
56	Mar. 8	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	Neighbourhood of Urakawa		
57	8	4	35.1	-	-	35	49	-	-	-	-	0.01	-	5.2	0				
58	8	8	53	41	53.7	54	24	54	23	-	-	0.04	0.05	0	0				
59	10	14	04.7	?	?	05	03	?	?	-	-	0.01	?	0	0				
60	10	12	53.1	-	-	53	49	-	-	-	-	0.01	-	4.2	0				
		19	54	32	?	54	58	55.0	-	-	-	0.01	?	0	0				
61	11	18	38.2	?	?	38	45	?	?	-	-	0.01	0.01	0	0	Distant			
62	15	4	33.0	32.8	32.8	38.1	38.1	43.2	42.8	-	-	?	0.05	0	0				
63	15	19	28.7	?	?	29	31	?	?	-	-	0.01	0.01	0	0				
64	16	20	25.0	?	?	25	42	?	?	-	-	0.01	?	0	0	Mariana Is.			
65	19	11	04	55	04	54	09	15	09	05	13	23	12	58	?		?	48.0	0
66	19	18	39.9	-	-	40.3	-	-	-	-	-	-	-	?	-	0	0		
67	19	20	51.5	-	-	51	37	-	-	-	-	-	-	0.02	-	0	0		
68	20	0	56.5	-	-	57	06	-	-	-	-	-	-	0.01	-	0	0		
69	20	18	31	15	?	?	31	39	?	?	-	-	-	0.01	?	2.2	0		
70	22	8	33.4	33.5	33.5	33	55	33	58	-	-	-	-	0.02	0.03	0	0	E off Ezanzaki	
71	22	14	03.1	?	?	03	37	?	?	-	-	-	-	0.01	0.01	0	0		
72	26	0	06	54	06	55	12	54	12	52	?	?	?	?	?	54.6	0	Aleutian Is.	
73	26	0	40.6	?	?	41	01	41	01	-	-	-	-	0.02	?	0	0		
74	26	10	00	41	00	41	07	14	07	13	13	24	13	49	?	?	42.3	0	Philippine
75	31	4	?	-	-	?	-	-	-	-	-	-	-	0.01	-	0	0		
76	Apr. 2	7	00.9	?	?	01	44	?	?	-	-	-	-	0.01	?	0	0		
77	3	13	39	49	?	?	39	59	?	?	-	-	-	0.01	?	1.8	0	E off Yoshihama	
78	4	19	18	46	18	44	20	21	20	21	-	-	-	0.33	0.36	25.6	0	S off Hachijyojima	
79	6	22	13	34	?	?	13	45	?	?	-	-	-	0.01	?	2.0	0		
80	8	23	24.8	-	-	25	02	-	-	-	-	-	-	0.01	-	0	0		
81	11	18	13	56	13	53	14	38	14	36	-	-	-	0.04	0.06	6.0	0	Kasukabe	
82	13	22	39	45	39	45	39	55	39	55	-	-	-	0.20	0.11	3.5	0	Off Miyako	
83	14	7	47	33	-	-	48	05	-	-	-	-	-	0.01	-	1.6	0		
84	14	17	02	24	02.3	02	49	02	49	-	-	-	-	0.07	0.08	4.1	0	E off Shiriyazaki	
85	15	7	48.2	-	-	48.8	-	-	-	-	-	-	-	?	-	0	0		
86	15	18	?	-	-	06.9	-	-	-	-	-	-	-	?	-	0	0		
87	16	19	?	-	-	41.6	-	-	-	-	-	-	-	?	-	0	0		
88	17	3	47.2	47.3	47.3	47	43	47	44	-	-	-	-	0.07	0.06	0	0	Bay of Nobeji	
89	18	1	?	-	-	?	-	-	-	-	-	-	-	0.01	-	0	0		
90	22	16	56.4	?	?	56	49	?	?	-	-	-	-	0.01	?	0	0		
91	23	11	01.9	?	?	02	15	02	16	-	-	-	-	0.01	?	0	0		
92	23	12	?	-	-	01.3	-	-	-	-	-	-	-	?	-	0	0		
93	24	8	53.0	?	?	53	35	53	37	-	-	-	-	0.03	0.02	0	0	Off Kushiro	
94	24	13	33.8	?	?	34	13	?	?	-	-	-	-	0.02	?	0	0		
95	24	19	?	-	-	05	00	-	-	-	-	-	-	?	-	0	0		
96	26	0	34	50	34.8	35	16	35	18	-	-	-	-	0.08	0.07	5.1	0	Off Miyako	
97	26	3	?	?	?	43.8	?	?	?	-	-	-	-	?	?	0	0		
98	26	13	?	?	?	36	42	?	?	-	-	-	-	0.01	?	0	0		
99	28	3	44	39	?	?	45	47	45	45	-	-	-	0.08	0.10	6.4	0	Kumanonada	
100	29	8	04	11	?	?	06	12	06.3	-	-	-	-	0.03	?	6.2	0		
101	May 30	7	52.1	-	-	52	27	-	-	-	-	-	-	?	-	0	0		
102	5	4	12	38	12	37	13	46	13	44	-	-	-	0.16	0.20	6.9	0	Bay of Osaka, deep	
103	5	8	06.4	-	-	06	42	-	-	-	-	-	-	0.01	-	0	0		
104	6	14	18.8	-	-	19	06	-	-	-	-	-	-	?	-	0	0		
105	7	3	40.0	?	?	40	17	40.3	-	-	-	-	-	0.01	?	0	0		
106	10	20	?	-	-	04.0	-	-	-	-	-	-	-	0.00	-	0	0		
107	11	6	55.2	55.2	55.2	56	17	56.3	-	-	-	-	-	0.03	0.06	0	0	ESE off Hachijyojima	
108	12	6	15.0	-	-	15	42	-	-	-	-	-	-	0.00	-	0	0		
109	13	21	39.4	?	?	39	42	39.7	-	-	-	-	-	0.02	?	0	0		
110	14	13	18	48	18	45	24	56	24	58	30	51	30	58	1.84	6.44	87.8	0	Distant

