

ANNUAL REPORT
OF THE
METEOROLOGICAL
AND THE
SEISMOLOGICAL OBSERVATIONS
MADE AT THE
INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA
FOR
THE YEAR 1926.

LATITUDE 39° 8' N., LONGITUDE 141° 8' E.,
HEIGHT ABOVE MEAN SEA LEVEL 61 METRES.

PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA.

1927.

The present report gives the results of the meteorological and seismological observations made at the observatory during the year 1926. No alteration has been made in the nature and methods of observation. The observations and the calculations were made by Messrs. K. Torihata, S. Satô and I. Kumagai under the superintendence of Dr. T. Ikeda.

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

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

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

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

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

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

Tension of Water Vapour.—is given in millimetres.

Relative Humidity.—is given in percentages.

Precipitation.—The amount is given in millimetres. In the total number of days only those, on which the amount is 0.1mm or more in the day, are reckoned. But all the days, on which snow, hail, or graupel fell, are included without reference to the amount.

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

The heights of the meteorological instruments are as follows,

Barometer.—63.1m above sea level.

Air temperature thermometer.—1.7m above the ground,

Anemometer.—15.4m above the ground,

Wind vane.—16.6m above the ground,

* 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	→	Snow drift	C	Cirrus
*	Snow	←	Ice crystals	CS	Cirro-stratus
⚡	Thunder storm	⊙	Solar corona	CK	Cirro-cumulus
⚡	Thunder without lightning	⊕	Solar halo	KC	Cumulo-cirrus
⚡	Lightning without thunder	☾	Lunar corona	SC	Strato-cirrus
△	Graupel	☾	Lunar halo	SK	Strato-cumulus
▲	Hail	↙	Gales	N	Nimbus
≡	Mist, fog	☾	Rainbow	K	Cumulus
⊥	Hoar frost	☾	Aurora	KN	Cumulo-nimbus
⊥	Dew	∞	Dust haze	S	Stratus
∇	Silver thaw	☒	Snow lying	~	Wave cloud
~	Glazed frost	⊥	Ice Column in the ground	☾	Zodiacal light

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.

The time adopted in the Seismological observations is Greenwich Local Time.

	EW Component		NS Component	
	Apparatus		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 of suspension	104	Centimetres	104	Centimetres

July, 1927

H. Kimura, *Rigakuhakushi*

Director of the International Latitude Observatory
in Misusawa.

