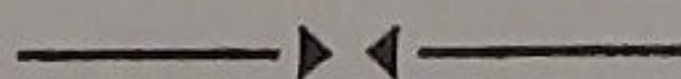


10/7/57 RBS



ANNUAL REPORT
OF THE
METEOROLOGICAL
AND THE
SEISMOLOGICAL OBSERVATIONS
MADE AT THE
INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA
FOR
THE YEAR 1948.



LATITUDE $39^{\circ} 08' N.$, LONGITUDE $141^{\circ} 08' E.$,
HEIGHT ABOVE MEAN SEA LEVEL, 61 METRES.



PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA.



1956

ERRATA

Page	Date	Column	Error	Correction
11	28	Remarks	$\text{---}\text{---}\text{---}^{\text{23}^{\text{h}}55}\text{---}\text{---}^{\text{1}}\text{---}23^{\text{h}}57\text{---}$,	$\text{---}\text{---}\text{---}^{\text{23}^{\text{h}}55}\text{---}\text{---}^{\text{1}}23^{\text{h}}57\text{---}$,
"	29	"	$\text{---}\text{---}^{\text{00}^{\text{h}}05}\text{---}$	$\text{---}\text{---}^{\text{00}^{\text{h}}05}\text{---}$
17	18	"	$\text{---}\text{---}^{\text{24}^{\text{h}}40}\text{---}\text{---}^{\text{34}^{\text{h}}50}\text{---}$	$\text{---}\text{---}^{\text{24}^{\text{h}}40}\text{---}\text{---}^{\text{34}^{\text{h}}50}\text{---}$
23	15	"	$\Pi^{\text{0}}p.$	$\sqcup^{\text{0}}p.$
25	8	"	$\text{H}^{\text{0}}a. 0^{\text{0}}, \text{H}^{\text{0}}a.$	$\text{H}^{\text{0}}a. 0^{\text{0}}, \text{H}^{\text{0}}p.$
"	16	"	$\not\propto 11.2, 12.3^{\text{h}}$	$\not\propto 11.2^{\text{h}}, 12.3^{\text{h}}$
"	30	"	H^{0}	H^{1}
36	No. 51	Earthquakes	L, EW	34 20
"	No. 51	"	L, NS	34 14

Introduction



The present report gives the results of the meteorological and seismological observations made at this observatory during 1948 which serve to investigate the meteorological effect on the latitude observations.

The majority of the meteorological instruments are situated in the observation field about 10 meters north of the zenith telescope room. In this field there are the wet-bulb and dry-bulb thermometers, maximum and minimum thermometers, thermograph, hygograph, pluviograph, Hellman's chinograph, rain gauge, evapometer, L-tube earth thermometers and Simon's earth thermometers.

The Fortin's mercurial barometer, three barographs and the anemograph are placed in the seismograph room, where is situated about 100 meters north of the zenith telescope room.

The Robinson's anemometer, anemoscope and Jordan's sunshine recorder are fixed on the roof of the tower of the seismograph room.

Observations were made generally six times a day, that is, at 2^h, 6^h, 10^h, 14^h, 18^h and 22^h. This distribution of observation times is convenient for the purpose of investigating the meteorological effect on the latitude observations.

The following are to be noted with respects to the meteorological observations.

Hours of observations.—Japanese Central Standard Time, i.e. mean solar time of the meridian 9^h east from Greenwich.

Air Pressure.—The barometric readings in millimeters are reduced to the freezing point of water and the corrections to the standard gravity are given at the bottom of the page for each month. The standard gravity is adopted as 980.62 dynes. Those reduced to mean sea level are given in pp. 26 and 27.

Air Temperature.—Fuess' double tube thermometer is employed and the degrees are given in Centigrade.

Earth temperature.—L-tube earth thermometers of 0.05, 0.1, 0.2 and 0.3 meters depth and Simon's earth thermometers of 0.5, 1.0, 2.0, 3.0, 5.0 and 6.0 meters depth are employed.

Wind.—The velocity is expressed in millimeter per second. The direction is expressed as for sixteen cardinal points.

Tension of Water Vapour.—The unit is given in millimeter.

Relative Humidity.—The wet-bulb and dry-bulb thermometers are used.

Cloud.—The amount of the cloudiness is estimated by the scale 0—10, the forms are those of International classification at that time and the direction of motion is indicated as for sixteen cardinal points.

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.—It is recorded by Jordan's sunshine recorder and is given in the unit of hour.

Amount of Evaporation.—It is given in millimeter and observed at 10^h once a day. Monthly mean daily amount of evaporation is computed except the day with precipitation. The bracket denotes the day with precipitation.

The heights of the meteorological instruments are as follows:

Barometer.—63.1 m above mean sea level.

Thermometer.—1.3 m above the ground.

Anemometer.—16.5 m above the ground.

Anemoscope.—16.5 m above the ground.

Raingauge.—0.6 m above the ground.

On recording the meteorological phenomena, the following symbols are used.

●	Rain	⊕	Snow drift	☄	Red sky
*	Snow	∞	Haze	⊖	Unusual visibility
△	Graupel	☁	Haze in the neighbourhood	⚡	Gale
▲	Hail	☁	Dust-storm	☁	Yellow dust
≡	Fog	☁	Frozen rain	☁	Wavy cloud
☁	Ice fog	↔	Ice needles	☁	Mammato-cumulus
☁	Fog in the neighbourhood	☁	Snow coverage	☁	Lenticular cloud
☁	Drizzle	☁	New snow coverage	⊕	Earthquake
=	Mist	☁	Freezing	C	Cirrus
☁	Hoar frost	☁	Thunder and lightning	Cs	Cirro-stratus
☁	Ice columns in the ground	☁	Thunder	Ck	Cirro-cumulus
☁	Dew	☁	Lightning	Kc	Alto-cumulus
☁	Frozen dew	☁	Solar halo	Sc	Alto-stratus
☁	Air hoar	☁	Solar corona	Sk	Strato-cumulus
☁	Soft rime	☁	Lunar halo	N	Nimbus
☁	Hard rime	☁	Lunar corona	K	Cumulus
~	Grazed frost	☁	Rainbow	Kn	Cumulo-nimbus
*→	Snow storm	☁	Aurora	S	Stratus

The seismological instruments in use are two Omori's horizontal pendulums of the same type as the described in p. 8 of No. 5, "Publication of the Earthquake Investigation Committee in Foreign Language."

Constants of two seismographs are as follows.

	EW-Component	NS-Component
Proper Period	16 sec.	36 sec.
Dynamical magnification	100	20
Mass of weight	45.0 kg	17.6 kg
Horizontal distance of the center of the cylinder from the pivot	20 cm	75 cm
Vertical distance between the points of support and suspension	104 cm	104 cm

The observations and computations were carried out by Messrs. S. Sato, I. Kumagai, K. Suzuki and Miss. M. Segawa under the superintendence of Mr. C. Sugawa.

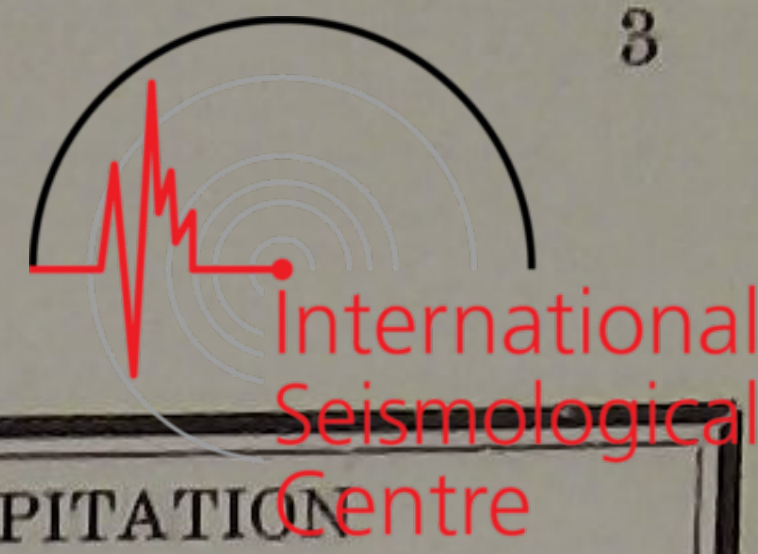
JANUARY, 1948



METEOROLOGICAL OBSERVATIONS

Date	RELATIVE HUMIDITY												DIRECTION AND VELOCITY (m.p.h.) OF WIND											
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
2	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
3	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
4	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
5	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
6	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
7	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
8	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
9	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
10	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
11	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
12	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
13	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
14	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
15	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
16	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
17	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
18	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
19	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
20	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
21	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
22	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
23	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
24	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
25	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
26	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
27	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
28	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
29	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
30	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
31	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	

JANUARY, 1948.



Main meteorological table with columns: Day, Direction and Speed of Clouds, Amount (0-10) and Forms of Clouds, and Precipitation (mm). Includes a summary row at the bottom.

Table with columns: Day, Duration of Sunshine (in hours), Amount of Evaporation (mm) in Open Air and Shelter, and Remarks. Includes a summary row at the bottom.

- × 1. High clouds moving slowly. 2. " " " fast. 3. " " " very fast. 4. Middle clouds moving slowly. 5. " " " fast. 6. " " " very fast. 7. Low clouds moving slowly. 8. " " " fast. 9. " " " very fast.

FEBRUARY, 1948.

Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	—	—	—	7 sk	5 sk	7 sk	0 c	1 sk	10 s	5.0	0.0	—	—	—	—	—	0.0
2	—	—	—	w9	—	—	10 n	10 n	10 sc,s,cs	10 sk,sc,s	9 sk	8 n	9.5	0.8	1.8	1.4	—	—	0.0	4.0
3	—	—	—	—	—	—	0 sk	10 s	10 n	10 n,sk	10 n	10 n	8.3	0.3	—	0.1	0.0	0.0	0.0	0.4
4	—	—	—	—	—	—	10 n	10 n,sk	10 s,sk	10 n	10 n	10 n	10.0	0.0	0.2	0.0	0.0	0.1	0.1	0.4
5	—	—	—	—	—	—	10 n	10 n	10 n	10 n	10 n,sk	10 s	10.0	0.0	0.5	0.6	0.5	0.1	0.0	1.7
6	—	—	—	—	—	—	10 s	10 sk,s	10 n	10 n	10 n	10 n	10.0	—	—	0.1	0.0	0.1	0.0	0.2
7	—	—	—	w9	—	—	10 n	10 n	10 sk	10 sk	10 sk	10 s	10.0	0.1	0.0	0.0	—	—	—	0.1
8	—	—	—	—	—	—	10 s	10 n	10 n	10 n	10 n	10 n	10.0	0.0	0.1	0.9	0.4	0.2	0.4	2.0
9	—	—	—	—	—	—	10 n	9 s	10 n	10 n	10 n	10 s	9.8	0.0	0.0	0.2	0.6	1.0	0.0	1.8
10	—	—	—	—	—	—	10 s	10 sk	10 n	10 n,sk	10 n	8 n	9.7	—	—	0.0	0.0	0.0	0.0	0.0
11	—	—	w7	—	—	—	0 cs	8 sk	6 sk	10 cs,k	10 sc,cs	0 —	5.7	0.0	—	—	—	—	—	0.0
12	—	w8	w8	—	—	—	0 —	9 sk	6 sk,k	0 k	0 k	0 k	2.5	—	—	—	—	—	—	—
13	—	—	w8	w8	—	—	10 sk	10 s,sk	7 sk	10 sk	10 sk	9 sk	9.3	—	0.6	—	—	0.3	0.0	0.9
14	—	—	—	w7	—	—	2 sk	10 cs,sk	10 cs,sk	10 sk,cs,s	8 sk	10 sk,cs	8.3	—	—	—	0.1	—	—	0.1
15	—	—	w8	w9	—	—	7 sk,cs	6 sk,cs	8 sk	2 sk	0 sk	0 —	3.8	—	—	0.0	—	—	—	0.0
16	—	—	—	—	—	—	0 —	10 sc,ck	10 n	10 n	10 sk,cs	10 sk,cs	8.3	—	—	0.6	3.3	0.5	—	4.4
17	—	—	—	—	—	—	10 sk	10 n	10 sk,s	10 sc,sk,s	1 s	0 —	6.8	—	0.1	0.4	—	1.1	0.0	1.6
18	—	—	—	—	—	—	10 n	9 sk,s	6 sk,cs	10 n	8 sk,cs,s	3 sk	7.7	1.1	0.3	0.0	0.1	0.1	—	1.6
19	—	—	—	w7	—	w7	2 sk	6 sk	6 sk,k	7 sk,k	5 sk	10 sk	6.0	—	—	—	—	—	—	—
20	—	w7	w8	NW7	—	—	10 sk	8 sk	7 k,kc	4 sk,k	0 —	0 —	4.8	—	—	—	—	—	—	—
21	—	—	—	—	—	—	0 —	10 sc,cs	10 sc	10 sc,sk	10 sk,sc	10 sc	8.3	—	—	—	0.2	—	—	0.2
22	—	—	—	w8	—	—	10 sc	10 sc	10 cs,c,sk	3 k,s	1 s,k	0 k	5.7	—	—	—	—	0.0	—	0.0
23	—	—	—	—	—	—	8 sk	10 n	10 sk	10 sk,s	7 sk,s	10 sk,s	9.2	—	0.2	0.5	0.0	—	—	0.7
24	—	w9	w8	w8	w8	w8	1 s	6 sk,s	7 sk,k	6 k,s	10 sk	6 k	6.0	—	—	0.0	—	—	—	0.0
25	—	—	w8	w8	w9	w9	10 n	5 s,sk	4 sk,s	9 sk	8 sk	8 sk	7.3	0.0	—	—	—	0.2	—	0.2
26	—	—	—	—	—	—	3 sk,k	10 sk,s	10 n	8 n,sk	10 n	6 s,k	7.8	—	0.0	0.0	8.5	0.7	0.5	9.7
27	—	—	w8	w9	—	—	10 n	10 n,sk	3 sk,k	6 sk,c,k	3 cs,sk	0 —	5.3	0.0	0.0	0.1	—	—	—	0.1
28	—	—	—	—	—	—	0 —	10 cs	0 cs,k	0 —	6 c,cs	8 cs	4.0	—	—	—	—	—	—	—
29	—	—	—	w8	—	—	10 sc	10 sc,s	10 sc,s	10 sk,sc	10 sk,s	10 n	10.0	—	—	—	—	—	0.1	0.1
Mean							6.6	9.0	8.2	7.8	7.1	6.8	7.6	2.3	3.8	4.9	13.7	4.4	1.1	30.2