## EARTHQUAKES, 1932.



No.	Date 1932	P				S				L				Maximum Range of Motion			Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N			
111	May 16	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0			
112	16	6	?	-	-	07	37	-	-	-	-	-	-	-	0				
113	16	16	?	-	-	11	51	-	-	-	-	-	-	-	0				
114	17	17	?	-	-	00	05	-	-	-	-	-	-	-	0				
115	19	13	05	00	?	05	16	05.2	-	-	-	-	0.04	0.03	1.8	0	SE off Kinkwazan		
		4	21	30	?	21	42	21	41	-	-	-	0.03	0.05	1.8	0			
116	19	6	45.9	-	-	46	07	46	07	-	-	-	0.02	?	0				
117	20	3	?	-	-	51	05	-	-	-	-	-	?	-	0				
118	20	11	55.3	55.2	-	55	55	55	54	-	-	-	0.04	0.05	0				
119	21	7	04.6	-	-	05	15	-	-	-	-	-	0.00	-	0				
120	22	0	47.4	?	-	47	43	47	43	-	-	-	0.02	?	0				
121	25	4	33	24	-	33	43	-	-	-	-	-	0.01	-	1.9	0			
122	26	16	20	14	20	29	00	29	01	?	?	-	0.15	?	38.3	0	Distant		
123	28	1	?	-	-	44	59	-	-	-	-	-	0.01	-	0				
124	28	2	13	51	13	14	27	14	24	-	-	-	0.04	0.06	5.3	0			
125	28	2	24	28	24	27	44	27	42	29.0	28.9	-	0.08	0.13	22.6	0			
126	31	5	43	26	43.4	43	50	43.9	-	-	-	-	0.02	?	3.3	0	E off Kinkwasan		
127	June 3	0	?	-	-	?	19	19	28	-	-	-	?	1.25	10.0	2	Off Kinkwasan		
128	3	10	50.4	50.7	-	61	31	61	44	?	72.0	-	0.04	0.72	0				
129	3	13	42	59	43	43	13	43	13	-	-	-	0.69	0.60	6.1	1	Distant, Mexico		
130	3	19	37	39	?	37	53	?	-	-	-	-	0.02	?	1.6	0	NNE off Miyako		
131	4	2	01	27	01	01	55	01	56	-	-	-	0.74	0.60	8.3	1	ESE off Shiriyazaki		
132	5	9	06	38	06	06	52	06	53	-	-	-	0.06	0.05	2.0	0	Upper valley of R. Kuji		
133	5	21	16.9	-	-	17	32	-	-	-	-	-	0.01	-	0				
134	5	22	?	-	-	30	47	-	-	-	-	-	0.00	-	0				
135	10	18	07.9	?	-	08.6	?	-	-	-	-	-	0.01	0.01	0				
136	10	20	28.0	?	-	28.6	?	-	-	-	-	-	0.01	?	0				
137	11	10	42.3	?	-	43	32	?	-	-	-	-	0.01	?	0				
138	11	12	?	-	-	15.9	-	-	-	-	-	-	0.00	-	0				
139	11	12	?	-	-	19.7	-	-	-	-	-	-	0.00	-	0				
140	11	17	05.4	05.7	-	09.9	09.9	?	14.0	-	-	-	?	?	0				
141	11	18	16.9	-	-	17	12	-	-	-	-	-	0.00	-	0				
142	13	0	47.3	?	-	47	36	47	36	-	-	-	0.01	?	0				
143	13	21	?	-	-	03	29	-	-	-	-	-	0.01	-	0				
144	14	6	05	14	05.3	05	36	05	35	-	-	-	0.01	0.02	6.3	0			
145	14	11	25.8	-	-	26.4	-	-	-	-	-	-	0.00	-	0				
146	16	1	?	?	-	28	02	?	-	-	-	-	0.01	?	0				
147	16	6	57.7	-	-	58	13	-	-	-	-	-	0.01	-	0				
148	16	8	33	17	33	33	54	33	56	-	-	-	0.08	0.08	6.8	0	Lower part of R. Kinu		
149	16	20	17	42	17	18	10	18	13	-	-	-	0.06	0.06	4.9	0	N Kashimanada		
150	17	5	46.8	?	-	47	43	?	-	-	-	-	0.00	?	0				
151	17	19	45	46	45.7	46	11	46	13	-	-	-	0.03	0.03	3.9	0	SE off Noshappuzaki		
152	18	1	?	?	-	36.3	?	-	-	-	-	-	0.00	?	0				
153	18	10	26	06	26	36.6	37.4	?	?	-	-	-	?	?	20.9	0	Distant		
154	19	9	18	51	?	19	02	?	-	-	-	-	0.01	?	1.9	0			
155	19	15	19.8	?	-	21	21	21.4	-	-	-	-	0.01	0.02	0				
156	20	15	39	51	39.9	40	09	40	10	-	-	-	0.04	0.05	2.9	0	Mabuchigawa		
157	21	7	?	-	-	?	-	-	-	-	-	-	0.00	-	0				
158	21	9	18.9	?	-	19.6	?	-	-	-	-	-	0.00	?	0				
159	21	12	18	08	?	18	30	18	30	-	-	-	0.02	0.01	2.4	0			
160	21	23	26.6	-	-	26	59	-	-	-	-	-	0.00	-	0				
161	22	0	36	54	36	37	29	37	29	-	-	-	0.57	0.78	19.1	0	Off Inubozaki		
162	22	3	42.4	?	-	43	05	?	-	-	-	-	0.01	?	0				
163	22	13	34.3	34.3	-	?	?	?	?	-	-	-	?	?	0				
164	23	3	30.7	?	-	31	58	32.1	-	-	-	-	0.01	0.02	0				
165	24	15	56	32	56.5	57	09	57	09	-	-	-	0.04	0.04	4.6	0	Off Kashimanada		