SEISMOLOGICAL OBSERVATIONS

TABLE A.
(Earthquakes)International
Seismological
Centre

No.	Date 1926	P				S				L				Duration of Total Earthquake (mean)	Maximum Range of Motion			Character of Motion	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S		E	W	N			
1	Jan. 3	h	m	S	m	S	m	S	m	S	m	S	m	mm	mm		Slow	Feeble		
2	7	20	?		—	—	27	44	—	—	—	—	?	0.01	—	//	//			
3	7	0	?		—	—	55	20	—	—	—	—	?	0.01	—	//	//			
4	8	15	05	16	05	16	05	33	05	34	—	—	3.6	0.09	0.09	//	//			
5	8	12	43	36	43	37	44	01	44	00	—	—	4.4	0.02	0.01	//	//			
	8	2	34	52	—	—	35	07	—	—	—	—	2.7	0.02	—	//	//			
6	10	9	03	28	03	28	04	04	04	05	—	—	8.3	0.14	0.11	//	//			
7	10	9	35	59	36.2		36	39	36	40	—	—	6.0	0.05	0.05	//	//			
8	14	23	35	36	—	—	36	11	—	—	—	—	1.6	0.00	—	//	//			
9	15	10	53	42	53	43	54	08	54	07	—	—	6.8	0.08	0.10	//	//			
10	15	14	54	22	54	23	55	33	55	35	—	—	7.6	0.15	0.25	//	//			
11	18	21	16	47	—	—	17	59	—	—	—	—	7.0	?	—	//	//			
12	18	21	?		?		?		?		38	20	?	—	0.09	//	//			
13	25	0	45	32	45	32	52	38	52	38	59	30	117.3	?	?	//	//			
14	31	15	44	41	—	—	44	57	—	—	—	—	2.9	0.01	—	//	//			
15	Feb. 3	4	32	21	—	—	32	54	—	—	—	—	3.3	0.00	—	//	//			
16	3	21	47	46	?		48	40	?		—	—	5.2	0.01	0.01 ¹	//	//			
17	4	6	44	52	44	52	45	18	45	19	—	—	17.5	?	1.75	Quick	Weak	Felt		
18	6	8	51	47	?		53	10	53	10	—	—	7.8	0.05	0.04 ¹	Slow	Feeble			
19	9	1	57	45	?		53	01	58	02	—	—	3.3	0.04	0.04 ¹	//	//			
20	9	22	57	47	—	—	57	54	—	—	—	—	2.2	0.01	—	//	//			
21	11	5	08	20	08	21	10	14	10	15	—	—	4.6	0.05	0.04	//	//			
22	13	14	59	12	—	—	59	34	—	—	—	—	4.2	0.01	—	//	//			
23	16	6	?		—	—	38	48	—	—	—	—	?	0.01	—	//	//			
24	17	10	42	31	42.6		43	11	43	11	—	—	6.3	0.13	0.10	//	//			
25	21	4	54	14	—	—	54	25	—	—	—	—	2.2	0.01	—	//	//			
26	22	1	21	24	—	—	21	53	—	—	—	—	5.0	0.01	—	//	//			
27	23	3	?		—	—	59	10	—	—	—	—	?	0.01	—	//	//			
28	23	20	53	35	—	—	53	55	—	—	—	—	4.2	0.03	—	//	//			
29	23	23	?		—	—	51	25	—	—	—	—	?	0.01	—	//	//			
30	25	6	03	31	—	—	03	51	—	—	—	—	4.5	0.01	—	//	//			
31	25	17	03	51	—	—	04	12	—	—	—	—	2.9	0.01	—	//	//			
32	Mar. 1	18	?		—	—	02	03	—	—	—	—	?	0.01	—	//	//			
33	4	9	33	03	38	03	43	37	43	36	49	30	31.5	0.01	0.06	//	//			
34	4	12	?		—	—	54	16	—	—	—	—	?	0.01	—	//	//			
35	4	14	?		—	—	22	50	—	—	—	—	?	0.01	—	//	//			
36	7	10	34	33	?		35	02	35	01	—	—	3.9	0.03	0.01	//	//			
37	8	20	23	20	23	21	24	27	24	27	—	—	9.7	0.25	0.25	//	//			
38	8	20	46.7		—	—	47	37	—	—	—	—	3.2?	0.00	—	//	//			
39	14	3	00.0		—	—	00	24	—	—	—	—	3.5?	0.01	—	//	//			
40	19	19	?		—	—	11	47	—	—	—	—	?	0.01	—	//	//			
41	19	20	33	25	33	25	33	54	33	54	—	—	9.6	0.26	0.38	Quick	Weak	Felt		
42	20	11	01	04	—	—	01	37	—	—	—	—	4.4	0.01	—	Slow	Feeble			
43	20	17	?		—	—	30	19	—	—	—	—	?	0.01	—	//	//			
44	22	0	29	31	—	—	30	08	—	—	—	—	6.5	0.03	—	//	//			
45	22	9	?		—	—	41	23	—	—	—	—	?	0.02	—	//	//			
46	23	11	01	20	—	—	01	48	—	—	—	—	5.3	0.02	—	//	//			
47	24	13	42	18	—	—	42	48	—	—	—	—	3.1	0.01	—	//	//			
48	25	13	19	56	19	57	20	47	20	47	—	—	10.7	0.52	0.55	Quick	Weak	Felt		
49	27	10	56.7		56	58	64	51	64	51	72	52	90.8	0.02	0.32	Slow	Feeble			
50	29	11	47	25	—	—	43	01	—	—	—	—	4.3	0.01	—	//	//			
51	30	12	07	07	—	—	07	42	—	—	—	—	4.3	0.01	—	//	//			
52	Apr. 1	16	05	26	05	26	06	34	03	34	—	—	11.4	?	0.22	//	//			
53	6	4	46	39	?		46	50	46	50	—	—	4.1	0.03	0.03	//	//			
54	6	19	33	18	33	20	34	03	34	02	—	—	14.7	0.50	0.40	//	//			
55	10	1	17	58	17	58	18	07	18	07	—	—	5.1	0.45	0.28	Quick	Weak	Felt		

TABLE A.
(Earthquakes)

