



ANNUAL REPORT
OF THE
METEOROLOGICAL
AND THE
SEISMOLOGICAL OBSERVATIONS
MADE AT THE
INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA

FOR
THE YEAR 1949.

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.

1957

EARTH & MAGNETIC SURVEY
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ERRATA

Page	Date	Column	Error	Correction
3	7	REMARKS	$\square^1a,$	$\square^1a,$
5	14	AMOUNT (0~10) AND FORMS OF CLOUDS (2)	10 ci	0 ci
7	6	REMARKS	$\square^1, 0^1a$	$\square^1, 0^1a$
11	22	"	$\square^1, 0^0, \infty^0a.$	$\square^1, 0^0, \infty^0a.$
15		PRECIPITATION	Mean	Total
16		RELATIVE HUMIDITY	RELATIVE HUMIDITY	RELATIVE HUMIDITY
		%	%	%
18		"	"	"
"		"	Menn	Mean
19	3	REMARKS	$\square^1a. \infty^0, \infty^1p_1.$	$\square^1a. \infty^0, \square^1p.$
"	5	"	$\equiv^40450 \equiv^20705 - 0743$	$\equiv^40450 - \equiv^20705 - 0743$
"	24	"	$0^1a. 0^0, \square^0p.$	$0^1a. 0^0, \square^1p.$
23	30	"	$\square^1, \square^1, 0^0, \infty^0a.$	$\square^1, \square^1, 0^0, \infty^0a.$
		Maximum		
39		Range of Motion (NS)	25	-25

Introduction

The present report gives the results of the meteorological and seismological observations made at this observatory during 1949 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, hygrograph, pluviograph, Hellman's chionograph, 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 time is convenient for the purpose of investigating the meteorological effect on the latitude observations.

The followings 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 meter 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 the recording the meteorological phenomena, the following symbols are used.

●	Rain	+	Snow drift	γ	Red sky
*	Snow	∞	Haze	ο	Unusual visibility
△	Graupel	∞	Haze in the neighbourhood	✓	Gale
▲	Hail	∞	Dust-storm	∞	Yellow dust
≡	Fog	△	Frozen rain	~~	Wavy cloud
□	Ice fog	↔	Ice needles	ω	Mammato-cumulus
≡	Fog in the neighbourhood	⊗	Snow coverage	⊖	Lenticular cloud
≡	Drizzle	☒	New snow coverage	⊙	Earthquake
=	Mist	日	Freezing	Ci	Cirrus
□	Hoar frost	☒	Thunder and lightning	Cs	Cirro-stratus
□	Ice columns in the ground	⊤	Thunder	Ce	Cirro-cumulus
□	Dew	↖	Lightning	Ac	Alto-cumulus
□	Frozen dew	⊕	Solar halo	As	Alto-stratus
□	Air hoar	○	Solar corona	Sc	Strato-cumulus
▽	Soft rime	□	Lunar halo	Ns	Nimbus
▽	Hard rime	□	Lunar corona	Cu	Cumulus
~	Grazed frost	~	Rainbow	Cb	Cumulo-nimbus
※	Snow storm	▣	Aurora	St	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.

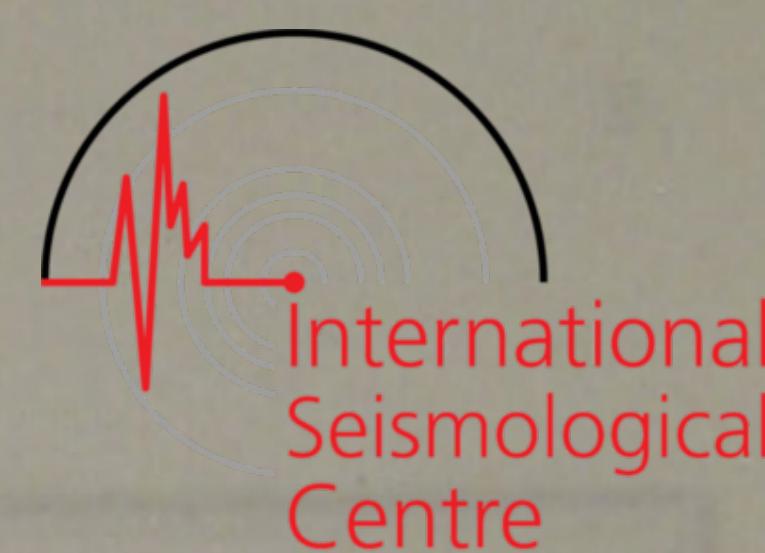
	EW-Component	NS-Component
Proper Period	16 sec.	36 sec.
Dynamical magnification	100	20
Mass of weight	45.0 kg	17.5 kg
Horizontal distance of the center of the cylinder from the pivot	20 cm	75 cm
Vertical distance between the points of support and suspension	104 cm	104 cm

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.