## EARTHQUAKES, 1932.

No.	Date 1932	P				S				L				Maximum Range of Motion				Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
166	June 26	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	SE off Ochiishizaki			
167	29	19	21.5		21.5		23	44	23.6				0.02	0.05	26.1	1	E off mouth of			
168	29	18	16	13	16	13	16	49	16	49			0.68	0.90		0	Mabuchigawa			
169	29	18	52	03	?		52	32	52.5				0.02	0.02	3.9	0				
170	30	19	58.9		?		59	24	?				0.01	0.01		0	NE off Miyako			
171	July 1	9	28	35	28.6		28	52	28	53			0.04	0.05	3.1	0				
172	2	15	37	34	?		38	01	?				0.01	?	3.4	0				
173	4	22	?		-	-	54	21	-	-			?	-		0				
174	5	20	06	47	?		06	59	?				0.01	?	2.5	0				
175	5	3	?		-	-	18	25	-	-			?	-		0				
176	6	5	43.4		-	-	44	07	-	-			0.01	-		0				
177	6	6	58	49	58.8		59	04	59	06			0.03	0.01	2.3	0	Mouth of Mabuchigawa			
178	9	22	?		-	-	46.6		-	-			0.01	-		0				
179	10	0	46.6		?		47	20	?				0.01	?		0				
180	10	7	46	02	46	04	46	42	46	44			0.37	0.55	26.2	0	E far off Miyako			
181	11	20	14	37	?		14	48	?				0.02	?	1.3	0	Off Bay of Hirota			
182	11	8	40.1		?		40	55	41.0				0.02	0.01		0				
183	15	23	18	20	18	20	18	38	18	39			0.24	0.27	8.6	1	SW off Erimozaki			
184	18	6	52	51	53.0		53	15	53	19			0.02	0.02	3.3	0	E off Miyako			
185	20	20	17	18	17.1		26	44	26.7				?	?	20.2	0	Distant			
186	21	12	47	46	47.8		54	02	54	02			?	?	25.6	0	New Guinea			
187	22	6	04.8		?		05	01	?				0.01	?		0				
188	22	15	46	55	?		47	09	?				0.01	?	2.3	0				
189	24	10	?		?		49	46	?				0.01	?		0				
190	24	15	08.4		?		08.8		?				0.01	?		0				
191	24	19	?		-	-	35.6		-	-			0.00	-		0				
192	25	8	26	11	26	11	27	14	27	15			0.13	0.12	9.5	0	Bay of Wakasa, deep			
193	25	9	?		-	-	?		-	-			?	-		0				
194	26	17	?		-	-	25	21	-	-			?	-		0				
195	27	0	32	54	32.9		34	25	34	26			0.06	0.06	7.3	0	SW off Hachijozima,			
196	27	21	28	03	28.1		34	34	34.6				?	?	19.4	0	Distant deep			
197	28	3	42	54	42	55	43	21	43	20			0.05	0.05	6.0	0	E off mouth of			
198	28	7	?		-	-	06.9		-	-			?	-		0	Mabuchigawa			
199	28	21	57	00	?		57	23	?				0.01	?	2.6	0				
200	29	11	45	25	?		46	00	?				0.01	?	3.8	0				
201	29	16	36	44	36.7		37	19	37	21			0.02	?	4.7	0	Kashimanada			
202	29	21	06	13	06.1		12	16	12.3				?	?	13.5	0	Distant			
203	Aug. 1	21	53	22	53	22	53	38	53	38			0.36	0.35	6.9	1	E off mouth of			
204	1	3	15	04	?		16	10	?				0.01	?	3.3	0	Mabuchigawa			
205	1	4	36.5		?		37	29	?				0.00	?		0				
206	2	4	33	11	33	10	39	10	39	17			?	?	14.3	0	New Guinea			
207	3	18	58	10	58	07	58	31	58	32			0.08	0.10		0	Bay of Nobeji			
208	3	23	49	35	49	33	50	06	50	03			0.04	0.05	7.0	0	Neighbourhood of Shiri-			
209	4	6	41	44	41	41	45	41	45	38			?	?	13.7	0	Kamchatka yazaki			
210	4	14	36	32	?		36	52	?				?	?	1.6	0				
211	5	12	45	26	45.4		45	50	45	49			0.02	0.02	3.1	0	SE off Kinkwasan			
212	6	22	45	16	45	17	45	34	45	34			0.14	0.10	4.5	0	ESE off mouth of			
213	7	7	59.7		?		60.0		?				?	?		0	Mabuchigawa			
214	8	0	57	09	?		57	38	?				0.01	?	4.1	0				
215	8	4	24	59	24	58	25	23	25	23			0.03	0.04	3.7	0	ESE off mouth of			
216	8	15	58	25	?		58	37	58	36			0.01	0.01	1.4	0	Uketogawa			
217	12	3	31	10	31	06	36.7		36.8				?	?	36.5	0	Aleutian Is.			
218	13	22	30	53	?		32	01	32.0				0.02	0.02	4.5	0	Kumanonada, deep			
219	14	2	57.5		-	-	57	40	-	-			?	-		0				
220	14	4	47	02	46	59	52	54	52	54			0.03	0.09	42.1	0	South China			
220	14	10	17	43	?		18	23	?				0.01	?	3.1	0				