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	6.40	(1.8)	1.1	H ¹ a. 0 ² , H ¹ p. — ☒ —
2	3.15	(2.4)	1.6	H ⁰ a, p. ● ⁰¹ 13—7 ^h 42, * ⁰² 140—, ☒ ²¹ 40—, — ☒ —, ☒ ²⁴ 0 ^h
3	0.13	(1.6)	1.1	H ¹ a, p. — * ⁰ —1 ^h 15, 7 ^h 33—11 ^h 40...., — ☒ —, ☒ ^{0.3} 1, 8 ^h —2.8 ^h
4	1.13	(1.0)	0.7	H ¹ a, p... * ⁰ ...1 ^h 00—8 ^h 30, ☒ ¹ 20, * ⁰ 11 ^h 43—, ☒ ¹¹ 43. — ☒ —
5	—	(1.2)	0.5	H ¹ a, p. — * ⁰ —18 ^h 28. — ☒ —
6	1.10	(1.2)	1.1	H ¹ a, p. * ⁰⁶ 52—, ☒ ⁷ 00. — ☒ —, ☒ ³ 15 ^h 15 ^m 08 ^s
7	4.56	(2.0)	0.9	H ¹ a. H ⁰ p. — * ⁰ —8 ^h 10, 23 ^h 00...., — ☒ —
8	0.36	(1.0)	1.0	H ⁰ a. H ¹ p... * ⁰ ...5 ^h 20—, ☒ ⁵ 30. — ☒ —
9	—	(1.4)	1.3	H ¹ a. H ⁰ p. — * ⁰ —3 ^h 00, 7 ^h 15—18 ^h 44. ☒ ⁷ 15, 15 ^h 36. — ☒ —
10	5.80	1.6	0.9	H ⁰ a, p. * ⁰⁹ 10—23 ^h 20. ☒ ¹⁷ 00, — ☒ —
11	3.82	2.4	1.8	H ¹ , 0 ² a. 0 ² , H ⁰ p. — ☒ —
12	6.85	(1.9)	1.1	H ⁰ , 0 ² a. 0 ¹ , H ¹ , ☒ ¹ p. — ☒ —
13	2.33	(1.2)	0.6	H ¹ a. * ⁰⁴ 05—5 ^h 35. ☒ ⁴ 05. ● ⁰¹ 514—16 ^h 22, ☒ ⁰ 19 ^h 27—20 ^h 36. — ☒ —
14	0.25	(2.1)	1.7	H ⁰ , ☒ ⁰ a. ● ⁰¹ 200—13 ^h 15...13 ^h 40. — ☒ —
15	8.68	(3.2)	1.5	H ¹ a. 0 ⁰ , H ¹ p. * ⁰⁹ 37—9 ^h 48. — ☒ —
16	—	(0.5)	0.7	H ¹ , 0 ⁰ a, H ¹ p. * ⁰⁹ 30—15 ^h 50. ☒ ⁹ 50. — ☒ —
17	2.06	(1.1)	1.0	H ¹ a, p. * ⁰² 50...6 ^h 15—7 ^h 43, 14 ^h 33—* ¹ 14 ^h 51—* ⁰ 15 ^h 24—15 ^h 57. ☒ ¹⁵ 14. * ⁰ 18 ^h 15—18 ^h 27, 23 ^h 50—, — ☒ —
18	6.20	(2.3)	1.4	H ¹ a, p. ☒ ⁰ 05. — * ⁰ —3 ^h 00, 6 ^h 17—7 ^h 44, 7 ^h 19—8 ^h 50, 10 ^h 45...10 ^h 55, 12 ^h 40..12 ^h 50.13 ^h 00—14 ^h 16, 14 ^h 35—15 ^h 12. *
19	7.82	2.6	1.7	H ¹ , 0 ² a. 0 ² , H ⁰ p. — ☒ —
20	7.61	2.6	1.2	H ⁰ , 0 ⁰ a. 0 ¹ , H ¹ , ☒ ¹ p. — ☒ —
21	—	(1.4)	0.9	H ¹ , ☒ ¹ , 0 ⁰ a. — ☒ —
22	8.13	(2.5)	1.3	H ⁰ , 0 ⁰ a. 0 ⁰ , H ¹ , ☒ ⁰ p. * ⁰¹ 433—14 ^h 54. — ☒ —
23	2.17	2.1	1.0	H ¹ , ☒ ⁰ , 0 ⁰ a. H ¹ p. * ⁰⁴ 30—8 ^h 37...16 ^h 20. ☒ ⁴ 30—11 ^h 45. — ☒ —11 ^h 45.
24	6.26	2.4	1.3	H ¹ , 0 ⁰ a, H ¹ p. * ⁰⁶ 30...8 ^h 36. ☒ ^{1.3}
25	6.84	(2.2)	1.0	H ¹ , 0 ⁰ a, H ⁰ p. * ⁰⁰ 40—5 ^h 30. ☒ ¹ 30—8 ^h 00. * ⁰ 15 ^h 30—16 ^h 47. ☒ ^{22.7} —23.2 ^h
26	2.31	(1.6)	1.2	H ⁰ a, p. * ⁰⁵ 47—5 ^h 53, 6 ^h 32...7 ^h 53—● ⁰⁸ 20—● ⁰¹ 10 ^h 40—● ⁰¹ 12 ^h 20—* ⁰ 12 ^h 50—18 ^h 50...., ☒, ☒ ¹⁵ 10—**
27	8.77	2.8	1.9	H ¹ a. 0 ² , H ¹ , ☒ ⁰ p... * ⁰ ...7 ^h 10. — ☒ —10 ^h 38, ☒ ^{9.5} —9.7 ^h
28	9.50	2.3	0.9	H ¹ , ☒ ¹ , ☒ ⁰ , 0 ² a. 0 ² , H ⁰ , ☒ ⁰ p.
29	1.06	(2.8)	1.6	H ¹ a, 0 ¹ p. * ⁰² 045...., ☒ ²³ 00
Mean	3.91	2.4	1.2	

× See Page 3.

MARCH, 1948.



Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	w9	—	w8	—	—	10 n,sk	10 sk,s	8 c.k,cs	6 k.s,cs	8 sk	10 n	8.7	0.3	0.0	—	—	—	0.0	0.3
2	—	—	w8	w9	—	—	10 n	10 n	5 sk,ke	9 sk,k	1 sk	3 sk	6.3	0.3	1.3	0.1	—	0.0	—	1.7
3	—	—	—	—	—	—	4 sk	1 sk	4 s,k	10 sk,s,k	10 sc	10 n	6.5	—	—	—	—	—	0.0	0.0
4	—	—	w8	w8	—	—	9 cs,sc	4 sk	10 sk,cs	10 sk	10 sk	10 sk	8.8	0.0	—	—	—	—	—	0.0
5	—	—	—	w8	w8	—	10 s	9 sk,s	4 sk,k,c	3 k	9 sk	2 k	6.2	—	0.1	—	—	—	—	0.1
6	—	w8	—	—	—	—	9 s,sk	10 sk,sc	10 sc,sk	10 sc	10 sc	10 sk	9.8	0.0	—	—	—	—	—	0.0
7	—	w8	w9	—	—	—	10 s	10 sk,sc,s	10 sk,s,cs	10 n	10 n	10 n	10.0	—	0.5	—	0.4	0.6	0.6	2.1
8	—	—	—	w9	w9	—	5 n	2 s,k	10 n	10 n,sk	10 sk,s	8 sk	7.5	0.1	0.0	0.1	0.3	0.1	—	0.6
9	—	w9	—	w8	—	—	10 s	10 n,sk	10 n	8 sk	2 sk	9 sk	8.2	—	0.0	0.0	—	—	—	0.0
10	—	w5	w8	—	—	—	0 sk	10 ke,sk	6 sk,cs,k	0 k	1 sk	0—	2.8	—	—	—	—	—	—	—
11	—	—	—	—	—	—	0—	0—	0 k	0 k	0—	0—	0.0	—	—	—	—	—	—	—
12	—	—	—	s9	—	—	10 sc	10 sk	10 sk	10 sk	10 n	10 n	10.0	—	—	—	—	1.7	5.6	7.3
13	—	—	—	w7	—	—	10 s	10 n	10 n	10 s,sk,ke	10 sk	10 sk	10.0	4.4	1.9	0.7	1.3	—	—	8.3
14	—	—	w8	NW8	w8	—	10 sk	10 sc,sk	10 sk,k	10 sk	9 sk	1 sk	8.3	—	—	—	—	—	—	—
15	—	—	—	—	—	—	3 sk	10 sk,cs	7 cs,c,k	1 k,cs	2 sk,k	0—	3.8	—	—	—	—	—	—	—
16	—	—	—	—	w8	—	0—	3 sk	1 k	0 k	8 sk	0—	2.0	—	—	—	—	—	—	—
17	—	—	—	—	—	—	0—	0—	0—	2 k	2 sk	8 sk	2.0	—	—	—	—	—	—	—
18	—	—	—	s7	s7	—	9 sk	5 sk,cs	1 ke,k	10 sk	10 sk	1 sk	6.0	—	—	—	—	—	—	—
19	—	—	—	—	—	s5	0—	1 sk	0 k	0—	1 c	8 ke	1.7	—	—	—	—	—	—	—
20	—	—	—	—	—	—	10 s	10 n	10 n	10 n	10 n	10 n	10.0	—	0.0	2.4	7.0	9.1	2.5	21.0
21	—	—	—	—	—	—	10 s,sk	10 sk	10 n,sk	10 n	10 s,sk	10 sc,sk	10.0	0.2	—	0.0	2.5	2.1	—	4.8
22	—	—	—	—	—	—	10 ke	3 ck,cs	10 cs,k	10 cs,k	10 sk	10 sc,sk	8.8	—	—	—	—	—	—	—
23	—	—	—	—	—	w8	10 cs	10 sc	10 sc,cs	10 sc,sk	10 sc	10 sk	10.0	—	—	—	—	—	—	—
24	w8	w8	w8	w8	w8	w8	10 sk	9 sk,s	8 sk	2 sk,k	4 sk	10 sk	7.2	—	—	0.0	—	—	—	0.0
25	—	w8	w8	w8	w7	w8	10 sc	10 sk	8 sk	3 k	3 sk	8 sk	7.0	—	—	—	—	—	—	—
26	—	—	w7	—	—	—	10 sk	10 n	10 sk	3 sk,k,s	2 sk	10 n,sk	7.5	—	0.0	0.0	—	—	0.0	0.0
27	—	—	—	—	—	—	10 n	9 sk	10 sk,k	10 c.sk,k	10 cs,ck	10 sc	9.8	0.5	0.1	0.0	—	—	—	0.6
28	—	w8	w8	w8	w9	w7	10 n	10 sk,s	7 sk,cs	10 sk	9 sk	9 sk	9.2	—	3.5	0.2	—	—	—	3.7
29	—	—	—	—	—	—	3 sk	1 sk	0 k	4 k	0 sk,k	0—	1.3	—	—	—	—	—	—	—
30	—	—	—	—	—	—	0—	0 k	0 k	0 k	0 k	0—	0.0	—	—	—	—	—	—	—
31	—	—	—	—	—	—	0—	0—	7 c	8 cs,c	9 ck,cs,c	1 cs	4.2	—	—	—	—	—	—	—
							6.8	6.7	6.6	6.4	6.5	6.4	6.6	5.8	7.4	3.5	11.5	13.6	8.7	50.5

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	7.43	(2.0)	1.0	H ⁰ a,p... ⁰ ...4 ^h 00,20 ^h 30—,☉,☉21 ^h 00—
2	6.61	2.5	1.6	H ⁰ a,p.— ⁰ —6 ^h 43,—☉10 ^h 30.— ⁰ 14 ^h 37...16 ^h 52.
3	5.88	2.4	1.3	H ¹ ,O ² a.O ⁰ ,H ⁰ p.* ⁰ 21 ^h 45—22 ^h 50.
4	6.32	(1.8)	0.8	H ¹ ,☉ ¹ ,O ² a.O ² p.
5	6.72	2.8	1.3	H ⁰ ,O ⁰ a,p.* ⁰ 2 ^h 08—2 ^h 34.☉,☉2 ^h 13—7 ^h 45.
6	2.40	(2.4)	1.0	H ⁰ ,O ⁰ a.
7	3.38	(1.8)	0.9	H ⁰ p.☉ ⁰ 3 ^h 36—4 ^h 08,11 ^h 50— ⁰ ☉ ⁰ 12 ^h 03— ⁰ * ⁰ 13 ^h 05—,☉,☉15 ^h 10—,☉10 ^h 7 ^h —11 ^h 3 ^h ,14 ^h 0 ^h —21 ^h 2 ^h
8	3.10	(1.8)	1.6	H ⁰ a,p.— ⁰ * ⁰ —5 ^h 00.—☉—7 ^h 40.— ⁰ * ⁰ 8 ^h 20—12 ^h 36...,☉1.7 ^h —3.2 ^h ,5.0 ^h ,5.8 ^h —7.2 ^h ,7.5 ^h —9.2 ^h
9	7.02	3.3	1.7	H ⁰ a,p.... ⁰ * ⁰ ...5 ^h 48—6 ^h 26,8 ^h 32—13 ^h 10.
10	9.23	3.3	1.6	H ¹ ,O ² a.O ² ,H ⁰ p.
11	10.92	3.4	1.2	H ¹ ,☉ ¹ ,O ² a.O ² ,H ¹ ,☉ ⁰ p.
12	—	(2.0)	0.8	H ⁰ ,O ⁰ a.O ⁰ p.☉ ⁰ 15 ^h 50—
13	1.16	(1.4)	0.9	☉ ⁰ —1 ^h 20,2 ^h 29—3 ^h 42,5 ^h 17—12 ^h 45.
14	3.44	3.0	1.5	O ⁰ a.O ⁰ ,H ⁰ p.☉13.0 ^h
15	7.05	3.1	1.2	H ⁰ ,O ² a.O ² ,H ⁰ ,☉ ⁰ p.
16	9.87	3.3	1.5	☉ ¹ ,H ¹ ,O ² a.O ² ,H ⁰ p.
17	10.90	3.8	1.4	H ¹ ,☉ ¹ ,O ² a.O ² p.
18	6.65	2.8	1.5	H ⁰ ,☉ ⁰ ,O ² a.O ² p.
19	10.84	(3.0)	1.3	H ¹ ,☉ ¹ ,O ¹ a,O ² p.
20	—	(1.3)	0.5	☉ ⁰ 2 ^h 20—☉ ⁰ 6 ^h 16—☉ ⁰ 11 ^h 07—☉ ⁰ 16 ^h 00—20 ^h 03...23 ^h 00.
21	—	(0.2)	0.6	O ⁰ a.☉ ⁰ 9 ^h 45—16 ^h 55
22	9.90	3.2	1.1	H ⁰ ,☉ ⁰ ,O ² a.O ² p.
23	1.04	1.9	0.9	O ² a,p.☉ ¹ 18 ^h 14 ^m 53 ^s
24	6.55	3.7	2.2	O ² a.O ² ,H ⁰ p.* ⁰ 7 ^h 35—8 ^h 40.
25	10.06	3.2	1.6	H ¹ ,O ² a.O ⁰ ,H ⁰ p.
26	7.06	(2.3)	1.4	H ¹ ,☉ ⁰ ,O ¹ a.O ⁰ ,H ⁰ p.* ⁰ 4 ^h 30—8 ^h 20,☉ ⁰ 5 ^h 00—7 ^h 10,* ⁰ 21 ^h 18—,☉,☉21 ^h 43—
27	6.21	(3.4)	1.4	H ⁰ a.— ⁰ * ⁰ —5 ^h 43,6 ^h 58—7 ^h 25.—☉—7 ^h 38.
28	4.41	3.2	1.3	☉ ⁰ 2 ^h 07—☉ ¹ 2 ^h 30—4 ^h 20.☉ ⁰ 9 ^h 19—9 ^h 47,☉16.3 ^h
29	11.60	3.7	1.5	H ⁰ ,O ¹ a.O ² ,☉ ⁰ p.
30	11.33	4.9	1.7	H ¹ ,☉ ¹ ,O ² a.O ² ,H ⁰ p.
31	10.88	4.6	1.7	H ¹ ,☉ ¹ ,O ² a.O ² p.
Mean	6.39	3.3	1.3	

× See Page 3.

APRIL, 1948.



Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm										
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total			
1	—	—	—	—	—	—	0 cs	1 cs	0 —	0 —	2 kc	0 —	0.5	—	—	—	—	—	—	—			
2	—	—	—	—	—	—	0 —	1 c	9 cs,c	2 cs,ck,c	5 c	0 —	2.8	—	—	—	—	—	—	—			
3	—	—	—	s8	w8	—	10 sc	4 ck,c,cs	10 s	10 sk,ck	10 sk,sc	10 n	9.0	—	—	—	—	—	0.7	0.7			
4	—	—	—	w7w8	—	—	10 n	10 n	10 sk	10 sk,n	10 sk,s	1 sk	8.5	14.6	10.3	0.3	0.7	—	—	25.9			
5	—	w2	—	—	—	—	0 cs	8 ck,c,k	7 cs	2 cs,c	2 c	3 cs	3.7	—	—	—	—	—	—	—			
6	—	—	—	—	—	—	4 cs	10 cs	0 c	3 ck	1 cs	0 —	3.0	—	—	—	—	—	—	—			
7	—	—	—	—	—	—	0 —	9 cs,c	2 cs	10 cs	10 cs	2 cs	5.5	—	—	—	—	—	—	—			
8	—	—	—	—	—	—	0 —	10 cs	7 c,cs	8 ck,cs,c	1 c	3 cs	4.8	—	—	—	—	—	—	—			
9	—	—	—	—	—	—	1 cs	10 cs,c,k	10 cs,k	8 cs,k	10 cs,ck	6 cs	7.5	—	—	—	—	—	—	—			
10	—	—	w7	w9	w8	—	2 cs	10 kc,cs	10cs,kc,sk	10 sc,sk	10 sk,sc	10 sk	8.7	—	—	—	—	—	—	—			
11	—	w8	w9	w7	—	—	3 sk	4 k	7 sk,k	1 k	0 k	0 —	2.5	—	—	—	—	—	—	—			
12	—	—	—	—	—	—	0 —	1 sk	0 sk	0 —	0 cs	1 cs	0.3	—	—	—	—	—	—	—			
13	—	—	s8	s7	s9	—	10 sc	10 sk	10 sk,kc	10 sk,sc	10 sk,s	10 s,sk	10.0	—	—	—	—	0.0	0.9	0.9			
14	—	—	—	—	—	—	10 s	10 s	3 k	0 k	2 c	0 —	4.2	—	—	0.0	—	—	—	0.0			
15	—	—	—	—	—	—	0 —	10 cs	10 sc,k	10 sc,sk	10 sc,k	10 n	8.3	—	—	—	—	—	0.0	0.0			
16	—	—	—	—	—	—	10 n	10 s	10 sk	10 sk	10 sk,cs	0 —	8.3	0.9	1.4	—	—	—	—	2.3			
17	—	—	—	—	—	—	0 —	0 cs	2 k	4 k,cs	10 cs,sk	10 sk,cs	4.3	—	—	—	—	—	—	—			
18	—	—	—	—	—	—	10 sc,sk	10 s	0 k	1 k,c	10 cs,ck	10 sc	6.8	—	—	—	—	—	—	—			
19	—	w2	—	—	—	—	1 kc	7 ck,cs,c	10 cs,k	10 cs,k	10 cs,ck,k	10 sc	8.0	0.4	—	—	—	—	—	0.4			
20	—	—	—	—	—	—	10 s	10 sc,s	10 sc	10 sc	10 sc,n	10 n	10.0	—	—	—	—	0.6	0.7	1.3			
21	—	—	—	—	—	—	10 n	10 ≡	10 n	10 n,sk	10 n	10 n	10.0	1.2	0.3	2.9	2.6	1.3	1.7	10.0			
22	—	—	—	—	—	—	10 n	10 s	10 n	10 sk	8 sk	3 sk,cs	8.5	6.9	0.8	0.6	0.1	—	—	8.4			
23	—	—	—	s7	—	—	0 —	0 —	10 sc,s	10 sk,s	10 n	10 n	6.7	—	—	—	—	10.7	5.1	15.8			
24	—	—	w9	w9	w9	w9	10 sk	10 n,sk	10 sk,s	10 sk	10 s,sk,cs	10 sk,k	10.0	2.2	1.1	0.0	—	—	—	3.3			
25	w9	w9	w8	—	—	—	4 k	2 k	2 k,sk	2 k	0 k	0 —	1.7	—	—	—	—	—	—	—			
26	—	—	—	s8	—	—	0 —	10 cs,s	10 cs	10 sk	10cs,ck,sk	10 cs	8.3	—	—	—	—	—	—	—			
27	—	s9	—	—	—	—	10 sc,sk	10 n	10 n	10 n	10 n,s	9 sk	9.8	—	1.0	2.7	1.7	0.7	0.2	6.3			
28	—	—	—	w7	—	—	10 sk,cs	5 ck,sk	2 k,c	2 k	1 k	0 k	3.3	—	—	—	—	—	—	—			
29	—	—	—	—	—	—	0 —	9 c,cs,ck	6 cs	3 cs,c	2 cs,ke	0 —	3.3	—	—	—	—	—	—	—			
30	—	—	—	—	—	—	10 cs	10 cs,≡	10 c,cs	10 c,k	10 n,sk,c	0 —	8.3	—	—	—	—	0.3	0.1	0.4			
							4.8	7.4	6.9	6.5	6.8	4.9	6.2	26.2	14.9	6.5	5.1	13.6	9.4	75.7			

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	11.20	5.7	2.1	☐ ¹ ,☐ ¹ ,☐ ² a.☐ ² p.
2	11.13	4.9	2.2	☐ ¹ ,☐ ¹ ,☐ ⁰ ,☐ ⁰ a.☐ ² ,☐ ⁰ p.
3	2.07	(5.6)	1.7	☐ ⁰ p.☐ ⁰ 19 ^h 52—☐ ⁰ 22 ^h 30—.
4	1.23	(3.1)	1.8	☐ ⁰ 1—5 ^h 00.☐ ⁰ 5 ^h 52—6 ^h 14,12 ^h 58—☐ ⁰ 13 ^h 18—☐ ⁰ 13 ^h 33—13 ^h 38.
5	10.55	5.0	2.3	☐ ⁰ ,☐ ² a.☐ ² p.
6	10.92	4.8	2.1	☐ ⁰ ,☐ ⁰ ,☐ ² a.☐ ¹ ,☐ ⁰ ,☐ ⁰ p.
7	10.73	5.4	2.2	☐ ¹ ,☐ ⁰ ,☐ ⁰ ,☐ ⁰ a.☐ ⁰ p.
8	9.30	3.8	1.7	☐ ⁰ ,☐ ⁰ a.☐ ⁰ ,☐ ⁰ ,☐ ⁰ p.☐ ⁰ 22 ^h 25 ^m 59 ^s .
9	9.87	5.5	2.1	☐ ⁰ ,☐ ⁰ a,p.☐ ⁰ 25 ^h 30—7 ^h 40.
10	4.01	3.4	2.0	☐ ¹ ,☐ ⁰ a.☐ ⁰ 10.3 ^h .
11	10.75	5.0	1.9	☐ ² a,p.
12	11.88	5.7	2.1	☐ ¹ ,☐ ¹ ,☐ ² a.☐ ² ,☐ ⁰ p.
13	2.46	(2.8)	1.4	☐ ⁰ a.☐ ⁰ 17 ^h 06...21 ^h 40.
14	8.75	5.4	2.5	☐ ⁰ ,☐ ⁰ a.☐ ² p.☐ ⁰ 6 ^h 17—6 ^h 19.
15	3.28	(3.0)	1.4	☐ ⁰ ,☐ ⁰ ,☐ ⁰ ,☐ ⁰ a.☐ ⁰ p.☐ ⁰ 21 ^h 46—.
16	0.24	2.6	0.8	☐ ⁰ a.☐ ⁰ ,☐ ⁰ ,☐ ⁰ p.—☐ ⁰ —5 ^h 13.
17	11.50	4.7	1.7	☐ ¹ ,☐ ⁰ ,☐ ⁰ a.☐ ⁰ ,☐ ⁰ p.
18	8.46	(4.7)	1.8	☐ ⁰ ,☐ ⁰ a.☐ ⁰ ,☐ ⁰ p.☐ ⁰ 22 ^h 08—23 ^h 40.
19	9.35	4.5	1.8	☐ ⁰ ,☐ ¹ a.☐ ² p.
20	0.23	(1.6)	0.7	☐ ⁰ a,p.☐ ⁰ 15 ^h 02...
21	—	(0.5)	0.5	...☐ ⁰ ...4 ^h 10.☐ ⁰ 35 ^h 20—☐ ⁰ 7 ^h 52—13 ^h 15,13 ^h 36—
22	0.51	(1.6)	0.9	☐ ⁰ a,p.—☐ ⁰ —4 ^h 45,6 ^h 30...9 ^h 25—10 ^h 20.
23	2.33	(3.0)	1.1	☐ ⁰ ,☐ ⁰ ,☐ ⁰ a.☐ ⁰ 14 ^h 53—☐ ⁰ 15 ^h 05.—☐ ⁰ 15 ^h 09—☐ ⁰ 15 ^h 13—☐ ⁰ 15 ^h 18.—☐ ⁰ 15 ^h 19—☐ ⁰ 15 ^h 27—.
24	5.80	4.9	2.2	☐ ⁰ a.—☐ ⁰ —0 ^h 33,3 ^h 30—6 ^h 20.☐ ⁰ 7.0 ^h ,8.0 ^h —8.3 ^h ,10.0 ^h —10.2 ^h ,11.0 ^h —11.2 ^h ,12.0 ^h —12.2 ^h ,12.5 ^h —12.7 ^h ,13.0 ^h —13.7 ^h .
25	11.58	4.7	1.7	☐ ² a.☐ ² ,☐ ⁰ p.
26	8.77	(4.5)	2.1	☐ ⁰ ,☐ ¹ ,☐ ⁰ ,☐ ⁰ ,☐ ⁰ a.☐ ⁰ ,☐ ⁰ p.☐ ⁰ 16.0 ^h ,16.5 ^h —17.2 ^h .
27	—	(2.7)	1.4	☐ ⁰ 5 ^h 10—☐ ⁰ 15 ^h 35—16 ^h 22.☐ ⁰ 17 ^h 18—18 ^h 40.
28	11.35	5.1	1.9	☐ ² a,p.
29	11.43	5.1	1.9	☐ ⁰ ,☐ ⁰ ,☐ ² a.☐ ² ,☐ ⁰ ,☐ ¹ p.
30	10.36	(4.1)	1.5	☐ ¹ ,☐ ⁰ ,☐ ⁰ a.☐ ⁰ ,☐ ⁰ ,☐ ⁰ p.☐ ⁰ 1 ^h 20—☐ ⁰ 14 ^h 40—7 ^h 00,☐ ⁰ WNW16 ^h 53...17 ^h 33.☐ ⁰ 17 ^h 41—18 ^h 22.
Mean	7.00	4.8	1.7	

× See Page 3.

MAY, 1948.



Main meteorological data table including columns for Day, AIR PRESSURE (700mm+)* mm, AIR TEMPERATURE °C (2, 6, 10, 14, 18, 22, Mean, Max., Min., Mean, Range), and TENSION OF VAPOUR mm (2, 6, 10, 14, 18, 22, Mean).

Secondary meteorological data table including columns for Day, RELATIVE HUMIDITY % (2, 6, 10, 14, 18, 22, Mean), and DIRECTION AND VELOCITY (m.p.s.) OF WIND (2, 6, 10, 14, 18, 22, Mean) with sub-columns for 6 obs. and 24 h.

* Reduction: to standard gravity, -0.4; to mean sea level, +5.7

JUNE, 1948.



Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	s7	s8	—	7 sk,ke	10 sk	10 sk	10 sk	10 s,sk	10 s	9.5	—	—	—	—	—	—	—
2	—	s8	s8	s9	ESE9	—	10 s	10 s,sk	10 sk,cs	10 s,sk	10 sk,s	10 n	10.0	—	—	—	0.1	0.2	0.9	1.2
3	—	—	—	w8	w8	—	10 n	10 n	10 n	10 sk,s	10 sk,s	10 n,sk	10.0	31.3	13.1	4.5	1.4	0.2	—	50.5
4	—	—	w8	w7	w7	—	10 sk	8sk,ck,n	10 sk,ke	10 sk	10 sk	10 sk	9.7	0.2	0.0	—	—	—	—	0.2
5	—	w8	—	—	—	—	10 sk	10 sc,sk	10 sk	9sk,k,ck	9 sk,ke	10 s	9.7	—	—	—	—	—	—	—
6	—	—	—	E7	—	—	4 cs	7 sc,ke,k	10 sk	9sk,ck,k	10sc,ke,sk	10 sc	8.3	—	—	—	—	—	—	—
7	—	—	—	—	—	—	6 sk	1 ke	7 c,k	10 c,cs,k	10 c,k	10 sc	7.3	0.4	—	—	—	—	—	0.4
8	—	—	—	—	—	—	10 sc	10 c,s	8 cs	10 cs	10 c,cs	0—	8.0	—	—	—	—	—	—	—
9	—	—	—	—	—	—	0—	10 cs	10cs,ke,sk	10cs,ke,sk	10cs,ke,sk	10cs,sk	8.3	—	—	—	—	—	—	—
10	—	—	—	w8	—	—	10 cs,sk	8 cs,sk	10 sk	10 sk	10 sk,s	10 s	9.7	—	—	—	—	—	0.3	0.3
11	—	—	—	—	—	—	10 n	10 sc,s	10 c,k	9 c	10 c,ck	3 c	8.7	2.6	0.8	—	—	—	—	3.4
12	—	—	—	—	—	—	10 sc	10sc,ke,sk	10 sc,ke	10 sc,ke	10 sc	10 n	10.0	—	—	—	0.1	—	1.4	1.5
13	—	s9	—	—	—	—	10 s	10 s,sk	10 n,s	10 s	10 s,sc	10 n	10.0	0.1	—	0.2	0.1	—	1.0	1.4
14	—	—	—	—	—	—	10 s,sc	10 s	10 s	10 sc,sk	10 n	10 s	10.0	0.1	0.0	0.2	1.5	0.9	1.2	3.9
15	—	WNW9	w7	w7	—	—	10 sk	10cs,sk,ke	9 sk,k,c	10 k,c	10 c,cs,k	0 c	8.2	0.1	—	—	—	—	—	0.1
16	—	—	s7	—	s7	—	10 cs	10 c,cs,k	10 sc,sk	10 sk,s	10 sk,sc	10 sc,sk	10.0	—	—	—	—	0.0	—	0.0
17	—	—	—	—	—	—	10 s	10 sc,s	10 sc,sk	10 sc,cs,k	6 c,k,kn	10 sc	9.3	—	—	—	—	—	—	—
18	—	—	—	s7	s7	—	10 s	10 s,sk	10 sk,s	10sk,cs,kn	8 cs,sk,k	10 s	9.7	—	—	—	—	—	—	—
19	—	—	—	—	—	—	10 s	10 s	10 s	10 sk,k	10 sc,sk	10 sc	10.0	0.1	0.2	—	—	—	—	0.3
20	—	—	—	—	—	—	10 sc	10 sc	10 sc,k,s	10 sk	10 cs,sk	10 s	10.0	—	—	—	0.0	—	—	0.0
21	—	—	—	—	—	—	10 s	10 s,sk	10 s	10 c,k,cs	10 sc,sk,s	10 s	10.0	—	—	—	—	—	—	—
22	—	—	—	—	—	—	10 sk,c	10 s,k	4 sk,c,k	9 k,cs,sk	5 cs,sk	0 c	6.3	—	—	—	—	—	—	—
23	—	—	—	—	—	—	1 sk	1 sk	0 k	1 ck,cs,k	0 cs,ck	0 ck	0.5	—	—	—	—	—	—	—
24	—	—	—	—	—	—	2 ck	3 ck,cs	8 cs	10 cs	9 cs,ke	10 sc,sk	7.0	—	—	—	—	—	—	—
25	—	—	—	—	s8	—	1 ke	10 sk,s	10 sk,k	10 s,sk	10 s	10 s	8.5	—	—	—	—	—	—	—
26	—	—	—	—	s7	—	10 s	10 n	10 s	10 sk	10 cs,sk	10 s	10.0	—	0.0	0.0	—	—	—	0.0
27	—	—	—	—	—	—	10 s	10 s	10 s,sc,sk	10 c,k	10 c,ke	10 c	10.0	—	—	—	—	—	—	—
28	—	—	—	s7	—	—	10 s	10 s,sk	10 cs,sk	10sc,sk,cs	10kc,sk,cs	10 s	10.0	—	—	—	—	—	—	—
29	—	—	—	—	—	—	10 s	10 n	10 n	10 n	10 sc,s,sk	10 s	10.0	—	18.0	23.3	3.1	0.1	—	44.5
30	—	—	s7	s7	—	—	10 s	10 s	10 s	10 s,sk	10 s	10 s	10.0	—	—	—	—	—	—	—
							8.4	8.9	9.2	9.6	9.2	8.4	9.0	34.9	32.1	28.2	6.3	1.4	4.8	107.7