May 1957

Dr. T. Ikeda

Director of the International Latitude Observatory
of Mizusawa



METEOROLOGICAL OBSERVATIONS

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

JANUARY, 1949.



Day	AIR PRESSURE (700mm+)* mm							AIR TEMPERATURE °C								TENSION OF 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	61.4	55.2	50.4	44.1	41.5	40.3	48.8	0.5	0.5	7.6	6.9	5.1	4.5	4.2	8.6	0.1	4.4	8.5	4.4	4.6	7.2	7.3	6.6	6.2	6.1
2	40.8	42.6	45.0	46.6	50.4	55.6	46.8	8.0	7.0	6.9	6.6	5.9	3.5	6.3	8.5	2.8	5.7	5.7	5.4	5.3	5.3	5.7	5.7	5.2	5.4
3	57.8	59.0	58.7	54.7	52.8	47.0	55.0	2.5	0.5	4.6	7.6	7.0	9.2	5.2	10.5	0.5	5.5	10.0	5.3	4.5	6.2	6.4	6.8	8.2	6.2
4	45.5	44.4	43.5	40.9	43.0	42.8	43.4	8.0	4.7	6.3	7.8	1.6	0.4	4.8	9.2	-0.4	4.4	9.6	6.6	5.4	4.4	4.4	4.6	4.6	5.0
5	41.8	41.2	42.1	41.3	43.4	43.8	42.3	-0.7	-0.5	-0.3	-0.7	-1.9	-2.3	-1.1	0.5	-2.3	-0.9	2.8	4.3	4.3	4.5	4.2	4.0	3.9	4.2
6	44.5	46.0	47.2	46.7	49.2	52.2	47.6	-2.4	-3.3	-1.5	-0.7	-1.5	-2.1	-1.9	1.7	-3.5	-0.9	5.2	3.7	3.3	3.8	3.0	3.3	3.8	3.5
7	52.9	53.9	55.9	54.9	57.2	58.1	55.5	-1.7	-1.3	-1.1	0.6	-2.2	-2.6	-1.4	1.4	-4.0	-1.3	5.4	2.9	2.4	3.4	3.8	3.5	3.6	3.3
8	58.1	59.0	59.5	57.1	56.3	54.8	57.5	-4.2	-3.4	-0.9	2.5	-0.8	-0.9	-1.3	3.0	-4.0	-0.5	7.0	2.9	3.2	3.2	3.1	3.8	4.1	3.4
9	53.7	53.7	54.9	53.1	56.0	57.8	54.9	-1.3	-1.3	0.5	2.2	-1.6	-2.3	-0.6	2.8	-4.0	-0.6	6.8	4.1	2.9	3.2	3.1	3.0	2.5	3.1
10	58.9	60.2	60.7	59.1	60.6	62.2	60.3	-4.3	-6.1	-2.1	-0.9	-0.5	-1.9	-2.6	0.3	-7.1	-3.4	7.4	2.6	2.8	3.3	4.0	4.2	2.9	3.3
11	62.6	63.6	64.8	62.7	63.1	63.4	63.4	-5.4	-7.8	-4.2	-0.1	-2.8	-3.4	-3.9	1.9	-9.0	-3.5	10.9	2.5	2.4	2.4	2.9	2.8	3.1	2.7
12	62.5	62.6	64.5	62.4	61.8	60.0	62.3	-4.5	-3.6	-1.3	1.8	-1.2	-0.8	-1.6	2.1	-5.5	-1.7	7.6	3.1	3.5	4.2	4.3	4.0	4.2	3.9
13	57.2	55.1	55.4	56.2	59.3	60.9	57.4	-0.8	-1.3	3.5	3.5	1.5	1.0	1.2	4.4	-2.1	1.2	6.5	4.3	4.2	4.5	3.5	3.2	2.9	3.8
14	61.6	62.8	63.8	61.3	62.0	60.5	62.0	0.4	-0.9	1.8	4.7	1.3	1.8	1.5	5.1	-0.9	2.1	6.0	3.1	3.6	3.4	4.2	4.4	4.8	3.9