## EARTHQUAKES, 1932.



No.	Date 1932	P				S				L				Maximum Range of Motion		Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W			
221	Aug. 14	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	E off Taiwan N off Ishigaki Is.	
222	18	12	58	42	?		59	28	59.6	-	-	-	-	0.02	?	5.6		0
223	20	16	17.5		?		18	09	?	-	-	-	-	0.01	?			0
224	21	9	40.3		?		41	23	41.3	-	-	-	-	0.01	?			0
225	22	4	20	33	20.7		24	35	24.4	26.8		26	24	?	?	20.3		0
		11	16	26	16	29	21	48	21	38	24.6		24.7	?	?	20.6	0	
226	24	1	18	12	-	-	18	32	-	-	-	-	-	0.01	-	1.3	0	
227	24	4	17	14	?		17	51	17	52	-	-	-	0.01	0.01	4.0	0	
228	24	12	?		?		16.6		?		-	-	-	0.01	?		0	
229	24	14	33	54	?		35	29	?		-	-	-	0.01	?	6.4	0	
230	25	10	31	48	?		31	59	31	59	-	-	-	0.03	?	1.3	0	
231	26	5	?		-	-	59	44	-	-	-	-	-	0.00	-		0	
232	26	10	57	38	-	-	58	06	-	-	-	-	-	0.00	-	2.6	0	
233	26	16	53	55	53	54	54	10	54	11	-	-	-	0.04	0.04	3.3	0	
234	27	3	20.6		-	-	20	59	-	-	-	-	-	0.00	-		0	
235	27	20	34.5		?		34	50	?		-	-	-	0.01	?		0	
236	28	8	36	29	?		36	49	?		-	-	-	0.01	?	2.8	0	
237	29	2	26	44	26.7		27	39	27	39	-	-	-	0.02	0.02	3.4	0	
238	29	4	37.8		-	-	38	52	-	-	-	-	-	0.00	-		0	
239	29	7	?		-	-	04	13	-	-	-	-	-	?	-		0	
240	30	12	37	43	-	-	38	00	-	-	-	-	-	?	-	1.7	0	
241	30	16	23.7		?		24	19	?		-	-	-	0.01	?		0	
242	30	19	18.5		-	-	18	48	-	-	-	-	-	?	-		0	
243	31	7	01.6		-	-	02	02	-	-	-	-	-	?	-		0	
244	Sept. 1	2	?		-	-	01.3		-	-	-	-	-	0.01	-		0	
245	1	17	45	18	-	-	45	30	-	-	-	-	-	0.01	-	1.6	0	
246	1	21	?		-	-	43	31	-	-	-	-	-	0.00	-		0	
247	2	2	42.2		?		43	06	43	07	-	-	-	0.01	?		0	
248	2	8	?		?		49	01	49	03	-	-	-	0.05	0.05		0	
249	2	8	56.2		?		57	02	57.0		-	-	-	0.01	0.02		0	
250	2	13	00	11	00	12	02	58	03	03	?		?	0.03	0.03	8.0	0	
251	2	18	35.5		-	-	36	22	-	-	-	-	-	0.01	-		0	
252	3	0	57	30	57.5		58	07	58	09	-	-	-	0.02	0.02	5.1	0	
253	3	11	59	37	59	36	60	12	60	12	-	-	-	?	4.81	28.0	3	
254	3	13	08.9		-	-	09	21	-	-	-	-	-	0.00	-		0	
255	3	14	20.5		-	-	20	57	-	-	-	-	-	0.00	-		0	
256	3	15	32.4		-	-	32	53	-	-	-	-	-	0.00	-		0	
257	3	16	?		-	-	56.5		-	-	-	-	-	?	-		0	
258	3	17	08	14	08.2		08	40	08	40	-	-	-	0.03	0.04	4.6	0	
259	3	22	49.4		-	-	49	54	-	-	-	-	-	0.01	-		0	
260	4	1	02	42	02.6		02	55	02	54	-	-	-	0.13	0.08	3.7	0	
261	4	3	24.3		-	-	24	56	-	-	-	-	-	?	-		0	
262	4	7	07.1		-	-	07	29	-	-	-	-	-	?	-		0	
263	4	7	32.7		-	-	33	00	-	-	-	-	-	?	-		0	
264	4	12	29	18	29	18	29	51	29	51	-	-	-	0.18	0.22	6.6	1	
265	4	13	23.9		-	-	24	12	-	-	-	-	-	0.01	-		0	
266	4	14	?		-	-	?		-	-	-	-	-	?	-		0	
267	5	2	42	29	42	29	42	58	42	58	-	-	-	0.09	0.10	5.7	0	
268	5	3	08	48	08	48	09	20	09	23	-	-	-	0.81	0.85	10.3	1	
269	5	3	?		-	-	27	26	-	-	-	-	-	?	-		0	
270	5	4	04.2		-	-	04	32	-	-	-	-	-	0.01	-		0	
271	5	7	27	14	-	-	27	30	-	-	-	-	-	?	-	3.2	0	
272	5	8	58	28	-	-	58	56	-	-	-	-	-	0.01	-	3.4	0	
273	5	12	56	44	56	44	57	01	57	01	-	-	-	0.16	0.14	5.0	0	
274	5	23	27.2		-	-	28	25	-	-	-	-	-	?	-		0	
275	7	9	10.8		?		11	45	11.7		-	-	-	0.01	?		0	