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	1.53	2.9	1.5	0 ⁰ a. 0 ¹ p.
2	—	(5.5)	1.0	0 ¹³ 00...0 ²² 14—, 21.0 ^h .
3	0.97	(2.1)	0.8	0 ⁰ p.—0 ¹ 30—0 ⁶ 57—8 ^h 40,10 ^h 07...0 ¹² 24—0 ¹² 29—12 ^h 41,17 ^h 02—17 ^h 20,22 ^h 04...
4	1.13	3.0	1.4	0 ⁰ , 0 ⁰ a. 0 ¹ p....0 ⁰ ...2 ^h 20.
5	5.33	4.5	1.5	0 ¹ a,p.
6	6.24	(5.0)	1.5	0 ⁰ , 0 ¹ a. 0 ¹ p.
7	12.15	6.2	1.9	0 ² a. 0 ¹ , 0 ⁰ , 0 ⁰ p. 0 ⁰ 06—0 ^h 30.
8	11.99	7.4	2.9	0 ⁰ , 0 ² a. 0 ² p.
9	8.43	4.8	2.0	0 ⁰ , 0 ⁰ a. 0 ⁰ , 0 ⁰ , 0 ⁰ p.
10	4.10	(4.4)	1.5	0 ⁰ , 0 ⁰ a. 0 ⁰ 18 ^h 19—18 ^h 37,22 ^h 32—.
11	11.20	6.6	2.4	0 ² a. 0 ² , 0 ⁰ p.—0 ⁰ —3 ^h 10.
12	1.37	(2.6)	1.1	0 ⁰ , 0 ⁰ a. 0 ⁰ p. 0 ¹¹ 52—12 ^h 13,20 ^h 40—0 ¹² 17—0 ¹² 38—22 ^h 19.
13	—	(1.7)	0.7	0 ⁰ 7 ^h 55...
14	—	(2.1)	1.0	0 ⁰ p....0 ⁰ ...4 ^h 10,6 ^h 53...16 ^h 50—21 ^h 46,22 ^h 28—22 ^h 47.
15	9.40	4.2	1.4	0 ¹ , 0 ¹ p.
16	2.32	2.2	1.1	0 ¹ , 0 ¹ a. 0 ⁰ 14 ^h 02...14 ^h 09.
17	5.28	4.3	1.5	0 ⁰ a,p.
18	2.44	(3.8)	1.3	0 ⁰ w12 ^h 53—14 ^h 36.
19	1.38	2.8	0.9	0 ¹ p. 0 ⁰ 1 ^h 10—1 ^h 46,3 ^h 00—4 ^h 09.
20	—	2.6	1.0	0 ⁰ 12 ^h 45—12 ^h 53.
21	5.33	6.0	1.4	—
22	8.49	6.4	2.2	0 ¹ a. 0 ² , 0 ⁰ p.
23	13.53	7.9	3.1	0 ¹ , 0 ¹ a. 0 ² p.
24	11.35	7.2	2.3	0 ⁰ , 0 ² a. 0 ² p.
25	3.10	3.7	1.3	—
26	2.76	4.5	1.5	0 ⁰ 4 ^h 30—7 ^h 10.
27	5.32	5.9	1.7	0 ⁰ , 0 ⁰ p.
28	5.13	(3.7)	1.4	0 ⁰ a,p.
29	0.12	(2.2)	0.7	0 ⁰ 3 ^h 03—0 ¹ 3 ^h 58—0 ⁰ 9 ^h 33—0 ¹ 10 ^h 42—0 ⁰ 13 ^h 20...14 ^h 20.
30	0.90	(3.2)	1.0	—
Mean	4.71	4.8	1.5	

× See Page 3.

JULY, 1948.

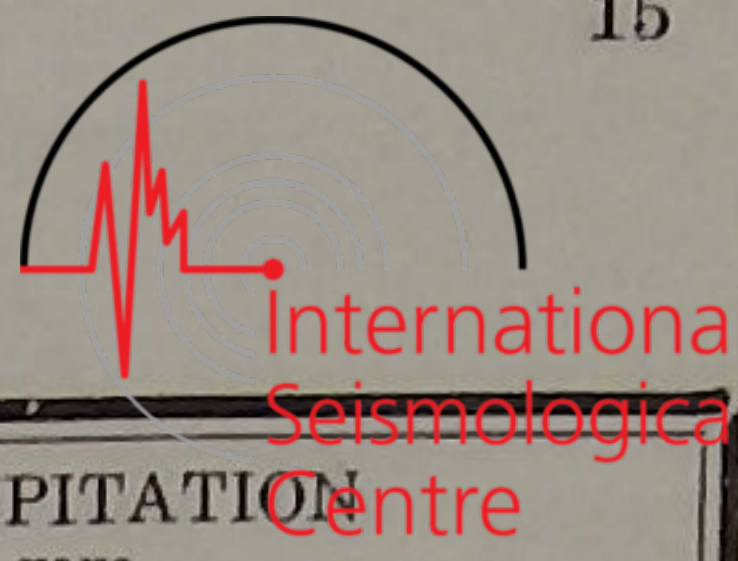


Table with columns: Day, DIRECTION AND SPEED OF CLOUDS, AMOUNT (0-10) AND FORMS OF CLOUDS, PRECIPITATION mm. Rows 1-31.

Table with columns: Day, Duration of Sunshine, Amount of Evaporation (Open Air, in the Shelter), REMARKS. Rows 1-31 and Mean.

× See Page 3.



SEPTEMBER, 1948.

Table with columns: Day, DIRECTION AND SPEED OF CLOUDS x, AMOUNT (0-10) AND FORMS OF CLOUDS, PRECIPITATION mm. Rows 1-30 showing cloud data and precipitation totals.

Table with columns: Day, Duration of Sunshine (in hours), Amount of Evaporation mm (Open Air, in the Shelter), REMARKS. Rows 1-30 with detailed weather observations and remarks.

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

OCTOBER, 1948.



Day	AIR PRESSURE (700mm+)*						AIR TEMPERATURE °C									TENSION OF THE VAPOUR mm									
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	Max.	Min.	Mean	Range	2	6	10	14	18	22	Mean
	1	61.0	61.5	61.8	60.2	60.3	61.6	61.1	11.0	10.6	15.8	20.8	15.9	12.2	14.4	21.6	10.4	16.0	11.2	9.5	9.1	10.0	10.4	10.5	10.0
Mean	59.0	59.6	59.8	58.4	59.1	59.4	59.2	10.5	9.6	14.3	16.8	13.5	11.7	12.8	18.2	8.2	13.2	10.0	8.8	8.3	9.0	9.3	9.4	9.2	9.0

Day	RELATIVE HUMIDITY %							DIRECTION AND VELOCITY (m.p.s.) OF THE WIND												
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean						
	6 obs.	24 h																		
1	97	96	75	57	78	95	83	WNW 0.7	—	0.5	—	0.5	NW 1.7	WSW 3.0	—	0.0	1.1	0.9		
Mean	91	92	73	64	79	88	81	1.2	1.1	1.9	3.2	2.5	1.2	1.8	1.8					

* Reduction: to standard gravity, -0.4: to mean sea level, +5.7



NOVEMBER, 1948.

Main meteorological data table with columns for Direction and Speed of Clouds, Amount and Forms of Clouds, and Precipitation (mm).

Table for Remarks and Evaporation data, including columns for Duration of Sunshine, Amount of Evaporation (Open Air and in Shelter), and detailed Remarks for each day.

x See Page 3.

DECEMBER, 1948.



Table with columns: Day, DIRECTION AND SPEED OF CLOUDS x, AMOUNT (0-10) AND FORMS OF CLOUDS, and PRECIPITATION mm. The table contains daily meteorological data for December 1948, including cloud types, amounts, and precipitation totals.

Table with columns: Day, Duration of Sunshine (in hours), Amount of Evaporation mm (Open Air, in the Shelter), and REMARKS. This section provides detailed daily observations, including sunshine duration, evaporation rates, and specific weather notes.

x See Page 3.

1948.



Month	AIR PRESSURE (700mm+)										TENSION OF THE VAPOUR mm							
	2	6	10	14	18	22	Mean	Max.	Date	Min.	Date	2	6	10	14	18	22	Mean
January	56.4	56.4	57.1	55.7	56.6	56.9	56.5	66.6	19	37.9	14	3.4	3.4	3.5	3.7	3.7	3.5	3.5
February	57.5	57.6	57.8	56.5	57.4	57.6	57.4	65.3	1	44.2	2	3.1	3.1	3.3	3.4	3.3	3.2	3.2
March	58.9	59.4	59.7	58.4	59.3	59.8	59.3	69.7	19	42.0	7	3.9	3.8	4.0	4.1	4.1	4.0	4.0
April	57.2	57.6	57.6	56.2	56.6	57.5	57.1	65.8	12	37.4	24	6.1	6.1	6.6	6.9	7.0	6.8	6.6
May	55.4	56.1	55.7	54.7	55.0	55.8	55.5	64.0	16	46.4	19	8.8	8.6	9.1	9.0	9.3	9.3	9.0
June	52.2	52.7	52.6	51.6	52.0	52.7	52.3	61.0	7	40.2	14	12.6	12.8	13.0	13.4	13.2	13.1	13.0
July	52.7	53.3	53.2	52.5	52.7	53.5	53.0	57.8	30	48.5	2	17.9	18.0	18.4	18.9	18.8	18.2	18.4
August	53.2	53.8	53.6	52.5	52.8	53.8	53.3	58.7	26	47.9	7	18.5	18.6	19.4	19.8	19.5	18.8	19.1
September	55.0	55.7	55.8	54.8	55.3	55.8	55.4	65.8	19	36.8	17	13.7	13.4	14.3	14.8	14.7	14.3	14.2
October	59.0	59.6	59.8	58.4	59.1	59.4	59.2	65.5	24	50.3	6	8.8	8.3	9.0	9.3	9.4	9.2	9.0
November	60.6	60.8	61.6	60.4	61.2	61.3	61.0	68.8	18	48.3	25	5.5	5.4	5.7	5.8	5.7	5.6	5.6
December	60.1	60.0	60.6	59.1	60.0	60.2	60.0	71.8	23	43.1	15	4.3	4.3	4.5	4.8	4.5	4.4	4.5
Annual	56.5	56.9	57.1	55.9	56.5	57.0	56.7	71.8	XII23	36.8	IX17	8.9	8.8	9.2	9.5	9.4	9.2	9.2

Month	AIR TEMPERATURE °C										RELATIVE HUMIDITY %										
	2	6	10	14	18	22	Mean	Mean			Absolute				2	6	10	14	18	22	Mean
								Max.	Min.	Range	Max.	Date	Min.	Date							
January	-2.6	-2.6	0.5	2.2	-0.1	-1.6	-0.7	3.6	-4.7	8.3	10.1	22	-9.8	10	87	89	74	68	80	86	81
February	-2.6	-2.9	0.0	1.6	-0.8	-1.8	-1.1	2.8	-4.5	7.4	8.7	28	-9.0	1	82	83	71	68	75	80	76
March	-0.1	-0.9	4.2	6.5	3.3	1.1	2.4	7.6	-2.0	9.6	14.6	31	-6.8	11	85	86	65	57	70	80	74
April	5.3	4.9	13.3	16.0	11.9	8.0	9.9	16.9	2.7	14.2	23.8	9	-3.3	1	89	91	58	51	66	83	73
May	10.6	11.4	18.4	20.5	17.0	12.9	15.1	21.9	8.6	13.3	29.5	7	2.5	6	90	85	58	51	65	82	72
June	15.9	16.5	20.9	22.5	20.5	17.5	19.0	23.8	14.8	8.9	30.2	24	8.7	1	92	90	71	66	73	87	80
July	21.2	21.2	25.3	26.4	24.3	22.0	23.4	28.1	20.5	7.6	33.8	27	17.8	2	96	96	77	74	83	92	86
August	21.5	21.6	26.3	28.1	24.8	22.3	24.1	29.2	20.4	8.8	32.2	16	12.6	30	96	96	76	70	83	93	86
September	16.6	16.2	21.6	23.7	20.0	17.8	19.3	24.7	14.6	10.0	31.0	5	5.6	29	94	95	73	67	82	91	84
October	10.5	9.6	14.3	16.8	13.5	11.7	12.8	18.2	8.2	10.0	24.0	13	3.0	28	91	92	73	64	79	88	81
November	3.5	3.7	7.8	9.8	6.2	4.1	5.8	10.8	1.0	9.9	18.5	20	-5.6	29	91	88	71	63	79	89	80
December	1.7	1.0	3.4	5.3	2.9	2.0	2.7	6.7	-0.8	7.5	15.0	18	-8.8	24	82	85	76	71	78	82	79
Annual	8.5	8.3	13.0	15.0	12.0	9.7	11.1	16.2	6.6	9.6	33.8	VII27	-9.8	I 10	90	90	70	64	76	86	79

Month	PRECIPITATION mm							CLOUD AMOUNT 0-10										
	2	6	10	14	18	22	Sum	Maximum				2	6	10	14	18	22	Mean
								in 24 h	Date	in 4 h	Date							
January	5.3	7.5	11.6	15.9	19.2	17.6	77.1	38.4	14	15.4	14	6.4	7.8	7.8	8.2	7.5	6.7	7.4
February	2.3	3.8	4.9	13.7	4.4	1.1	30.2	9.7	26	8.5	26	6.6	9.0	8.2	7.8	7.1	6.8	7.6
March	5.8	7.4	3.5	11.5	13.6	8.7	50.5	21.0	20	9.1	20	6.8	6.7	6.6	6.4	6.5	6.4	6.6
April	26.2	14.9	6.5	5.1	13.6	9.4	75.7	25.9	4	14.6	4	4.8	7.4	6.9	6.5	6.8	4.9	6.2
May	18.6	6.1	9.5	8.5	135.7	45.0	223.4	123.6	28	111.5	28	6.7	7.1	7.1	7.3	7.3	6.8	7.1
June	34.9	32.1	28.2	6.3	1.4	4.8	107.7	50.5	3	31.3	3	8.4	8.9	9.2	9.6	9.2	8.4	9.0
July	8.0	8.0	11.3	19.1	28.7	6.9	82.0	22.9	13	12.6	13	9.3	9.8	8.9	8.8	8.6	7.8	8.8
August	57.2	26.4	5.8	41.4	43.6	16.6	191.0	67.2	13	26.2	13	8.7	9.5	8.2	7.2	7.9	8.1	8.3
September	49.6	46.9	16.9	14.2	143.6	115.2	386.4	246.9	16	123.7	16	7.0	7.7	7.9	8.1	7.9	7.7	7.7
October	29.5	40.7	26.8	29.9	25.4	21.5	173.8	43.9	6	16.2	5	7.2	9.0	6.8	7.1	6.3	7.8	7.4
November	17.6	8.3	18.4	20.5	43.0	21.3	129.1	31.7	19	15.4	19	7.2	7.6	6.6	6.3	5.7	6.8	6.7
December	16.6	11.7	16.4	19.2	16.0	12.7	92.6	23.8	15	8.8	27	8.0	7.6	7.9	7.8	7.0	7.0	7.6
Annual	271.6	213.8	159.8	205.3	488.2	280.8	1619.5	246.9	IX16	123.7	IX16	7.3	8.2	7.7	7.6	7.3	7.1	7.5