15	57.9	54.8	53.8	50.0	49.6	48.6	52.5	2.5	2.5	4.9	6.3	5.1	3.0	4.1	6.8	2.1	4.5	4.7	5.5	5.3	5.7	5.8	5.4	4.5	5.4
16	48.0	48.4	49.4	49.3	50.3	51.6	49.5	1.1	0.5	1.4	0.5	-0.9	-1.7	0.2	2.8	-2.9	0.0	5.7	4.3	4.3	4.1	4.0	3.9	4.0	4.1
17	53.1	55.5	57.9	57.9	59.8	60.7	57.5	-2.3	-4.4	0.5	0.3	-0.5	-0.9	-1.2	1.1	-4.4	-1.6	5.5	3.8	3.2	3.1	3.7	4.1	4.0	3.7
18	59.9	58.3	57.6	53.7	53.9	52.3	56.0	-1.7	-1.3	1.0	4.5	0.5	-0.1	0.5	4.6	-2.1	1.3	6.7	3.8	3.4	3.7	4.2	4.5	4.0	3.9
19	52.3	54.0	56.3	56.7	59.2	59.2	56.3	0.7	-0.9	-1.1	-0.8	-1.4	0.3	-0.5	1.3	-1.5	-0.1	2.8	3.8	2.7	2.5	2.6	2.9	3.3	3.0
20	58.5	58.7	60.8	59.8	60.6	60.6	59.8	0.5	0.8	1.4	2.5	2.1	1.6	1.5	2.8	0.0	1.4	2.8	3.6	3.1	3.4	3.1	3.2	3.4	3.3
21	60.3	61.0	62.0	60.2	60.0	59.3	60.5	1.9	1.5	2.9	4.3	1.3	0.1	2.0	4.8	-0.3	2.3	5.1	3.2	3.1	3.1	3.4	3.9	3.8	3.4
22	57.7	56.4	56.5	54.4	54.9	55.4	55.9	-0.6	-0.7	1.6	3.8	2.5	1.6	1.4	6.0	-1.2	2.4	7.2	4.1	4.0	4.6	4.8	4.7	3.7	4.3
23	55.2	56.5	58.3	57.8	59.0	58.9	57.6	1.6	0.9	3.6	4.5	1.7	1.9	2.4	5.2	0.4	2.8	4.8	3.1	3.8	3.2	3.0	3.1	3.1	3.2
24	59.4	60.4	61.5	60.2	61.1	60.8	60.6	1.9	-0.5	2.8	5.0	1.1	0.8	1.9	5.8	-1.5	2.2	7.3	3.5	3.4	3.7	3.7	3.9	4.0	3.7
25	60.4	60.2	59.8	56.4	55.9	54.3	57.8	2.1	1.3	5.1	7.3	4.3	2.7	3.8	8.3	1.2	4.8	7.1	3.8	3.8	4.2	4.6	5.1	5.1	4.4
26	52.2	52.5	52.9	51.8	53.2	54.0	52.8	1.5	0.7	2.3	1.5	-1.3	-2.7	0.3	3.0	-2.8	0.1	5.8	4.9	3.9	3.6	3.4	3.0	2.4	3.5
27	53.9	54.3	54.6	52.3	52.5	54.7	53.7	-2.5	-2.1	-0.4	4.7	4.1	5.3	1.5	6.9	-2.7	2.1	9.6	2.7	2.9	4.2	3.6	5.0	4.2	3.8
28	57.0	58.1	58.8	56.7	57.7	57.5	57.6	3.5	1.9	6.0	10.5	4.8	2.3	4.8	10.8	1.2	6.0	9.6	3.9	4.0	4.2	4.5	5.0	4.7	4.4
29	57.9	58.1	59.4	57.2	58.1	57.1	58.0	1.0	2.9	6.4	10.8	6.5	5.3	5.5	11.6	0.3	6.0	11.3	4.4	4.5	4.9	4.5	5.5	4.8	4.8
30	54.6	51.4	51.0	48.2	52.3	55.2	52.1	4.1	3.3	4.6	4.9	4.5	4.7	4.4	6.8	3.0	4.9	3.8	4.8	5.3	6.1	5.1	4.7	5.2	
31	55.5	56.4	58.0	57.6	58.5	59.7	57.6	4.8	3.9	8.2	9.1	4.8	2.9	5.6	9.5	2.2	5.9	7.3	4.4	5.1	5.5	4.5	5.6		

JANUARY, 1949.