## EARTHQUAKES, 1932.

International  
Seismological  
Centre

No.	Date 1932	P				S				L				Maximum Range of Motion				Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
276	Sept. 7	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0				
277	7	11	?		-	-	32	45	-	-	-	-	?	-	4.5	0				
278	8	18	22	43	?		23	10	23.1	-	-	-	0.01	0.02	1.7	0				
279	9	0	28	11	?		28	19	28.3	-	-	-	0.01	0.04		0	Distant			
280	9	6	54.4		-	-	60.6		-	-	-	?	-		0	New Guinea				
		13	47.3		47	22	53.9	53	43	57.7	57.1		?	?		0				
281	9	22	?		-	-	09.3		-	-	-	-	?	-		0				
282	10	3	29.7		-	-	30	05		-	-	-	?	-		0				
283	11	14	45.2		?		45	57	46.0	-	-	-	0.01	0.01		0				
284	12	8	47.5		?		48	24	?	-	-	-	0.01	?		0				
285	13	22	?		-	-	19	48		-	-	-	0.01	-		0				
286	15	11	20.0		?		20	43	?	-	-	-	0.00	0.01		0	Distant			
287	15	14	-	-	29.3		-	-	36.1	-	-	42.4	-	0.04		0				
288	15	16	12.0		?		12	18	?	-	-	-	?	?		0				
289	17	18	?		?		42	50	42.9	-	-	-	0.01	?		0				
290	18	8	?		-	-	02	17		-	-	-	0.01	-		0				
291	18	18	18.5		?		20	08	20	10	-	-	0.02	0.02		0	NW off Hachijojima			
292	19	1	?		?		09	37	?		-	-	0.01	0.01		0				
293	19	14	?		?		14	07	?		-	-	0.01	0.01		0				
294	22	5	?		-	-	07	47		-	-	-	0.00	-		0				
295	23	14	23	42	23	42	24	51	24	51	-	-	?	2.15	31.8	2	North Nipponkai, deep			
296	25	14	14.6		?		15	12	?		-	-	0.01	?		0				
297	26	1	53	58	-	-	54	15		-	-	-	0.00	-	1.5	0				
298	26	10	23	50	23.8		24	10	24	07	-	-	0.01	?	3.3	0				
299	26	19	33	15	33	18	?		44	11	64	00	63	37	62.7	0	Greece			
300	27	8	21.7		-	-	22	04		-	-	-	0.01	-		0				
301	29	6	?		-	-	19	08		-	-	-	0.00	-		0				
302	29	17	49.1		49.2		51	11	51	24	-	-	0.06	0.15		0	S off Etoroff			
303	30	4	57.2		?		58	31	58	30	-	-	0.02	?		0	SW off Hachijojima			
304	Oct. 1	15	10	34	10	31	12	31	12	33	-	-	0.05	0.07	6.8	0	NW far off Chichijima			
305	2	3	?		-	-	?			-	-	-	?	-		0				
306	2	3	?		-	-	?			-	-	-	?	-		0				
307	2	14	36.9		?		37	12	?		-	-	0.01	?		0				
308	5	3	51.9		?		52	37	52	40	-	-	0.02	0.02		0	ESE off Hachijojima			
309	5	14	01	19	?		02	16	02.3		-	-	0.02	0.03	5.3	0	Off Inubozaki			
310	5	14	09.6		?		10	24	?		-	-	0.01	?		0				
311	5	15	00	44	?		01	09	01	07	-	-	0.02	?	2.2	0	Off Shiriyazaki			
312	5	16	08.8		?		09	35	09	35	-	-	0.02	?		0	Off Kushiro			
313	6	5	04.2		?		04	37	04	38	-	-	0.02	0.02		0	SW of Hachijojima			
314	7	13	51	10	?		51	22	?		-	-	0.00	?	1.4	0				
315	9	13	-	-	?		-	-	?		-	-	-	0.04		0				
316	10	9	02	52	02	52	03	02	03	01	-	-	?	1.71	8.5	2	Neighbourhood of Ozuchi			
317	11	9	36.3		?		36	47	36.9		-	-	0.01	?		0				
318	12	6	?		?		37.7		?		-	-	0.00	?		0				
319	12	18	14.6		?		14	58	?		-	-	0.00	?		0				
320	12	19	39.5		?		41	32	41	31	-	-	0.01	0.01		0	Chishima			
321	12	22	56	30	-	-	56	51		-	-	-	0.01	-	2.4	0				
322	14	5	36.8		?		37	28	?		-	-	0.01	?		0				
323	14	12	38.1		?		39	13	39	15	-	-	0.02	0.05		0	SSW off Hachijojima, deep			
324	15	8	35	27	?		35	48	35	48	-	-	0.01	?	2.2	0				
325	16	0	10.5		10.5		11	31	11	35	-	-	0.04	0.05		0	S off Inubozaki			
326	16	2	02.6		?		03	48	03.9		-	-	0.02	?		0				
327	16	10	?		-	-	18	19		-	-	-	0.00	-		0				
328	16	12	15.9		15.9		22.1		22.2		27.4	27.1	?	?		0	Distant			
329	19	10	58.2		?		58	43	58	44	-	-	0.01	?		0				
330	23	21	?		?		32.6		33.1		40.1	40.3	?	?		0	ENE off Taiwan			