No.	Date 1926	P				S				L				Duration of Total Earthquake (mean)	Maximum Range of Motion			Character of Motion	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S		E	W	N			
56	Apr. 12	h	m	S	m	S	m	S	m	S	m	S	m	mm	mm					
57	14	8 41 46	41 47	49 16	49 18	56 30	56 29	80.6	0.28	1.85	Slow	Feeble								
58	14	4 38 42	- -	39 42	- -	- -	- -	6.3	0.01	-	"	"								
59	18	17 36 53	? -	37 16	37 17	- -	- -	3.3	0.02	0.01	"	"								
60	22	6 55 29	? -	56 14	56 14	- -	- -	5.5	0.04	0.05	"	"								
61	23	23 51 48	- -	53 07	- -	54 28	- -	?	0.02	-	"	"								
62	26	4 ?	- -	41 37	- -	- -	- -	?	0.01	-	"	"								
63	27	18 ?	- -	26 50	- -	- -	- -	?	0.00	-	"	"								
64	28	14 18 09	- -	18 40	- -	- -	- -	4.8	0.01	-	"	"								
65	30	11 ?	- -	33 23	- -	- -	- -	?	0.00	-	"	"								
66	30	0 35 00	? -	35 24	? -	- -	- -	5.4	0.02	?	"	"								
67	May 3	17 37 02	- -	37 41	- -	- -	- -	4.4	0.02	-	"	"								
68	4	23 34 51	34 53	35 09	35 12	- -	- -	3.0	0.04	0.02	"	"								
69	7	17 34 56	? -	36 12	36 12	- -	- -	3.3	0.02	0.01	"	"								
70	7	6 13 31	? -	14 23	14 26	- -	- -	?	0.07	0.20	"	"								
71	9	22 13 22	13 25	13 39	13 40	- -	- -	3.5	0.02	0.01	"	"								
72	11	5 11 05	- -	11 43	- -	- -	- -	2.8	0.01	-	"	"								
73	11	8 ?	- -	49 43	- -	- -	- -	?	0.01	-	"	"								
74	12	12 35 00	35 02	35 22	35 23	- -	- -	3.4	0.03	0.03	"	"								
75	13	13 18 41	- -	18 53	- -	- -	- -	2.6	0.01	-	"	"								
76	14	5 ?	- -	01 53	- -	- -	- -	?	0.01	-	"	"								
77	18	22 41 49	- -	42 09	- -	- -	- -	3.9	0.02	-	"	"								
78	18	0 ?	- -	19 36	- -	- -	- -	?	0.00	-	"	"								
79	18	1 24 25	? -	24 59	25 01	- -	- -	6.9	0.06	0.07	"	"								
80	20	5 47 16	- -	47 34	- -	- -	- -	2.8	0.01	-	"	"								
81	20	7 09 23	09 24	- -	- -	- -	- -	?	0.02	0.01	"	"								
82	20	7 14 37	14.7	- -	- -	- -	- -	?	0.01	-	"	"								
83	22	11 49 00	- -	49 39	- -	- -	- -	3.2	0.01	-	"	"								
84	22	7 39 45	39 45	40 34	40 35	- -	- -	?	0.07	0.05	"	"								
85	22	7 46 22	? -	47 13	47 14	- -	- -	9.5	0.08	0.05	"	"								
86	22	16 27 07	- -	27 51	- -	- -	- -	6.0	0.03	-	"	"								
87	22	22 11 15	? -	12 16	12 16	- -	- -	5.4	0.05	0.03	"	"								
88	23	4 ?	- -	09 38	- -	- -	- -	?	0.01	-	"	"								
89	26	23 ?	- -	40 14	- -	- -	- -	?	0.00	-	"	"								
90	28	19 45 40	45 41	46 08	46 07	- -	- -	18.7	1.06	1.20	Quick	Weak	Felt							
91	31	21 12 45	- -	13 08	- -	- -	- -	3.6	0.01	-	Slow	Feeble								
92	June 1	11 29 46	- -	30 22	- -	- -	- -	2.7	0.00	-	"	"								
93	3	4 56 07	- -	- -	- -	- -	- -	4.3	0.01	-	"	"								
94	4	4 56 58	- -	- -	- -	- -	- -	?	0.01	-	"	"								
95	4	0 15 13	? -	16 56	? -	- -	- -	11.5	0.04	0.04	"	"								
96	5	15 08 22	08 22	09 06	09 05	- -	- -	10.1	0.11	0.10	"	"								
97	6	9 12 31	- -	13 25	- -	- -	- -	7.5	0.01	-	"	"								
98	10	18 21 13	21 14	22 04	22 05	- -	- -	8.9	0.10	0.10	"	"								
99	12	1 ?	- -	09 18	- -	- -	- -	?	0.00	-	"	"								
100	12	2 11 15	- -	11 45	- -	- -	- -	4.3	0.01	-	"	"								
101	14	14 41 28	- -	41 38	- -	- -	- -	2.2	?	-	"	"								
102	14	23 33 06	33 05	33 30	33 30	- -	- -	11.1	?	0.91	Quick	Weak	Felt							
103	15	23 57 53	? -	53 19	18 17	- -	- -	4.9	0.03	0.02	Slow	Feeble								
104	17	0 40 00	? -	41 05	41 07	- -	- -	6.0	0.02	0.01	"	"								
105	17	6 40 18	- -	40 34	- -	- -	- -	1.5	0.01	-	"	"								
106	17	7 27 14	27 14	27 31	27 32	- -	- -	4.7	0.05	0.10	"	"								
107	17	10 55 01	- -	55 18	- -	- -	- -	2.4	0.01	-	"	"								
108	21	8 51 13	51 15	52 26	52 29	- -	- -	11.5	0.07	0.02	"	"								
109	22	6 53 47	- -	53 57	- -	- -	- -	2.5	0.01	-	"	"								
110	22	14 46 28	- -	46 39	- -	- -	- -	2.0	0.01	-	"	"								
110	24	11 23 50	- -	24 08	- -	- -	- -	3.4	0.00	-	"	"								