Day	DIRECTION AND SPEED OF CLOUDS ^x		AMOUNT (0-10) AND FORMS OF CLOUDS								PRECIPITATION									
	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	—	s4s8	—	—	—	—	10 NS	10 NS,AS	10 NS	10 NS	10 st,NS	10 st	10.0	1.4	10.7	11.3	9.7	1.9	—	35.0
2	—	w8	w7	—	—	—	1st,Cu	10 st,Ac	10 st,Sc,Ac	10 ns	10 ns	10 ns	8.5	—	—	0.2	0.1	0.8	4.1	5.2
3	—	—	sw8	—	—	—	10 sc	10 ≡	10 st,Sc	10 ns	10 ns	10 ns	10.0	2.5	—	—	0.2	1.1	7.7	11.5
4	—	—	sw8	w7	w8	—	10 st	10 sc,st	9 Cu,Ci	7 Sc,Cu,st	8 Sc,st	10 ns	9.0	5.1	—	—	—	—	0.5	5.6
5	—	—	—	—	—	—	10 st	10 st	10 ns	10 ns	10 ns	10 ns	10.0	0.3	0.2	2.1	2.2	3.0	2.3	10.1
6	—	—	w8	—	—	—	10 ns	10 ns	10 ns,Sc,Ci	10 st	10 st	10.0	3.9	1.4	1.1	0.5	0.0	0.1	7.0	
7	—	—	—	—	—	—	10 st	10 st	10 ns	10 ns	10 ns	10.0	—	—	0.2	0.0	0.4	1.4	2.0	
8	—	—	w4ws	—	—	—	0	10 st,sc	5 cs,Sc,Ac	10 Sc,Ac,Cs	10 cs,Ac	10 ns	7.5	0.2	—	—	—	—	0.0	0.2
9	—	—	w8	—	—	—	10 sc	2 Ac,Sc	2 Sc	10 st,Sc,Ac	6 Sc	6 Sc	6.0	0.1	—	—	—	0.1	—	0.2
10	—	—	—	—	w8	0 sc	10 st,sc	10 ns	10 ns,Sc	10 ns	10 Sc,st	8.3	—	—	0.2	0.0	0.7	0.3	1.2	
11	—	—	w1	w7	w4	w8	8 sc	7 Sc,Ci	8 cc,Cu	9 cc,Sc	10 AS	10 cs,st,Sc	8.7	—	—	—	—	—	—	—
12	—	—	—	—	—	—	10 sc	10 sc	10 ns	10 As,Cs,Sc	10 As	10 As,Sc	10.0	—	—	0.5	0.0	—	—	0.5
13	—	—	—	w8	w8	10 ns	10 ns	10 ns,Sc	2 Sc,Cu	7 Sc	6 Sc	7.5	2.6	0.0	0.2	—	—	—	—	2.8
14	w7	—	—	—	—	—	10 sc	10 As,Cc	2 Ac,Sc	3 Ac,Cu,Ci	10 Ac,Sc	10 ns	7.5	—	—	—	—	—	—	0.0
15	—	—	se8	—	w8	10 ns	10 st,sc	10 sc	10 As,Ci	10 sc	10 sc	10.0	0.9	0.2	—	—	—	—	—	1.1
16	—	—	w8	—	—	—	10 As,St,Cs	10 ns	9 ns	10 ns	10 ns	10 ns	9.8	—	0.2	0.1	0.4	0.5	0.5	1.7
17	—	w8	—	w8	—	w8	10 ns	6 sc	2 st,Sc	10 ns,Sc	10 ns,st	10 sc,st	8.0	0.0	0.1	—	0.2	0.1	0.2	0.6
18	—	w8	—	—	—	—	4 sc	9 sc	10 sc	10 sc,st	10 ns	6 Ac,st	8.2	—	—	—	0.3	0.0	0.3	0.3
19	—	w8	—	—	—	—	10 sc,Ac	8 ns,Sc	10 ns,Sc	10 ns	10 ns	10 ns	9.7	—	0.0	0.0	0.0	0.0	0.0	0.0
20	—	—	w7	—	—	—	10 ns	4 sc,Ci	10 sc	10 sc,st	10 sc	10 sc	9.0	0.2	0.0	0.0	0.0	—	—	0.2
21	w8	w8	w8	w9	—	—	9 sc	8 sc	7 sc	8 sc,Ac	10 sc,st,Ac	10 As,Sc	8.7	—	—	—	—	—	—	—
22	—	—	w8	—	—	—	10 sc	10 sc,st	9 ns	9 sc	2 ns	0 ns	6.7	—	—	0.0	0.2	0.2	—	0.4
23	—	—	—	—	—	—	0 sc	5 sc,Ci	3 sc,st	4 sc,st	1 sc	1 sc	2.3	—	—	—	—	—	—	—
24	—	w8	—	w9	—	—	7 sc	2 sc	8 sc	8 sc	8 sc	10 ns,Sc	7.2	—	—	—	—	—	0.1	0.1
25	—	w8	w8	—	—	—	10 sc	8 sc	8 sc	10 sc,As	10 ns	10 ns	9.3	0.0	—	—	—	0.0	1.1	1.1
26	—	w8	w8	w8	—	—	10 ns	3 sc	10 sc	6 sc,st	10 sc	0 —	6.5	1.1	0.6	—	0.0	—	—	1.7
27	—	w8	w8	—	—	—	2 sc	10 ns	10 ns,Sc	8 sc	10 ns	10 ns,Sc	8.3	—	0.0	0.1	0.0	0.9	0.3	1.3
28	—	w8	w8	—	—	—	10 st,Sc	4 sc	3 sc,Cu	4 Cu,Cs	4 sc	10 sc	5.8	0.0	—	—	—	—	—	0.0
29	—	w8	w8	w8	—	—	3 sc	4 sc	10 sc	9 sc	10 sc	10 sc	7.7	—	—	—	—	—	—	—
30	—	—	—	—	—	—	10 st	10 As,St	10 ns	10 ns	4 sc	10 sc,ns	9.0	—	—	0.2	1.3	0.1	0.0	1.6
31	—	—	w7	w7	—	—	10 sc	9 sc	3 cu,Sc	8 sc,Cu	1 sc	10 st	6.8	—	—	0.3	—	—	—	0.3
							7.9	8.0	8.0	8.5	8.4	8.7	8.3	18.3	13.4	16.5	14.8	10.1	18.6	91.7