EARTHQUAKES, 1932.



No.	Date 1932	P				S				L				Maximum Range of Motion				Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
331	Oct. 24	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	ENE off Karafuto			
332	25	18	36	39	36.6	37	08	37	07	-	-	0.01	0.01	2.9	0					
333	26	17	04	07	04	07	05	38	05	36	-	-	0.32	0.23	9.1	0				
334	28	3	?	-	-	-	24	54	-	-	-	-	0.00	-	-	0				
335	30	5	35.5	-	-	-	?	-	-	-	-	-	?	?	-	0				
336	30	1	51.0	-	-	-	03	15	03	15	-	-	0.02	0.02	-	0				
337	30	1	51.0	-	-	51.7	-	-	-	-	-	-	0.00	-	-	0				
338	Nov. 1	20	54.8	-	-	54.8	64.8	64.9	?	?	-	-	?	?	-	0				
339	1	2	17	42	17.7	17	51	17	51	-	-	-	0.04	0.05	2.2	1				
340	1	2	57	23	?	57	29	57	28	-	-	-	0.01	?	0.6	0				
341	2	7	01	25	-	-	01	39	-	-	-	-	0.01	-	2.1	0				
342	3	23	56	25	56.4	56	54	56.9	-	-	-	-	0.02	0.02	3.5	0				
343	3	15	22.6	-	-	23	26	-	-	-	-	-	0.00	-	-	0				
344	6	19	47	50	48.1	51	50	52	36	?	?	-	?	?	16.8	0				
345	10	12	50	44	50	44	53	01	53	03	-	-	0.03	0.02	7.1	0				
346	11	10	58	50	?	59	33	59	31	-	-	-	0.04	0.04	5.1	0				
347	13	17	?	-	-	17	12	17	12	-	-	-	0.02	0.02	-	0				
348	13	4	48	27	48	26	49	35	49	39	-	-	?	1.03	31.5	2				
349	14	7	18	50	?	-	19	24	?	-	-	-	0.01	?	2.2	0				
350	14	2	?	-	-	40	38	-	-	-	-	-	?	-	-	0				
351	18	15	?	-	-	53.8	?	-	-	-	-	-	?	?	-	0				
352	19	13	54	29	54.5	60	15	60	16	?	?	-	?	?	13.6	0				
353	19	15	40	22	?	41	04	?	-	-	-	-	0.01	?	2.9	0				
354	23	18	04.2	-	-	04	30	?	-	-	-	-	0.01	?	-	0				
355	23	8	58.5	-	-	59	08	-	-	-	-	-	0.01	-	-	0				
356	26	21	56.8	-	-	57	33	57	33	-	-	-	?	?	-	0				
357	26	1	?	-	-	?	-	-	-	-	-	-	0.01	?	-	0				
358	26	4	24	48	24	48	25	25	25	26	-	-	?	1.89	28.5	2				
359	26	4	34.9	-	-	?	-	-	-	-	-	-	?	?	-	0				
360	26	4	?	-	-	?	-	-	-	-	-	-	?	-	-	0				
361	26	5	?	-	-	?	-	-	-	-	-	-	0.01	-	-	0				
362	26	6	?	-	-	?	-	-	-	-	-	-	0.01	-	-	0				
363	26	7	41	08	41.1	41	46	41	47	-	-	-	0.05	0.05	5.0	0				
364	26	8	48.5	-	-	?	49	05	49	04	-	-	0.04	0.04	-	0				
365	26	10	39	39	?	40	07	?	-	-	-	-	0.01	?	1.8	0				
366	26	12	01	52	01	53	02	31	02	28	-	-	0.23	0.25	7.0	1				
367	26	12	06.0	-	-	06.0	06	24	06.4	-	-	-	?	?	-	0				
368	26	12	?	-	-	?	?	-	-	-	-	-	?	?	-	0				
369	26	14	?	-	-	?	?	-	-	-	-	-	?	-	-	0				
370	26	15	?	-	-	?	52.6	-	-	-	-	-	0.01	-	-	0				
371	26	18	?	-	-	?	52.7	-	-	-	-	-	?	-	-	0				
372	27	19	?	-	-	?	?	-	-	-	-	-	?	-	-	0				
373	27	3	?	-	-	?	?	-	-	-	-	-	?	-	-	0				
374	29	11	?	-	-	?	30	54	31.0	-	-	-	0.01	0.01	-	0				
375	30	10	31.5	-	-	?	31	55	?	-	-	-	0.01	?	-	0				
376	Dec. 1	1	13.4	-	-	?	13	48	13	49	-	-	0.01	?	-	0				
377	1	17	41	45	41	44	42	15	42	14	-	-	0.09	0.11	6.4	0				
378	1	19	47	55	47.9	-	48	10	48	10	-	-	0.03	0.03	2.5	0				
379	1	20	00.0	-	-	-	00	10	-	-	-	-	?	-	-	0				
380	2	19	?	-	-	-	09.3	-	-	-	-	-	?	-	-	0				
381	3	6	?	-	-	-	14.1	-	-	-	-	-	?	-	-	0				
382	3	7	24.2	-	-	?	24	35	?	-	-	-	0.01	?	-	0				
383	4	8	18	57	19	03	25	17	25	15	31	57	?	?	35.3	0				
384	4	10	40.9	-	-	-	46.8	-	-	-	?	-	?	-	-	0				
385	4	22	43.5	-	-	43	48	49.6	?	-	?	-	?	?	-	0				