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International
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Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual	
MONTHLY MAXIMUM DAILY RANGE (WITH DATE) OF AIR TEMPERATURE °C														
Max. Date	14.2 21	16.0 28	18.7 31	24.3 2	24.2 6	15.9 24	12.3 24, 27	13.4 31	16.0 25	15.6 20	15.6 20	12.9 18	24.3 IV 2	
VARIABILITY OF DAILY MEAN AIR TEMPERATURE, °C														
Mean.	1.6	1.5	1.5	2.0	0.9	1.1	0.9	1.0	1.5	1.4	2.0	2.5	1.5	
FREQUENCY OF VARIATION														
Rise	< 2°	11	14	9	11	11	12	15	10	9	7	10	6	125
	2° — 4°	4	2	5	5	1	2	2	2	4	2	2	7	38
	4° — 6°	—	1	—	1	1	1	—	—	—	1	2	1	8
	6° — 8°	1	—	—	—	—	—	—	—	—	—	—	1	2
	8° — ∞	—	—	—	—	—	—	—	—	—	—	—	—	—
Sum	16	17	14	17	13	15	17	12	13	10	14	15	173	
Fall	< 2°	8	9	14	8	15	15	13	16	10	16	8	5	137
	2° — 4°	7	1	3	3	2	—	1	3	7	3	5	9	44
	4° — 6°	—	2	—	2	—	—	—	—	—	2	3	2	11
	6° — 8°	—	—	—	—	—	—	—	—	—	—	—	—	—
	8° — ∞	—	—	—	—	—	—	—	—	—	—	—	—	—
Sum	15	12	17	13	17	15	14	19	17	21	16	16	192	
Stationary	—	—	—	—	1	—	—	—	—	—	—	—	1	
MONTHLY MAXIMUM (WITH DATE) MINIMUM (WITH DATE) AND RANGE OF TENSION OF VAPOUR (mm)														
Max. Date	7.9 14	5.3 14	8.2 13	11.6 27	15.6 18	18.2 14	22.6 29	24.0 18	22.5 16	16.3 5	10.4 4	8.3 21	24.0 VIII 18	
Min. Date	2.0 29	2.0 23	2.2 25	3.3 11	5.2 12	7.7 1, 5	14.4 4	10.1 29	6.9 28	4.5 31	2.8 30	2.4 23, 24	2.0 I 29 II 23	
Range	5.9	3.3	6.0	10.5	10.4	10.5	8.2	13.9	15.6	11.8	7.6	5.9	22.0	
MONTHLY MINIMUM (WITH DATE) OF RELATIVE HUMIDITY (%)														
Min. Date	42 5	49 15	24 17	23 1, 6	23 15	27 8	52 25	43 24	40 22	41 16, 24	37 26	45 2	23 IV1, 6 V 15	
NUMBER OF OBSERVATIONS WITH PRECIPITATION														
IN LAST FOUR HOURS														
22— 2	9	4	6	6	9	8	3	9	10	8	11	7	90	
2— 6	11	7	6	6	6	4	7	8	9	9	6	8	87	
6—10	13	10	5	4	5	4	7	5	7	8	8	10	86	
10—14	8	8	5	4	4	6	10	8	8	6	9	10	86	
14—18	9	11	5	5	5	4	11	8	7	6	6	7	84	
18—22	8	4	3	7	6	5	9	6	10	8	8	7	81	
Sum	58	44	30	32	35	31	47	44	51	45	48	49	514	
<0.1 mm	19	35	16	4	9	6	11	7	7	6	9	16	145	
AT EXACT TIME OF OBSERVATION														
2	6	8	4	3	2	2	1	5	6	5	3	5	50	
6	8	8	4	3	4	2	2	4	4	7	3	4	53	
10	9	8	5	3	3	2	—	2	6	5	4	5	52	
14	10	10	4	2	3	1	7	3	3	5	3	7	58	
18	8	8	3	4	4	1	2	2	5	6	3	4	50	
22	6	7	6	5	4	3	1	6	8	6	6	3	61	
Sum	47	49	26	20	20	11	13	22	32	34	22	28	324	

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VELOCITY (m.p.s.) OF THE WIND.

Hour Month	2 6 10			14 18 22			Maximum			Mean for 24th	No. of Days with Gale			
	2	6	10	14	18	22	Vel.	Dir.	Date		m.p.s. 10-15	m.p.s. 15-29	m.p.s. ≤29	Sum
January	2.2	2.2	3.2	3.7	3.0	2.1	17.3	W	11	2.7	2	2	—	4
February	2.8	2.3	3.2	4.0	2.6	2.6	17.0	W	26	2.7	5	1	—	6
March	2.4	2.3	3.5	4.4	3.9	2.1	17.7	WSW	7	3.0	2	2	—	4
April	1.8	1.3	3.1	5.2	4.3	2.2	13.5	W	24	3.1	3	—	—	3
May	1.3	1.3	3.5	4.7	4.2	2.4	14.5	WSW	4	2.9	4	—	—	4
June	1.0	1.1	2.8	3.7	3.5	2.0	10.2	ESE	2	2.3	1	—	—	1
July	1.0	0.8	1.3	2.8	2.3	1.3	6.8	S, WSW	4, 6	1.6	—	—	—	—
August	0.5	0.4	1.4	3.0	2.7	1.4	7.7	NW	7	1.7	—	—	—	—
September	0.7	1.0	1.6	2.9	2.0	1.1	12.8	NNW	17	1.7	2	—	—	2
October	1.2	1.1	1.9	3.2	2.5	1.2	17.0	WNW	31	1.8	1	1	—	2
November	1.3	1.7	2.4	4.2	2.4	1.2	13.2	W	26	2.2	6	—	—	6
December	2.0	2.1	2.5	2.8	2.7	2.4	14.3	W	7	2.4	4	—	—	4
Annual	1.5	1.5	2.5	3.7	3.0	1.8	17.7	WSW	Mar. 7	2.3	30	6	—	36

NUMBER OF OBSERVATIONS OF THE WIND FROM

Dir. Month	Dir.																Calm
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
January	9	2	7	3	6	7	13	9	8	2	2	11	18	16	22	21	30
February	7	2	15	3	1	2	4	5	2	—	4	5	20	19	24	35	26
March	9	3	1	2	1	2	9	21	10	1	2	11	7	21	26	26	34
April	4	5	1	1	—	3	10	28	12	3	5	4	16	20	23	12	33
May	5	2	3	2	8	9	8	32	15	2	8	9	8	21	12	9	33
June	6	3	2	1	3	7	13	42	21	1	1	—	4	4	14	20	38
July	1	—	2	1	4	1	22	38	24	5	3	1	4	—	8	10	62
August	2	2	2	2	2	5	25	38	10	6	3	2	1	4	14	5	63
September	11	1	2	—	5	3	9	24	10	4	2	1	9	8	9	10	72
October	3	2	5	2	4	4	9	20	12	3	5	5	9	12	17	17	57
November	5	3	6	2	4	4	3	8	2	1	3	2	15	30	19	20	53
December	7	7	1	1	3	1	6	9	4	2	6	4	6	14	21	32	62
Annual	69	32	47	20	41	48	131	274	130	30	44	55	117	169	209	217	563

MONTHLY MEAN VELOCITY (m.p.s.) OF THE WIND FROM

Dir. Month	Dir.															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
January	2.7	2.2	2.1	1.7	1.6	3.1	2.1	2.7	3.3	1.8	4.6	5.0	3.3	3.5	3.6	3.9
February	1.8	2.4	1.8	1.8	1.2	1.1	1.1	3.8	1.4	—	1.4	2.8	4.2	4.8	4.1	3.7
March	2.6	2.0	1.0	1.5	1.7	1.4	3.5	3.5	3.0	2.2	3.3	5.9	4.3	4.1	4.0	3.9
April	2.1	1.6	1.0	1.5	—	4.0	3.9	4.6	2.8	1.5	1.4	3.9	3.3	4.0	4.0	3.9
May	1.4	2.8	1.9	2.5	2.1	4.6	3.9	4.0	3.4	1.8	4.7	4.3	3.2	3.4	5.8	2.7
June	1.5	1.5	1.1	0.7	1.2	3.4	3.8	2.9	2.9	1.5	7.7	—	1.4	2.3	3.4	3.3
July	1.0	—	1.0	1.7	1.0	1.3	2.3	2.7	2.7	2.0	1.3	2.3	2.2	—	1.9	1.7
August	1.9	1.6	1.3	3.1	1.9	2.5	2.8	2.9	2.0	1.3	1.9	1.1	0.7	1.4	1.8	3.1
September	2.2	1.7	0.9	—	1.0	1.7	1.9	2.8	1.9	1.6	3.5	4.3	3.3	3.7	2.1	3.1
October	1.0	1.5	1.5	1.4	0.8	1.1	2.6	3.0	2.0	0.8	3.4	2.0	3.4	4.3	3.0	2.3
November	2.8	1.0	1.2	1.7	1.0	1.4	2.1	2.5	1.0	2.5	1.3	1.8	3.7	4.0	3.8	4.0
December	2.5	1.2	0.7	1.0	0.9	0.7	1.8	2.9	2.3	2.1	3.4	1.1	6.1	5.5	4.4	3.8
Annual	2.2	1.6	1.5	1.8	1.3	2.8	2.7	3.2	2.7	1.6	3.0	3.9	3.6	4.0	3.6	3.4

1948.



DIRECTION AND INTENSITY (m.p.s.) OF THE RESULTANT WIND COMPUTED WITH THE VELOCITY

Hour	2		6		10		14		18		22		General	
Month														
January	N 77°	W 0.5	N 66°	W 1.0	N 82°	W 1.4	N 71°	W 2.0	N 47°	W 1.2	N 36°	W 0.8	N 65°	W 1.1
February	N 52°	W 2.0	N 34°	W 1.6	N 45°	W 2.0	N 55°	W 2.8	N 57°	W 1.9	N 48°	W 1.8	N 49°	W 2.0
March	N 45°	W 1.3	N 60°	W 1.5	N 56°	W 2.4	N 82°	W 2.3	S 52°	W 1.0	S 67°	W 0.2	N 71°	W 1.3
April	N 59°	W 0.8	N 55°	W 0.7	N 89°	W 1.2	S 49°	W 1.9	S 31°	W 0.8	S 43°	W 0.4	S 73°	W 0.8
May	S 3°	E 0.3	N 61°	W 0.2	S 49°	W 1.3	S 10°	W 1.4	S 16°	W 1.7	S 12°	W 0.9	S 22°	W 0.9
June	S 35°	E 0.6	S 50°	W 0.2	S 13°	E 0.3	S 8°	E 0.8	S 21°	E 1.0	S 25°	E 1.2	S 17°	E 0.7
July	S 17°	E 0.6	S 5°	E 0.4	S 18°	E 0.5	S 8°	E 1.7	S 19°	E 1.7	S 21°	E 1.1	S 15°	E 1.0
August	S 14°	W 0.1	N 36°	W 0.3	S 59°	E 0.4	S 34°	E 2.2	S 27°	E 2.1	S 13°	E 0.9	S 28°	E 0.9
September	N 21°	W 0.3	N 11°	W 0.3	S 33°	W 0.2	S 51°	W 0.9	S 37°	W 0.7	S 24°	W 0.3	S 58°	W 0.3
October	N 54°	W 0.7	N 51°	W 0.3	N 64°	W 0.5	S 82°	W 1.2	S 31°	W 0.8	S 34°	W 0.3	S 84°	W 0.5
November	N 49°	W 0.8	N 61°	W 1.2	N 56°	W 1.7	N 64°	W 3.1	N 52°	W 1.2	N 35°	W 0.8	N 57°	W 1.5
December	N 39°	W 1.3	N 52°	W 1.4	N 56°	W 1.4	N 63°	W 2.2	N 47°	W 1.5	N 43°	W 1.2	N 51°	W 1.5
Annual	N 57°	W 0.5	N 55°	W 0.7	N 73°	W 0.8	S 78°	W 1.1	S 45°	W 0.6	S 61°	W 0.3	N 88°	W 0.6

NUMBER OF DAYS WITH PRECIPITATION (Separated by Amount)

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Amount													
<0.1 mm	3	6	6	2	2	3	1	2	3	3	1	3	35
0.1— 1	10	11	4	4	4	5	7	6	2	6	6	11	76
1— 3	1	5	2	2	3	3	5	—	8	3	5	5	42
3— 5	4	2	2	1	2	2	4	1	1	1	1	—	21
5— 10	1	1	2	2	1	—	3	2	1	2	2	1	18
10— 15	1	—	—	1	1	—	1	1	—	—	1	—	6
15— 20	—	—	—	1	2	—	—	1	—	1	2	3	10
20— 25	—	—	1	—	—	—	1	2	1	—	—	1	6
25— 30	—	—	—	1	—	—	—	1	—	—	1	—	3
30— 35	—	—	—	—	1	—	—	—	—	—	1	—	2
35— 40	1	—	—	—	—	—	—	—	1	—	—	—	2
40— 45	—	—	—	—	—	1	—	—	—	3	—	—	4
45— 50	—	—	—	—	—	—	—	—	—	—	—	—	—
50— 60	—	—	—	—	—	1	—	—	1	—	—	—	2
60— 70	—	—	—	—	—	—	—	1	—	—	—	—	1
70— 80	—	—	—	—	—	—	—	—	—	—	—	—	—
80— 90	—	—	—	—	—	—	—	—	—	—	—	—	—
90—100	—	—	—	—	—	—	—	—	—	—	—	—	—
100≤	—	—	—	—	1	—	—	—	1	—	—	—	2
Annual	21	25	17	14	17	15	22	17	19	19	20	24	230

EARTH TEMPERATURE °C

Month	Surface						Mean	Depth (m)									
	2	6	10	14	18	22		0.05	0.1	0.2	0.3	0.5	1.0	2.0	3.0	5.0	6.0
January	-1.1	-1.2	-1.0	-0.9	-0.9	-1.0	-1.0	0.4	0.0	1.4	1.8	3.1	5.8	11.0	12.9	13.3	13.1
February	-0.9	-0.9	-0.7	0.9	-0.4	-0.7	-0.5	1.2	1.0	1.7	1.7	2.6	4.6	9.4	11.7	12.6	12.9
March	1.8	1.1	5.1	9.7	5.4	3.0	4.3	5.2	4.9	5.0	4.5	4.7	5.2	8.5	10.7	11.9	12.5
April	7.7	6.8	13.8	17.5	13.1	9.9	11.5	12.0	11.4	11.1	10.0	9.6	8.5	8.7	10.2	11.4	12.2
May	13.2	12.7	20.2	23.4	18.7	15.1	17.2	17.6	16.6	16.1	14.9	14.2	12.2	9.9	10.3	11.0	11.9
June	17.8	17.5	23.1	26.0	22.6	19.5	21.1	21.2	20.4	19.9	18.8	18.0	15.4	11.6	11.0	11.1	11.7
July	22.8	22.7	27.5	29.4	26.8	24.1	25.6	25.8	24.9	24.3	23.0	22.0	18.8	13.4	12.1	11.4	11.7
August	24.1	23.8	28.9	31.3	27.6	25.2	26.8	27.5	26.7	26.6	25.6	24.9	22.0	15.3	13.4	12.0	11.9
September	19.1	18.4	23.1	25.4	21.9	20.1	21.4	22.5	22.1	22.5	22.2	22.5	21.6	16.9	14.7	12.7	12.2
October	12.4	11.7	14.7	16.8	14.2	13.1	13.8	15.6	15.4	16.4	16.3	16.9	18.0	16.9	15.5	13.4	12.6
November	5.0	4.6	6.3	8.3	6.4	5.3	6.0	8.4	8.3	9.7	9.9	10.9	13.5	15.5	15.3	13.9	13.0
December	1.2	1.0	1.7	3.1	2.1	1.5	1.8	4.1	3.8	5.1	5.4	6.5	9.4	13.6	14.5	14.0	13.3
Annual	10.3	9.8	13.6	15.9	13.1	11.3	12.3	13.5	12.9	13.3	12.8	13.0	12.9	12.6	12.7	12.4	12.4

1948.