TABLE A, (Earthquakes)

Table with columns: No., Date 1926, P (E, W, N, S), S (E, W, N, S), L (E, W, N, S), Duration of Total Earthquake (Mean), Maximum Range of Motion (E, W, N, S), Character of Motion, Intensity, Remarks. Rows 111-165.

TABLE A.
(Earthquakes)

No.	Date 1920	P				S				L				Duration of Total Earthquake (mean)	Maximum Range of Motion			Character of Motion	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S		E	W	N			
166	Oct. 4	h	m	S	m	S	m	S	m	S	m	S	m	mm	mm		Slow	Feeble		
167	10	6	02	17	02	19	02	49	02	49	—	—	7.7	0.11	0.16		"	"		
168	13	13	53	11	—	—	53	37	—	—	—	—	3.9	0.03	—		"	"		
169	13	6	00	53	—	—	08	31	—	—	16	07	?	?	—		"	"		
170	15	19	14	43	—	—	20	03	—	—	25	26	?	?	—		"	"		
		23	44	21	?		44	25	44	24	—	—	4.1	0.10	0.06	Quick	Weak	Felt		
171	17	16	42	49	—	—	43	12	—	—	—	—	1.4	0.01	—	Slow	Feeble			
172	19	0	30	46	30	47	31	20	31	19	—	—	22.3	0.28	0.30	Quick	Weak	Felt		
173	21	7	24	28	—	—	24	42	—	—	—	—	2.8	0.01	—	Slow	Feeble			
174	23	13	34	17	—	—	34	35	—	—	—	—	1.9	0.01	—	"	"			
175	24	16	?		—	—	39	37	—	—	—	—	?	0.00	—	"	"			
176	26	0	41	15	—	—	41	34	—	—	—	—	2.7	0.01	—	"	"			
177	26	3	52	35	52	32	58	44	58	45	65	00	?	0.12	7.72	"	"			
178	26	6	19	27	19	28	25	36	25	34	31	40	47.2	0.01	0.07	"	"			
179	28	10	46	12	—	—	46	43	—	—	—	—	3.5	0.01	—	"	"			
180	29	19	?		—	—	45	26	—	—	—	—	?	0.01	—	"	"			
181	Nov. 30	13	47	34	—	—	52	30	—	—	57	14	?	?	—	"	"			
182	2	19	49	03	—	—	50	57	—	—	—	—	?	0.01	—	"	"			
183	2	21	12	36	12	35	14	26	14	28	—	—	?	0.03	0.01	"	"			
184	2	23	01	55	—	—	03	47	—	—	—	—	?	0.01	—	"	"			
185	3	15	?		—	—	07	00	—	—	—	—	?	0.01	—	"	"			
186	5	19	05	50	?		06	19	06	21	—	—	8.0	0.05	0.05	"	"			
187	6	2	48	03	—	—	48	35	—	—	—	—	5.9	0.01	—	"	"			
188	6	5	26	05	—	—	26	48	—	—	—	—	6.6	0.02	—	"	"			
189	6	13	?		—	—	22	33	—	—	—	—	?	0.01	—	"	"			
190	6	17	31	48	—	—	32	46	—	—	—	—	5.3	0.02	—	"	"			
191	11	3	02	12	02	11	02	42	02	42	—	—	20.4	0.44	0.41	"	"			
192	11	7	12	25	?		13	23	13	26	—	—	6.5	0.04	0.01	"	"			
193	11	11	?		—	—	20	55	—	—	—	—	?	0.00	—	"	"			
194	11	18	?		—	—	04	23	—	—	—	—	?	0.00	—	"	"			
195	12	8	?		—	—	49	45	—	—	—	—	?	0.00	—	"	"			
196	12	14	40	59	—	—	41	23	—	—	—	—	3.3	0.01	—	"	"			
197	19	8	03	29	?		04	14	04	13	—	—	5.7	0.04	0.02	"	"			
198	19	11	37	41	?		38	21	38	22	—	—	4.4	0.04	0.01	"	"			
199	20	22	42	40	42	39	43	07	43	08	—	—	2.8	0.03	0.02	"	"			
200	21	7	23	39	?		24	06	24	03	—	—	3.8	0.04	0.01	"	"			
201	22	14	11	49	—	—	12	10	—	—	—	—	3.6	0.01	—	"	"			
202	23	0	23	18	?		25	28	25	29	—	—	9.6	0.02	0.02	"	"			
203	23	18	57	57	?		58	13	58	13	—	—	4.2	0.02	0.02	"	"			
204	27	3	26	47	26	48	26	58	26	58	—	—	3.8	0.03	0.03	"	"			
205	27	11	21	27	?		21	59	22	02	—	—	7.5	0.02	0.02	"	"			
206	27	13	?		37	48	—	—	44	06	—	—	?	—	0.32	"	"			
207	29	13	47	08	—	—	47	27	—	—	50	17	?	—	—	"	"			
208	Dec. 1	13	03	58	04	02	04	44	04	44	—	—	2.3	0.01	—	"	"			
209	1	21	57	23	—	—	57	58	—	—	—	—	6.0	0.02	0.02	"	"			
210	2	22	02	55	—	—	03	22	—	—	—	—	3.7	0.01	—	"	"			
													4.3	0.01	—	"	"			
211	5	5	54	37	54	36	56	19	56	20	—	—	6.8	0.03	0.04	"	"			
212	5	19	41	57	?		42	26	42	24	—	—	7.3	0.01	0.01	"	"			
213	5	21	13	05	?		13	32	13	33	—	—	7.7	0.06	0.06	"	"			
214	6	0	11	11	—	—	12	02	—	—	—	—	3.6	0.01	—	"	"			
215	6	0	41	52	41	53	42	25	42	25	—	—	6.0	0.04	0.04	"	"			
216	6	20	16	09	16	11	16	35	16	34	—	—	3.3	0.02	0.01	"	"			
217	9	3	?		—	—	41	18	—	—	—	—	?	0.01	—	"	"			
218	9	8	05	21	05	21	05	33	05	33	—	—	5.4	0.13	0.03	"	"			
219	12	22	02	04	02	03	02	49	02	48	—	—	9.5	0.08	0.10	"	"			
220	15	0	33	22	?		33	52	33	52	—	—	3.5	0.03	0.04	"	"			