## SEISMOLOGICAL OBSERVATIONS AT MIZUSAWA.

## EARTHQUAKES, 1932.

No.	Date 1932	P				S				L				Maximum Range of Motion				Duration of Total Earthquake (mean)	Intensity	Approximate Epicenter
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
386	Dec. 5	h	m	s	m	s	m	s	m	s	m	s	mm	mm	m	0	Kumanonada, deep			
387	5	0	21	07	21.1		22	31	22	28	-	-	0.04	0.05	5.0	0				
388	6	23	?		?		59	31	?		-	-	0.00	?	0	0				
389	8	11	?		-	-	51.0		-	-	-	-	?	-	0	0				
390	10	15	18.2		18.5		19.5		19.7		-	-	0.03	0.04	0	0	N off Abashiri			
		4	?		-	-	?		-	-	-	-	?	-	0	0				
391	10	5	04.9		-	-	05.5		-	-	-	-	?	-	0	0				
392	11	4	34.9		-	-	35.4		-	-	-	-	?	-	0	0				
393	15	19	39	04	39.0		43	41	43.8		?	?	?	?	17.3	0	E off Koshun			
394	17	5	08	56	08	56	09	33	09	34	-	-	0.06	0.05	5.2	0	Off Urakawa			
395	17	14	04	16	04	17	04	37	04	38	-	-	0.04	0.06	4.1	0	Upper valley of R. Abukuma			
396	17	15	?		-	-	33.0		-	-	-	-	?	-	0	0				
397	18	7	51.6		?		51	55	51.9		-	-	0.02	0.01	0	0				
398	19	6	29.2		-	-	29	33	-	-	-	-	?	-	0	0	SSE off Nemuro			
399	19	19	25	43	-	-	26	10	-	-	-	-	0.00	-	2.5	0				
400	20	3	?		?		52	09	?		-	-	0.01	?	0	0				
401	20	5	47	08	?		47	26	47.4		-	-	0.02	0.01	2.8	0				
402	20	12	33	04	33	03	33	40	33	40	-	-	0.16	0.19	8.5	0	SW off Erimozaki			
403	21	6	20.8		20.7		?		31	18	?	42.2	?	?	0	0	Distant			
404	21	13	14	32	14	32	15	01	15	02	-	-	0.04	0.04	4.4	0	E off Miyako			
405	22	1	01	17	01	17	01	39	01	40	-	-	0.04	0.02	3.9	0	S off mouth of Niikappu- gawa			
406	22	20	02	28	02	28	02	43	02	43	-	-	0.20	0.16	4.8	1	S off Kinkwasan			
407	23	7	47.3		?		47.8		?		-	-	0.01	?	0	0				
408	23	12	16	24	-	-	16	36	-	-	-	-	?	-	1.4	0				
409	24	6	38	33	38	34	44	54	44	56	48	13	?	?	33.5	0	New Guinea			
410	24	10	07	57	?		08	26	?		-	-	0.01	?	3.0	0				
411	25	2	11	17	11	28	16.9		16.9		19.1		?	?	0	0	Mongoria			
412	26	6	09	31	09.5		09	58	09	55	-	-	0.01	0.03	3.7	0				
413	26	21	18	53	18	52	22	12	22	09	-	-	0.05	0.05	9.3	0	SW off Okinawa			
414	26	22	34	56	34	53	38	00	38	00	-	-	0.08	0.07	10.3	0	SSE off Chichijima			
415	28	17	24.4		?		24	40	24.7		-	-	0.01	?	0	0				
416	29	3	16.9		?		17	19	?		-	-	0.00	?	0	0				
417	29	9	26	09	26	11	26	46	26	48	-	-	0.08	0.09	5.3	0	Neighbourhood of R. Niikappu			
418	30	21	?		-	-	12	48	-	-	-	-	?	-	0	0				
419	31	18	55	02	?		55	30	55	31	-	-	0.04	0.03	3.9	0				