International
Seismological
Centre

	Month	NUMBER OF OBSERVATIONS OF CLOUDS FROM																	MEAN MOTION OF CLOUDS	
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Not Observed	Direction	Intensity %
Upper Cloud	Jan.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—
	Feb.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	174	—	—
	Mar.	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	185	W	100
	Apr.	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	178	W	100
	May	—	—	—	—	—	—	—	—	—	—	1	—	5	—	—	—	180	S 83° W	96
	Jun.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—
	Jul.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—
	Aug.	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	185	W	100
	Sep.	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	179	W	100
	Oct.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—
	Nov.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—
	Dec.	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	185	W	100
Annual		—	—	—	—	—	—	—	—	—	1	—	11	—	—	—	2184	S 87° W	98	
Middle Cloud	Jan.	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	182	W	100	
	Feb.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	174	—	—	
	Mar.	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	185	W	100	
	Apr.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—	
	May	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	185	W	100	
	Jun.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—	
	Jul.	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	184	S 56° W	83	
	Aug.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—	
	Sep.	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	177	W	100	
	Oct.	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	185	S 22° W	100	
	Nov.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—	
	Dec.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—	
Annual		—	—	—	—	—	—	—	—	2	—	—	10	—	—	—	2184	S 80° W	91	
Lower Cloud	Jan.	—	—	—	—	—	—	—	—	—	—	1	18	—	—	—	167	S 89° W	100	
	Feb.	—	—	—	—	—	—	—	—	—	—	—	27	—	—	—	147	W	100	
	Mar.	—	—	—	—	—	—	—	—	4	—	—	38	—	1	—	143	S 85° W	90	
	Apr.	—	—	—	—	—	—	—	—	7	—	—	17	—	—	—	156	S 68° W	77	
	May	—	—	—	—	—	—	1	—	8	—	1	1	25	—	1	—	149	S 71° W	76
	Jun.	—	—	—	—	1	1	—	—	15	—	—	—	9	1	—	—	153	S 28° W	63
	Jul.	—	—	—	—	—	—	—	—	3	—	—	—	13	—	—	—	170	S 77° W	83
	Aug.	1	2	—	—	5	—	2	—	7	—	—	—	—	—	—	—	169	S 52° E	53
	Sep.	1	—	—	—	—	—	—	—	6	—	1	—	20	—	2	—	150	S 79° W	75
	Oct.	—	—	—	—	—	—	—	—	3	—	—	—	16	—	—	—	167	S 79° W	86
	Nov.	—	—	—	—	—	—	—	—	4	—	—	—	24	—	—	—	152	S 81° W	87
	Dec.	—	—	—	—	—	—	—	—	—	—	—	—	26	—	—	—	160	W	100
Annual		2	2	—	—	6	1	3	—	57	—	2	2	233	1	4	—	1883	S 77° W	76

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
MONTHLY TOTAL DURATION OF SUNSHINE (in hours)												
93.13	113.29	197.96	210.04	217.96	141.29	114.49	191.71	159.16	144.16	152.13	108.08	1843.40
PERCENTAGE OF POSSIBLE DURATION												
31	36	57	53	49	32	25	45	43	42	51	37	41
AMOUNT OF EVAPORATION (mm)												
OPEN AIR												
1.8	2.4	3.3	4.8	5.7	4.8	4.1	5.3	3.4	2.5	2.2	2.0	3.5
IN THE SHELTER												
1.1	1.2	1.3	1.7	2.0	1.5	1.0	1.3	1.2	1.0	1.0	1.0	1.3

1948.



NUMBER OF DAYS WITH

Month	●* △△	*	△	▲	☒	≡	Clear	Cloudy	Sunless	☂	☐	Min. Temp. <0°	Mean Temp. <0°	Max. Temp. <0°	Mix. Temp. ≥25°	Mean Temp. ≥25°	Max. Temp. ≥25°	Max. Temp. ≥30°
January	18	19	1	—	—	3	1	17	4	4	5	30	19	3	—	—	—	—
February	19	21	—	—	—	—	—	15	4	6	8	29	17	8	—	—	—	—
March	11	10	—	—	—	—	5	14	3	4	11	24	4	—	—	—	—	—
April	12	—	—	—	1	1	2	14	2	3	9	7	—	—	—	—	—	—
May	15	—	—	—	2	—	5	18	5	4	—	—	—	—	—	—	4	—
June	12	—	—	—	—	—	1	24	4	1	—	—	—	—	—	—	12	1
July	21	—	—	—	1	4	—	24	7	—	—	—	—	—	—	5	26	8
August	15	—	—	—	3	8	—	19	1	—	—	—	—	—	—	14	30	14
September	16	—	—	—	1	3	1	17	5	2	—	—	—	—	—	—	15	1
October	16	—	—	—	—	11	1	18	4	2	2	—	—	—	—	—	—	—
November	19	7	1	—	—	1	2	14	6	6	11	11	3	—	—	—	—	—
December	21	6	3	—	—	5	1	18	6	4	9	16	4	—	—	—	—	—
Annual	195	63	5	—	8	36	19	212	51	36	55	117	47	11	—	19	87	24

Note 1: In the 2nd Column, the number of days on which the amount is 0.1 mm or more are reckoned, but in the 3rd 4th 5th Columns, the amount is not considered.
 Note 2: In the 7th Column, day with ≡° are not included.

GENERAL REMARKS.

	First Day (last year) 1947	Last Day (this year) 1948	First Day (this year) 1948
Min. Air Temp. below 0°:	Oct. 31	Apr. 29	Nov. 2
Mean Air Temp. below 0°:	Nov. 22	Mar. 26	Nov. 28
Max Air Temp. below 0°:	Dec. 11	Feb. 23	Mar. 1 (1949)
Max. Air Temp. above 25°:		Sep. 22	May 6
Mean Air Temp. above 25°:		Aug. 18	Jul. 25
Max. Air Temp. above 30°:		Sep. 5	Jul. 24
Hoar Frost:	Oct. 8	Apr. 29	Oct. 24
Snow:	Nov. 12	Mar. 27	Nov. 9
Snow on Ground:	Nov. 12	Mar. 27	Nov. 27

Max. Continuance of Days with Min Temp. below 0° is 52 Days: from Dec. 2 to Jan. 22
 Max. Continuance of Days with Mean Temp. below 0° is 17 Days: from Dec. 11 to Dec. 27
 Max. Continuance of Days with Max Temp. above 30° is 12 Days: from Jul. 24 to Aug. 4
 Max. Continuance of Days with Precipitation is 9 Days: from Jul. 8 to Jul. 16
 Max. Continuance of Days without Precipitation is 8 Days: from Apr. 5 to Apr. 12

Continuance of more than 5 Days with precipitation are

8 Days: from Jan. 23 to Jan. 30	5 Days: from July 22 to Jul. 26
8 " from Feb. 2 to Feb. 9	5 " from Aug. 12 to Aug. 16
6 " from Apr. 19 to Apr. 24	5 " from Oct. 14 to Oct. 18
6 " from Jun. 10 to Jun. 15	7 " from Nov. 24 to Nov. 30
9 " from Jul. 8 to Jul. 16	5 " from Dec. 12 to Dec. 16

1948.

FIVE-DAY MEANS

Month	Five-day Period	Air Pressure mm	Air Temperature °C	Tension of the Vapour mm	Relative Humidity %	Amount of Clouds (0-10)	Velocity of the Wind m.p.s.	Precipitation (Total) mm
January	1-5	756.9	-0.6	3.4	79	6.6	2.6	3.8
	6-10	753.4	-2.4	3.1	80	8.6	3.4	7.5
	11-15	751.6	1.0	4.2	84	8.0	3.1	42.9
	16-20	757.0	-0.4	3.6	80	4.7	2.1	4.3
	21-25	760.3	1.0	4.0	81	7.0	1.9	11.2
	26-30	758.5	-2.5	3.1	81	9.1	2.8	7.4
February	31-4	757.1	-2.2	3.1	79	8.5	3.1	4.8
	5-9	759.0	-2.8	2.9	78	10.0	1.9	5.8
	10-14	758.3	1.0	3.7	76	7.1	2.0	1.0
	15-19	758.5	-1.8	3.1	78	6.5	2.9	7.6
	20-24	755.6	-1.2	3.1	74	6.8	3.3	0.9
	25-1	756.4	3.3	3.4	73	7.2	3.3	10.4
March	2-6	755.6	0.7	3.5	74	7.5	2.4	1.8
	7-11	755.1	0.8	3.5	74	5.7	4.4	2.7
	12-16	759.4	3.1	4.5	78	6.8	2.9	15.6
	17-21	763.5	3.6	4.7	80	5.9	2.2	25.8
	22-26	761.0	1.7	3.7	71	8.1	3.1	0.0
	27-31	761.9	4.6	4.1	67	4.9	2.6	4.3
April	1-5	756.2	10.2	6.4	70	4.9	2.9	26.6
	6-10	759.2	10.9	6.6	70	5.9	2.4	—
	11-15	762.2	8.7	5.6	69	5.1	3.2	0.9
	16-20	759.7	9.1	6.3	75	7.5	2.5	4.0
	21-25	749.4	9.9	7.3	79	7.4	3.5	37.5
	26-30	755.9	10.7	7.3	76	6.6	3.9	6.7
May	1-5	756.7	14.9	9.9	80	8.0	4.0	37.2
	6-10	756.4	15.3	8.5	69	6.2	3.0	5.3
	11-15	756.0	14.2	7.4	65	6.3	2.1	0.8
	16-20	754.7	15.9	9.4	69	7.8	2.6	10.7
	21-25	754.6	16.0	9.9	75	7.8	2.8	23.4
	26-30	753.9	14.7	9.1	74	6.3	2.9	145.5
June	31-4	750.2	14.4	9.6	79	9.2	2.8	52.4
	5-9	756.6	17.2	10.4	72	8.3	2.2	0.4
	10-14	750.7	21.3	15.4	83	9.7	2.0	10.5
	15-19	751.1	19.3	13.7	83	9.4	2.3	0.4
	20-24	753.2	20.1	12.9	75	6.8	2.5	0.0
	25-29	753.9	20.3	14.6	83	9.7	2.4	44.5
July	30-4	751.0	21.0	16.1	88	9.5	1.9	12.9
	5-9	753.0	22.0	17.1	88	9.4	2.0	13.1
	10-14	751.7	24.1	20.0	90	9.6	1.6	37.7
	15-19	752.0	22.5	17.1	85	8.9	2.0	7.8
	20-24	754.7	23.6	18.4	85	9.6	1.7	4.7
	25-29	753.6	26.3	20.2	81	6.2	1.2	2.2
August	30-3	755.7	25.4	20.3	85	7.9	1.5	10.3
	4-8	751.4	25.0	20.6	88	9.0	1.6	73.6
	9-13	755.1	24.7	20.1	88	8.9	1.8	76.2
	14-18	752.2	25.9	21.3	87	7.9	1.7	14.6
	19-23	752.1	24.0	19.5	89	8.8	1.4	19.8
	24-28	753.9	22.9	16.9	83	8.2	1.5	—
September	29-2	754.9	20.1	14.0	81	7.1	1.5	0.1
	3-7	754.5	22.9	17.8	86	8.9	1.1	56.7
	8-12	754.4	22.5	17.7	88	9.2	1.5	25.6
	13-17	750.7	21.7	16.0	83	8.4	2.5	287.6
	18-22	758.5	16.6	11.4	82	5.7	1.7	3.2
	23-27	755.7	15.5	10.6	81	6.3	2.0	11.1
October	28-2	760.7	13.9	9.3	81	7.9	1.5	2.2
	3-7	755.6	14.8	11.6	92	9.2	1.6	141.0
	8-12	759.6	14.4	9.9	83	6.2	1.1	0.0
	13-17	759.1	14.4	9.9	82	7.4	1.3	3.9
	18-22	760.0	12.4	8.4	78	7.0	2.2	0.6
	23-27	759.9	11.3	7.3	73	6.7	2.7	13.8
November	28-1	761.3	7.5	6.0	78	7.8	2.1	10.0
	2-6	761.4	9.0	7.4	86	8.2	2.0	45.2
	7-11	760.3	5.9	4.9	71	5.7	3.4	2.9
	12-16	762.5	4.2	5.0	82	5.7	1.5	18.9
	17-21	760.3	7.4	6.2	81	4.4	1.8	32.2
	22-26	760.4	7.1	6.0	79	7.0	2.7	5.3
December	27-1	761.4	-0.3	3.6	82	9.5	1.8	24.6
	2-6	757.2	3.5	4.5	78	8.5	2.3	3.2
	7-11	758.5	2.7	4.1	73	5.2	3.9	2.0
	12-16	755.7	3.3	5.0	85	7.7	2.1	32.4
	17-21	763.1	5.2	5.3	80	8.3	2.1	16.7
	22-26	764.2	0.1	3.8	81	5.7	2.3	22.0
	27-31	760.3	2.3	4.4	79	7.6	2.2	16.3
Mean	756.7	11.2	9.2	79	7.5	2.3	22.1	

SEISMOLOGICAL OBSERVATIONS

Remarks:

1. The seismic intensity is divided into the following seven classes according to the scale of the Central Meteorological Observatory.

Unfelt	0.	
			{
			1. slight
			2. moderate
			3. rather strong
Felt		4. strong
			5. very strong
			6. disastrous

2. The time adopted in the seismological observations is Japanese Central Standard Time 9^h east from Greenwich.

3. Symbols and notations.

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

EARTHQUAKES, 1948.