TABLE B.

(Pulsatory Oscillations EW Component.)

International
Seismological
Centre

Beginning			Ending			Maximum				Double Amplitude
Date			Date			Date				
Month	Day	Hour	Month	Day	Hour	Day	Hour	Day	Hour	
January	2	7	January	5	10	2	22	3	2	8 ^μ
	9	10		10	22	9	20	9	23	5
	13	17		14	15	13	21	13	24	4
	19	13		23	18	20	13	21	2	6
	28	5		29	15	28	22	29	1	8
February	5	1	February	6	5	5	15	5	20	4
	10	15		11	23	10	21	11	2	14
	15	7		18	3	15	14	15	18	12
	23	6		26	20	23	18	23	23	9
March	10	23	March	12	20	11	18	11	21	15
	14	17		16	7	15	9	15	15	10
	27	9		28	23	27	21	28	1	5
	30	10		31	6	30	15	30	18	3
April	4	22	April	5	22	5	12	5	16	4
	8	6		8	21	—	—	—	—	4
	14	14		15	2	14	18	14	20	4
	19	13		19	22	19	10	19	14	5
	21	5		23	2	21	12	21	16	7
	27	10		28	2	27	11	27	14	4
May	7	9	May	8	20	8	5	8	9	5
	22	3		25	11	24	9	24	15	4
June	14	12	June	16	18	15	13	15	20	10
August	17	15	August	18	17	17	17	17	22	2
September	4	19	September	6	3	5	8	5	15	25
	17	22		19	8	18	10	18	15	13
October	1	15	October	2	21	2	14	2	18	5
	6	21		7	6	7	2	7	5	9
	13	9		14	9	13	11	13	15	6
	29	4		30	23	29	15	29	21	3
November	5	14	November	7	8	6	19	6	21	4
	14	7		16	10	14	12	14	20	11
	26	4		29	8	26	13	26	20	8
December	2	5	December	5	8	2	13	2	20	10
	8	9		9	7	8	16	8	19	11
	9	18		11	22	11	2	11	7	4
	18	4		21	9	20	15	20	22	5

The time adopted in this table is Japanese Central Standard Time.