## PULSATORY OSCILLATIONS, 1932 (EW Component.)

International  
Seismological  
Centre

No.	Beginning			Ending			Maximum				Double Amplitude
	Date			Date			Date				
	Month	Day	Hour	Month	Day	Hour	Day	Hour	Day	Hour	
1	January	1	21	January	5	22	4	18	4	21	7
2		6	20		11	13	9	1	9	3	30
3		12	0		14	1	13	7	13	10	6
4		14	3		17	24	14	23	15	2	8
5		18	9		19	20	18	21	18	23	5
6		21	10		22	24	21	22	21	24	9
7		29	5		31	14	30	2	30	5	3
8	February	1	0	February	8	23	3	6	3	10	13
9		13	1		14	2	13	12	13	15	3
10		15	10		19	23	17	19	17	22	18
11		20	15		22	1	21	2	21	4	7
12		22	14		25	4	23	6	23	8	10
13		25	12		28	22	26	0	26	3	11
14		29	3	March	3	2	1	8	1	10	4
15	March	5	0		7	24	5	23	6	2	3
16		8	12		10	15	8	22	9	1	4
17		12	5		16	5	13	12	13	14	10
18		16	12		19	11	18	17	18	19	5
19		19	21		23	1	20	9	20	11	6
20		26	5		28	17	27	23	28	1	6
21		29	0		31	24	29	5	29	7	7
22	April	1	20	April	3	6	2	17	2	19	6
23		4	0		5	9	4	10	4	12	5
24		5	13		6	20	6	5	6	8	9
25		9	10		11	1	10	5	10	8	10
26		12	3		14	18	12	18	12	22	21
27		15	10		17	21	16	13	16	15	10
28		17	23		22	19	19	8	19	11	11
29		24	1		26	18	25	12	25	14	12
30		28	4		29	12	28	23	29	1	5
31	May	1	0	May	1	22	1	7	1	9	6
32		5	12		7	5	6	7	6	9	10
33		8	2		9	3	8	16	8	19	5
34		12	8		13	21	13	3	13	5	11
35		21	17		23	18	22	5	22	7	3
36		25	7		27	15	25	23	26	1	5
37	June	6	3	June	12	5	9	2	9	5	3
38		25	1		26	5	25	13	25	15	2
39	July	1	20	July	4	16	2	22	3	1	7
40		7	0		11	1	8	23	9	2	4
41	August	4	20	August	8	3	6	1	6	4	30
42		20	8		22	24	21	13	21	15	3
43		24	14		26	15	25	4	25	7	4
44		31	3	September	4	2	2	22	2	24	6
45	September	5	0		7	22	6	21	6	24	3
46		9	5		21	20	18	9	18	15	6
47		22	21		26	24	24	0	24	4	5
48		28	15	October	2	12	29	5	29	7	3
49	October	2	18		7	4	5	0	5	3	5
50		4	5		12	3	9	2	9	5	5
51		15	12		20	17	16	20	16	23	9
52		31	2	November	2	1	1	5	1	7	3
53	November	6	2		10	22	7	5	7	8	10
54		11	18		13	13	12	13	12	15	9
55		13	16		17	18	14	22	14	24	60
56		18	18		19	15	19	3	19	6	3
57		20	1		21	19	20	22	20	24	6
58		25	17		27	9	26	13	26	16	8
59		27	9		30	20	28	20	28	24	10
60	December	1	15	December	3	3	2	10	2	13	4
61		4	6		5	5	4	16	4	19	4
62		6	8		7	13	6	20	6	24	4
63		11	9		17	23	12	21	12	24	11
64		19	21		24	11	20	22	21	2	11
65		27	8		28	15	27	18	27	21	7
66		28	20		31	24	30	19	30	23	9