No.	Date 1948	P				S				L				Maximum Range of Motion				Duration of Total Earthquake		Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s		
1	Jan. 2	h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0		
2	3	e 7	38	00	—	—	e 38	26	—	—	—	—	—	—	—	—	3	17	0		
3	4	e 5	33	23	—	—	33	40	—	—	—	—	—	- 6	—	—	2	16	0		
4	4	e 6	47	51	—	—	48	29	—	—	—	—	—	+ 4	—	—	3	54	0		
5	7	e 19	02	54	—	—	e 03	55	—	—	—	—	—	+ 11	—	—	3	30	0		
6	7	e 23	39	42	—	—	39	50	—	—	—	—	—	—	—	—	1	07	0		
7	11	e 7	28	04	e 28	03	28	39	28	37	—	—	—	+ 28	+ 25	—	5	04	0		
8	13	3	19	40	—	—	20	28	—	—	—	—	—	- 10	—	—	3	38	0		
9	14	2	15	53	15	52	16	46	16	48	—	—	—	+ 37	- 23	—	7	36	0		
10	16	e 20	14	24	14	24	19	02	19	07	—	—	—	+ 9	—	—	20	04	0		
11	17	16	16	29	16	30	20	41	20	42	—	—	—	- 23	- 40	—	18	40	0		
12	17	22	—	—	—	—	55	33	—	—	—	—	—	- 5	—	—	—	—	0		
13	19	e 14	13	56	—	—	e 14	22	—	—	—	—	—	—	—	—	2	07	0		
14	19	20	09	41	—	—	10	45	e 10	47	—	—	—	+ 8	—	—	3	27	0		
15	23	e 0	45	46	—	—	46	48	—	—	—	—	—	—	—	—	3	07	0		
16	23	17	—	—	—	—	39	15	—	—	—	—	—	+ 6	—	—	—	—	0		
17	24	18	—	—	—	—	09	53	—	—	—	—	—	—	—	—	—	—	0		
18	25	2	53	23	53	20	60	38	e 60	37	—	—	—	—	—	—	52	49	0		
19	25	15	16	48	—	—	17	06	—	—	—	—	—	—	—	—	1	55	0		
20	26	18	—	—	—	—	20	41	—	—	—	—	—	—	—	—	—	—	0		
21	26	e 23	17	25	? 17	29	e 21	57	e 21	56	—	—	—	—	—	—	33	31	0		
22	27	21	08	50	e 08	52	17	11	17	17	—	—	—	—	—	—	34	38	0		
23	28	12	54	59	55	00	60	55	60	55	—	—	—	—	—	—	23	13	0		
24	29	1	—	—	—	—	—	—	24	45	—	—	—	—	—	—	—	—	0		
25	29	3	55	51	—	—	56	22	—	—	—	—	—	—	—	—	3	19	0		
26	29	e 9	25	10	—	—	25	20	—	—	—	—	—	—	—	—	1	52	0		
27	29	15	—	—	—	—	41	31	—	—	—	—	—	—	—	—	—	—	0		
28	30	? 18	00	57	? 00	59	10	31	? 10	28	—	—	—	—	—	—	47	34	0		
29	Feb. 1	e 12	13	50	—	—	14	22	—	—	—	—	—	+ 5	—	—	2	35	0		
30	3	1	—	—	—	—	e 09	58	—	—	—	—	—	—	—	—	—	—	0		
31	4	e 20	44	17	—	—	44	40	e 44	41	—	—	—	- 5	—	—	04	05	0		
32	6	10	38	09	e 38	11	41	50	41	51	—	—	—	+ 49	- 70	—	13	21	0		
33	6	15	15	08	15	10	15	24	15	23	—	—	—	±130	±170	—	5	42	3		
34	9	21	15	12	—	—	15	21	—	—	—	—	—	—	—	—	2	15	0		
35	9	22	10	49	10	51	21	12	21	08	—	—	—	+ 21	—	—	64	05	0		
36	10	0	02	09	e 02	13	08	14	e 08	18	—	—	—	+ 13	—	—	18	45	0		
37	13	1	—	—	—	—	51	49	—	—	—	—	—	—	—	—	—	—	0		
38	13	2	—	—	—	—	49	22	—	—	—	—	—	—	—	—	—	—	0		
39	13	14	05	54	e 05	58	e 09	06	? 09	13	—	—	—	—	—	—	31	25	0		
40	14	e 20	58	47	—	—	59	31	—	—	—	—	—	- 4	—	—	8	01	0		
41	15	2	33	35	—	—	33	52	e 33	56	—	—	—	- 26	+ 28	—	4	14	0		
42	16	0	06	21	e 06	25	10	10	10	07	—	—	—	- 14	+ 30	—	8	39	0		
43	18	1	09	19	—	—	09	28	—	—	—	—	—	- 13	—	—	2	58	0		
44	22	6	—	—	—	—	41	09	—	—	—	—	—	- 5	—	—	—	—	0		
45	23	14	58	37	—	—	59	01	—	—	—	—	—	- 3	—	—	2	38	0		
46	23	e 18	33	51	33	55	—	—	40	19	—	—	—	+ 6	—	—	16	03	0		
47	23	e 23	56	09	e 56	09	57	05	e 57	10	—	—	—	- 6	—	—	8	10	0		
48	26	1	20	02	—	—	20	15	—	—	—	—	—	+ 5	—	—	1	58	0		
49	26	19	26	12	—	—	26	38	—	—	—	—	—	- 5	—	—	3	14	0		
50	28	15	15	20	15	21	15	32	15	33	—	—	—	- 18	- 23	—	3	21	0		
51	Mar. 1	10	20	36	20	38	27	08	27	08	34	19	34	20	—	- 213	—	56	46	0	
52	1	16	57	16	e 57	18	57	47	e 57	50	—	—	—	+ 10	—	—	4	44	0		
53	2	1	—	—	—	—	e 57	01	—	—	—	—	—	—	—	—	—	—	0		
54	3	18	15	46	e 15	51	20	32	20	29	—	—	—	—	—	—	44	04	0		
55	4	14	49	31	e 49	31	50	06	50	08	—	—	—	+ 12	—	—	7	51	0		

EARTHQUAKES, 1948.



No.	Date 1948	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	W			
		h	m	s	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s		
56	Mar. 5	19			—	—	e 03	38	—	—	—	—	—	—	—	—	—	—	0	
57	6	9			—	—	58	50	—	—	—	—	—	—	—	—	—	—	0	
58	7	18	25	29	—	—	26	03	26	02	—	—	—	—	+ 16	—	3	16	0	
59	9	e 6	34	10	—	—	35	24	—	—	—	—	—	—	—	—	5	03	0	
60	10	3	14	06	—	—	15	18	—	—	—	—	—	—	- 6	—	5	02	0	
61	10	3	55	47	? 55	46	? 62	12	e 62	09	—	—	—	—	—	—	29	05	0	
62	10	7	24	15	24	13	25	22	e 25	22	—	—	—	—	+ 20	- 20	8	34	0	
63	10	19	19	23	—	—	19	38	—	—	—	—	—	—	+ 4	—	1	48	0	
64	11	22	59	03	—	—	59	20	—	—	—	—	—	—	- 5	—	2	56	0	
65	14	5	10	09	—	—	16	05	—	—	—	—	—	—	+ 18	—	12	39	0	
66	14	12	15	55	—	—	16	07	—	—	—	—	—	—	—	—	2	03	0	
67	15	11	18	01	e 17	58	19	22	19	22	—	—	—	—	- 18	—	6	27	0	
68	15	18	23	37	—	—	24	06	e 24	13	—	—	—	—	- 17	—	7	17	0	
69	15	20	24	41	e 24	37	25	12	e 25	19	—	—	—	—	+370	-300	15	47	0	
70	15	e 20	42	34	—	—	43	05	—	—	—	—	—	—	- 5	—	3	24	0	
71	16	3	52	24	e 52	24	53	01	53	05	—	—	—	—	- 27	- 30	6	43	0	
72	16	4	10	15	—	—	10	48	—	—	—	—	—	—	+ 7	—	4	00	0	
73	16	4	27	15	—	—	27	44	e 27	43	—	—	—	—	+ 17	—	5	02	0	
74	16	4			—	—	32	46	—	—	—	—	—	—	—	—	—	—	0	
75	16	e 10	21	23	—	—	22	07	e 22	07	—	—	—	—	+ 15	—	3	54	0	
76	16	e 11	45	49	—	—	46	08	—	—	—	—	—	—	- 10	—	3	12	0	
77	16	21	23	08	—	—	23	39	e 23	37	—	—	—	—	+ 11	—	7	32	0	
78	16	22	18	27	—	—	19	08	—	—	—	—	—	—	- 4	—	3	07	0	
79	18	4	46	58	46	58	51	19	51	20	—	—	—	—	—	—	23	50	0	
80	18	17	40	47	—	—	41	16	e 41	21	—	—	—	—	+ 7	—	4	31	0	
81	20	19	59	04	59	05	59	32	59	31	—	—	—	—	+ 44	+ 14	6	07	0	
82	22	18	06	02	—	—	06	39	e 06	34	—	—	—	—	- 25	+ 25	6	42	0	
83	22	18	15	09	—	—	15	24	—	—	—	—	—	—	- 7	—	2	23	0	
84	22	18	31	04	—	—	31	30	—	—	—	—	—	—	—	—	2	51	0	
85	22	18			—	—	51	36	—	—	—	—	—	—	—	—	—	—	0	
86	22	19			—	—	14	44	—	—	—	—	—	—	—	—	—	—	0	
87	22	21			—	—	33	56	—	—	—	—	—	—	—	—	—	—	0	
88	23	4	28	45	—	—	29	20	e 29	23	—	—	—	—	+ 8	—	4	39	0	
89	23	13			—	—	10	25	—	—	—	—	—	—	—	—	—	—	0	
90	23	18	14	53	14	53	15	05	15	03	—	—	—	—	- 33	- 48	3	16	1	
91	24	3	14	49	14	50	17	27	17	30	—	—	—	—	+ 46	- 20	8	14	0	
92	24	14			—	—	e 29	06	—	—	—	—	—	—	- 4	—	—	—	0	
93	24	15			—	—	15	29	—	—	—	—	—	—	—	—	—	—	0	
94	26	12	40	27	e 40	29	40	49	40	53	—	—	—	—	- 23	- 25	4	13	0	
95	26	15	32	10	—	—	32	37	—	—	—	—	—	—	—	—	2	27	0	
96	26	18	50	29	—	—	50	53	—	—	—	—	—	—	—	—	2	35	0	
97	29	21			—	—	01	43	e 01	43	—	—	—	—	—	—	—	—	0	
98	Apr. 3	16	49	45	49	45	55	17	55	16	—	—	—	—	+ 11	—	12	52	0	
99	4	5			—	—	25	59	—	—	—	—	—	—	—	—	—	—	0	
100	5	4	01	57	e 01	59	02	24	02	24	—	—	—	—	+ 11	—	3	56	0	
101	7	6	36	36	—	—	37	12	—	—	—	—	—	—	- 5	—	3	31	0	
102	8	22	25	59	26	00	26	18	26	19	—	—	—	—	- 36	- 35	2	57	1	
103	9	5	50	47	—	—	51	18	—	—	—	—	—	—	+ 5	—	3	45	0	
104	9	12	20	34	—	—	22	52	e 22	54	—	—	—	—	+ 10	—	7	47	0	
105	12	0	58	46	e 58	51	60	07	60	07	—	—	—	—	+ 46	-100	7	44	0	
106	12	e 8	14	43	—	—	14	54	—	—	—	—	—	—	+ 11	—	2	48	0	
107	12	17	57	41	e 57	41	58	32	e 58	33	—	—	—	—	- 5	—	7	36	0	
108	14	1			—	—	46	33	—	—	—	—	—	—	—	—	—	—	0	
109	16	4			—	—	e 43	08	—	—	—	—	—	—	—	—	—	—	0	
110	18	1	13	22	13	21	14	53	14	53	—	—	—	—	—	—	44	48	0	

EARTHQUAKES, 1948.



No.	Date 1948	P				S				L				Maximum Range of Motion				Duration of Total Earthquake		Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s		
111	Apr. 18	h 21	m 27	s 49	e 27	m 33	s 56	e 33	m 55	—	—	—	—	—	—	—	—	40	59	0	
112	19	19	—	—	—	47	43	—	—	—	—	—	—	—	—	—	—	—	—	0	
113	19	22	15	53	—	16	04	—	—	—	—	—	—	—	—	—	—	1	48	0	
114	21	21	43	13	—	44	27	44	25	—	—	—	—	+ 14	+ 13	—	—	5	36	0	
115	22	6	—	—	? 23	—	—	? 30	21	—	—	? 35	57	—	—	—	—	48	14	0	
116	22	20	—	—	—	—	—	—	—	—	—	? 28	51	—	—	—	—	—	—	0	
117	22	23	36	03	—	36	10	—	—	—	—	—	—	—	—	—	—	1	06	0	
118	23	15	—	—	—	12	48	—	—	—	—	—	—	± 6	—	—	—	—	—	0	
119	24	14	43	03	—	43	41	43	41	—	—	—	—	— 15	+ 15	—	—	4	06	0	
120	26	2	04	34	—	04	45	04	47	—	—	—	—	— 10	—	—	—	1	42	0	
121	28	e 1	37	25	—	38	31	—	—	—	—	—	—	—	—	—	—	2	35	0	
122	29	3	—	—	—	e 18	02	—	—	—	—	—	—	—	—	—	—	—	—	0	
123	29	23	24	49	—	24	59	—	—	—	—	—	—	—	—	—	—	2	09	0	
124	May 1	9	26	33	—	27	12	—	—	—	—	—	—	+ 3	—	—	—	4	49	0	
125	1	18	—	—	—	57	12	—	—	—	—	—	—	—	—	—	—	—	—	0	
126	2	9	51	12	51	09	51	42	51	39	—	—	—	+ 53	+ 55	—	—	8	37	0	
127	2	e 16	38	09	—	e 39	25	e 39	26	—	—	—	—	— 10	—	—	—	6	53	0	
128	6	17	—	—	—	56	08	—	—	—	—	—	—	—	—	—	—	—	—	0	
129	6	e 21	07	39	—	07	48	—	—	—	—	—	—	—	—	—	—	1	17	0	
130	7	14	48	07	—	49	13	—	—	—	—	—	—	+ 5	—	—	—	4	12	0	
131	8	11	48	35	—	50	02	—	—	—	—	—	—	+ 67	—	—	—	9	39	0	
132	9	11	11	52	11	53	e 14	12	e 14	14	—	—	—	—	+ 803	—	—	55	06	0	
133	10	18	10	39	e 10	40	14	22	e 14	21	—	—	—	—	—	—	—	12	02	0	
134	10	22	49	33	—	49	46	—	—	—	—	—	—	— 8	—	—	—	1	46	0	
135	11	18	15	22	e 15	21	16	10	e 16	12	—	—	—	+ 6	—	—	—	6	20	0	
136	12	i 9	57	29	i 57	32	57	39	e 57	44	—	—	—	—	—	—	—	—	—	3	
137	12	10	22	03	22	02	22	23	22	24	—	—	—	—	—	—	—	77	27	1	
138	12	e 10	42	09	—	42	30	—	—	—	—	—	—	+ 6	—	—	—	—	—	0	
139	12	e 10	46	15	—	46	42	—	—	—	—	—	—	—	—	—	—	—	—	0	
140	12	10	—	—	—	47	55	—	—	—	—	—	—	—	—	—	—	—	—	0	
141	12	e 10	56	34	—	56	59	—	—	—	—	—	—	—	—	—	—	5	49	0	
142	12	e 11	07	30	—	08	02	—	—	—	—	—	—	— 7	—	—	—	4	14	0	
143	12	11	16	29	—	17	04	—	—	—	—	—	—	— 16	—	—	—	5	06	0	
144	12	12	—	—	—	02	51	—	—	—	—	—	—	—	—	—	—	—	—	0	
145	12	12	41	18	—	e 41	39	—	—	—	—	—	—	—	—	—	—	2	04	0	
146	12	16	35	30	—	35	55	—	—	—	—	—	—	+ 5	—	—	—	3	39	0	
147	12	17	06	41	—	06	57	—	—	—	—	—	—	—	—	—	—	2	40	0	
148	13	2	06	36	—	07	15	—	—	—	—	—	—	—	—	—	—	2	56	0	
149	13	22	12	12	—	12	36	—	—	—	—	—	—	—	—	—	—	2	16	0	
150	14	5	51	01	51	01	51	22	51	24	—	—	—	— 176	— 198	—	—	10	21	0	
151	14	9	03	52	e 03	50	e 04	22	e 04	22	—	—	—	+ 6	—	—	—	5	58	0	
152	14	e 9	06	29	—	e 06	47	—	—	—	—	—	—	+ 5	—	—	—	3	41	0	
153	14	14	54	18	54	21	54	40	54	41	—	—	—	— 95	+ 145	—	—	10	10	0	
154	14	22	19	43	19	44	20	05	20	05	—	—	—	—	— 1210	—	—	22	59	1	
155	15	0	58	43	—	59	05	—	—	—	—	—	—	—	—	—	—	4	19	0	
156	15	3	00	41	e 00	42	01	01	01	04	—	—	—	+ 75	+ 103	—	—	8	09	0	
157	15	3	41	25	e 41	30	42	41	42	40	—	—	—	+ 35	—	—	—	31	42	0	
158	15	4	00	14	—	01	24	—	—	—	—	—	—	—	—	—	—	6	10	0	
159	15	4	56	10	—	56	33	—	—	—	—	—	—	—	—	—	—	3	00	0	
160	15	7	39	34	39	34	45	27	e 45	24	51	52	e 51	39	—	+ 148	—	65	45	0	
161	15	20	—	—	—	e 23	27	—	—	—	—	—	—	—	—	—	—	—	—	0	
162	16	10	27	41	—	28	03	28	04	—	—	—	—	—	—	—	—	2	37	0	
163	16	19	15	59	e 16	00	16	42	16	43	—	—	—	— 20	— 30	—	—	6	40	0	
164	16	20	33	34	—	e 33	53	—	—	—	—	—	—	—	—	—	—	1	47	0	
165	16	21	31	31	—	32	09	32	09	—	—	—	—	+ 8	—	—	—	4	41	0	

EARTHQUAKES, 1948.

International
Seismological
Centre

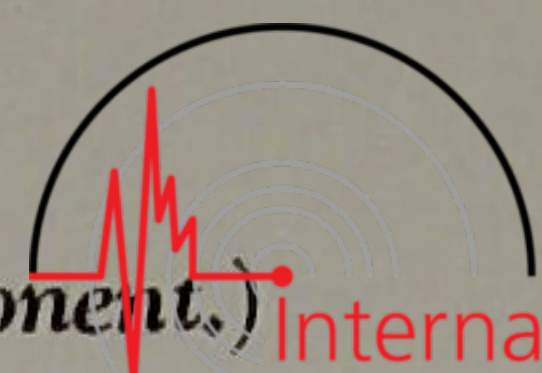
No.	Date 1948	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
276	Sep. 14	h	m	s	m	s	m	s	m	s	m	s	μ	μ	m	s	0			
277	14	1			—	—	37	48	—	—	—	—	—	—	—	—	0			
278	19	13			—	—	09	06	—	—	—	—	+ 10	—	—	—	0			
279	19	8			—	—	11	53	—	—	—	—	—	—	—	—	0			
280	22	12	55	36	e 55	38	55	49	55	50	—	—	—	—	—	—	5	13	0	
		1			—	—	43	56	—	—	—	—	—	—	—	—	—	—	0	
281	22	2	41	38	—	—	42	46	42	47	—	—	—	—	—	—	5	54	0	
282	22	13	33	42	33	41	34	51	34	50	—	—	—	—	—	—	9	02	0	
283	23	9	53	19	53	17	53	45	53	44	—	—	—	—	—	—	16	25	1	
284	24	0	12	46	12	50	13	54	13	54	—	—	—	—	—	—	18	36	0	
285	24	5			—	—	03	03	—	—	—	—	—	—	—	—	—	—	0	
286	24	6	06	08	—	—	07	20	—	—	—	—	—	—	—	—	5	44	0	
287	24	e 11	38	13	e 38	12	38	41	38	43	—	—	—	—	—	—	3	44	0	
288	24	11	57	31	e 57	31	58	26	e 58	28	—	—	—	—	—	—	8	43	0	
289	24	18	08	01	08	03	e 08	57	08	59	—	—	—	—	—	—	5	58	0	
290	25	3	05	04	—	—	05	32	—	—	—	—	—	—	—	—	2	14	0	
291	25	8	33	20	? 33	15	37	37	37	39	—	—	—	—	—	—	21	52	0	
292	26	16			—	—	12	43	—	—	—	—	—	—	—	—	—	—	0	
293	26	17			—	—	16	00	—	—	—	—	—	—	—	—	—	—	0	
294	28	? 6	23	19	—	—	29	58	29	57	—	—	—	—	—	—	17	48	0	
295	29	6	44	46	e 44	44	51	01	51	01	—	—	—	—	—	—	33	24	0	
296	30	5	58	59	—	—	59	34	—	—	—	—	—	—	—	—	2	50	0	
297	30	18	03	51	—	—	04	28	—	—	—	—	—	—	—	—	2	27	0	
298	Oct. 1	12	15	37	—	—	16	11	—	—	—	—	+ 4	—	—	—	4	42	0	
299	1	12	42	17	—	—	42	54	—	—	—	—	—	—	—	—	3	04	0	
300	2	6	14	22	—	—	14	46	14	46	—	—	—	—	—	—	4	09	0	
301	2	e 16	51	29	—	—	52	20	—	—	—	—	+ 5	—	—	—	3	41	0	
302	4	8	33	09	—	—	33	23	—	—	—	—	—	—	—	—	2	51	0	
303	4	11			—	—	—	—	08	00	—	—	—	—	—	—	—	—	0	
304	4	e 17	04	35	—	—	05	04	—	—	—	—	+ 9	—	—	—	2	58	0	
305	6	5	22	36	22	36	30	59	30	58	e 38	37	e 38	44	—	- 775	104	55	0	
306	7	1	09	36	—	—	09	54	09	55	—	—	—	—	—	—	1	49	0	
307	7	7	15	03	15	03	15	21	15	21	—	—	—	—	—	—	8	33	1	
308	7	22	18	29	—	—	18	56	—	—	—	—	—	—	—	—	3	36	0	
309	9	21	50	16	—	—	50	44	—	—	—	—	+ 3	—	—	—	3	58	0	
310	9	23	47	47	—	—	47	59	47	56	—	—	—	—	—	—	4	24	0	
311	10	2	28	27	28	27	29	12	29	12	—	—	—	—	—	—	5	08	0	
312	15	19			—	—	53	15	—	—	—	—	—	—	—	—	—	—	0	
313	18	e 3	39	53	—	—	40	20	—	—	—	—	—	—	—	—	2	00	0	
314	20	0	48	19	e 48	22	48	37	48	37	—	—	—	—	—	—	5	29	0	
315	23	3	19	13	—	—	19	45	—	—	—	—	—	—	—	—	3	44	0	
316	24	0	50	41	—	—	54	40	—	—	—	—	—	—	—	—	20	26	0	
317	25	8	15	57	—	—	16	08	—	—	—	—	—	—	—	—	2	45	0	
318	29	5	46	15	—	—	46	33	—	—	—	—	—	—	—	—	26	54	2	
319	30	10	36	53	36	54	37	31	37	31	—	—	—	—	—	—	5	00	0	
320	30	13	52	24	e 52	25	54	26	e 54	27	—	—	—	—	—	—	8	21	0	
321	Nov. 1	21	10	55	10	55	14	59	14	59	—	—	—	—	—	—	8	59	0	
322	2	17	30	27	—	—	30	59	—	—	—	—	—	—	—	—	4	09	0	
323	2	21	17	05	—	—	17	31	—	—	—	—	+ 7	—	—	—	3	31	0	
324	4	22	20	32	—	—	22	59	—	—	—	—	—	—	—	—	6	18	0	
325	5	18	06	52	—	—	07	31	—	—	—	—	+ 6	—	—	—	4	50	0	
326	6	3	01	53	e 01	53	02	39	e 02	39	—	—	—	—	—	—	6	36	0	
327	8	0	57	38	—	—	57	57	—	—	—	—	—	—	—	—	2	57	0	
328	8	11	04	34	—	—	04	58	—	—	—	—	—	—	—	—	3	23	0	
329	9	19	11	42	11	42	11	59	11	59	—	—	—	—	—	—	5	39	1	
330	10	22	00	32	00	32	02	03	e 02	06	—	—	—	—	—	—	8	10	0	

EARTHQUAKES, 1948.



No.	Date	P				S				L				Maximum Range of Motion				Duration of Total Earthquake		Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S	m	s		
331	Nov. 13	h	m	s	m	s	m	s	m	s	m	s	m	s	±165	±155	5	11	1		
332	14	15	16	06	16	06	16	37	16	37	—	—	—	—	+160	+200	11	47	1		
333	14	17	—	—	—	—	05	00	—	—	—	—	—	—	—	—	—	—	0		
334	14	19	26	35	—	—	27	09	27	09	—	—	—	—	- 16	± 38	5	43	0		
335	15	13	51	46	51	46	53	28	53	29	—	—	—	—	+ 14	- 20	7	16	0		
336	15	e 14	00	04	—	—	00	45	—	—	—	—	—	—	+ 5	—	3	56	0		
337	18	6	55	01	—	—	55	11	—	—	—	—	—	—	± 14	—	1	44	0		
338	20	6	—	—	—	—	57	05	—	—	—	—	—	—	—	—	—	—	0		
339	20	19	12	38	—	—	14	28	—	—	—	—	—	—	+ 11	—	5	39	0		
340	21	11	—	—	—	—	41	11	—	—	—	—	—	—	—	—	—	—	0		
341	22	4	20	06	e 20	06	27	48	e 27	48	—	—	—	—	—	—	21	19	0		
342	25	3	—	—	—	—	53	12	—	—	—	—	—	—	—	—	—	—	0		
343	25	e 21	55	11	—	—	e 55	24	—	—	—	—	—	—	—	—	1	14	0		
344	26	5	14	57	—	—	15	34	—	—	—	—	—	—	- 6	—	2	55	0		
345	26	14	44	46	44	46	51	12	e 51	14	—	—	—	—	+ 40	—	32	10	0		
346	27	4	41	11	—	—	41	39	—	—	—	—	—	—	- 23	—	5	40	0		
347	27	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0		
348	28	17	—	—	—	—	47	35	—	—	—	—	—	—	+ 4	—	—	—	0		
349	28	21	51	21	—	—	52	25	e 52	25	—	—	—	—	- 8	—	4	35	0		
350	30	16	42	08	—	—	43	19	—	—	—	—	—	—	+ 5	—	4	27	0		
351	Dec. 1	6	28	34	e 28	33	29	07	29	07	—	—	—	—	- 5	—	4	14	0		
352	1	e 9	32	14	—	—	32	24	—	—	—	—	—	—	—	—	1	24	0		
353	6	17	54	20	54	23	54	59	55	00	—	—	—	—	- 7	- 10	3	33	0		
354	7	16	04	24	—	—	04	45	—	—	—	—	—	—	+ 4	—	2	30	0		
355	7	21	—	—	—	—	08	04	08	07	—	—	—	—	- 7	—	—	—	0		
356	9	22	34	45	—	—	35	27	—	—	—	—	—	—	+ 9	—	5	04	0		
357	10	23	—	—	—	—	05	56	—	—	—	—	—	—	—	—	—	—	0		
358	13	10	—	—	—	—	49	17	—	—	—	—	—	—	- 4	—	—	—	0		
359	13	e 13	16	18	—	—	16	39	—	—	—	—	—	—	—	—	2	06	0		
360	14	16	18	29	—	—	18	55	—	—	—	—	—	—	+ 5	—	3	43	0		
361	16	4	15	19	15	20	? 18	22	18	26	—	—	—	—	—	+153	12	57	0		
362	16	e 6	54	49	e 54	47	55	59	e 56	01	—	—	—	—	—	—	6	00	0		
363	16	7	31	38	—	—	32	02	—	—	—	—	—	—	—	—	—	—	0		
364	16	e 14	11	09	—	—	11	43	—	—	—	—	—	—	- 5	—	4	07	0		
365	18	13	49	47	—	—	50	23	—	—	—	—	—	—	+ 6	—	4	07	0		
366	19	5	04	40	—	—	05	29	e 05	26	—	—	—	—	- 14	—	4	12	0		
367	20	e 11	10	19	—	—	10	32	—	—	—	—	—	—	+ 5	—	1	10	0		
368	21	3	22	54	—	—	23	10	23	09	—	—	—	—	- 19	- 25	4	08	0		
369	22	9	40	08	—	—	40	38	e 40	40	—	—	—	—	+ 8	—	3	52	0		
370	23	17	46	24	46	25	50	44	50	45	—	—	—	—	—	—	39	58	0		
371	24	0	31	19	e 31	16	36	39	e 36	47	—	—	—	—	—	—	12	57	0		
372	27	2	35	52	—	—	36	11	—	—	—	—	—	—	—	—	2	20	0		
373	27	17	—	—	—	—	04	54	—	—	—	—	—	—	—	—	—	—	0		
374	27	20	07	04	—	—	07	48	—	—	—	—	—	—	+ 5	—	4	45	0		
375	29	20	48	23	—	—	48	32	—	—	—	—	—	—	- 10	—	2	32	0		
376	30	1	47	30	e 47	30	47	55	47	54	—	—	—	—	- 34	- 30	6	26	0		
377	31	e 20	19	30	—	—	19	49	—	—	—	—	—	—	- 4	—	3	05	0		
378	31	e 23	47	05	—	—	47	32	—	—	—	—	—	—	+ 4	—	3	29	0		

PULSATORY OSCILLATIONS, 1948. (EW Component.)



International
Seismological
Centre

No.	Beginning			Ending			Maximum				Double Amplitude μ
	Date			Date			Date				
	Month	Day	Hour	Month	Day	Hour	Day	Hour	Day	Hour	
1	Jan.	1	1	Jan.	3	16	2	1	2	17	5
2		6	8		9	15	7	1	8	2	10
3		11	9		12	18	11	15	11	22	7
4		14	8		17	21	14	20	15	17	18
5		24	6		25	23	24	15	25	1	5
6		26	8		28	23	27	2	27	23	10
7	Feb.	2	14	Feb.	3	19	2	23	3	7	7
8		21	7		25	17	22	5	22	11	6
9		26	9		28	3	26	15	27	8	7
10	Mar.	7	9	Mar.	9	11	7	14	8	17	9
11		13	7		15	12	13	20	14	8	4
12		20	19		25	1	21	17	22	1	5
13	Apr.	10	18	Apr.	11	14	10	21	11	1	5
14		22	1		23	5	22	7	22	19	10
15		23	7		25	13	23	20	25	1	10
16		27	21		28	23	28	1	28	9	6
17	May	3	11	May	5	14	4	8	4	22	5
18		9	6		9	22	9	11	9	17	9
19		19	14		20	21	19	16	19	22	5
20		25	14		26	9	25	19	25	23	5
21		28	2		30	9	28	13	28	21	8
22	Jun.	2	12	Jun.	5	11	3	1	4	9	5
23	Jul.	1	8	Jul.	3	17	2	5	3	8	7
24	Aug.	7	5	Aug.	8	0	7	15	7	21	10
25		12	22		14	15	13	1	13	5	3
26		29	1		30	21	29	14	30	6	7
27	Sep.	12	22	Sep.	15	12	13	6	14	1	6
28		16	9		19	9	17	2	18	3	41
29	Oct.	4	9	Oct.	5	23	4	15	4	22	6
30		6	1		7	15	6	9	6	17	4
31		18	2		19	11	18	7	18	16	5
32		26	1		27	11	26	5	26	23	12
33		31	5	Nov.	1	17	31	8	31	13	6
34	Nov.	3	21		4	23	4	6	4	21	7
35		6	17		11	18	7	6	7	23	8
36		17	0		18	17	17	5	17	22	10
37		19	17		21	18	19	20	20	13	4
38		25	6		27	14	25	14	26	4	9
39	Dec.	7	4	Dec.	9	9	7	12	8	4	5
40		10	6		11	1	10	13	10	20	14
41		15	3		16	3	15	13	15	23	24
42		16	9		17	15	16	10	16	17	13
43		19	5		20	18	19	8	19	18	5
44		21	12		23	16	22	4	22	18	9
45		26	5		29	19	26	9	26	20	4