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm	REMARKS																		
			Open Air	in the Shelter																	
1	—	(1.1)	0.5		*0045—,☒,☒0115—,—*0125—*0140—●0420—●0455—●0445—1650,—☒—1040.																
2	—	(1.0)	0.5		●0710—0825,1148—																
3	—	(2.7)	0.8		☒,^a.—●0—0030.≡^0547—≡^0830—0930,●01025...1055—1145,●01350...1415—1430...1620,1740—,☒2300																
4	4.56	(1.7)	0.9		0^a,p,—●0—0030.*01920—2330,☒,☒2000—.																
5	—	(1.1)	0.5		*0410—0530,0735—,☒0820. —☒—																
6	6.00	(2.1)	1.5		☒^a,p.—*0—0900...0946—1245,↑^01312—1314,*01345...1430,1825...2015. —☒—,☒1330.																
7	0.30	(1.6)	1.0		☒^a,p.*0640...1230—2350. —☒—																
8	7.39	(1.6)	0.8		☒^a.^p.*02147—,☒2210,—*0—2300. —☒—		</td														

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

FEBRUARY, 1949.



Day	AIR PRESSURE (700mm+)* mm						AIR TEMPERATURE °C								TENSION OF 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	59.0	59.0	60.1	58.0	58.8	59.7	59.1	1.9	0.7	6.7	10.8	5.1	0.5	4.3	12.2	-1.0	5.6	13.2	4.9	4.5	5.4	4.5	5.0	4.2	4.8	
2	59.7	60.5	61.6	59.4	60.8	61.2	60.5	-2.1	-3.9	3.1	11.9	6.1	5.1	3.4	12.0	-4.1	4.0	16.1	3.7	3.2	4.6	5.4	5.8	5.8	4.8	
3	60.7	60.5	60.3	58.3	58.6	58.4	59.5	4.1	4.3	8.7	11.2	8.3	5.5	7.0	11.9	4.0	8.0	7.9	5.9	6.0	5.9	6.2	6.2	6.2	6.1	
4	56.7	56.0	55.3	52.2	50.3	48.1	53.1	4.9	4.9	6.9	8.7	7.8	5.9	6.5	9.1	4.4	6.8	4.7	6.1	6.5	7.1	7.4	7.4	6.8	6.9	
5	46.5	45.0	44.9	42.9	42.4	41.4	43.9	5.0	3.8	5.4	4.5	2.5	0.3	3.6	7.9	0.1	4.0	7.8	6.1	5.0	4.5	4.7	4.0	4.1	4.7	
6	41.2	41.6	42.9	43.4	46.5	47.6	43.9	-0.1	-0.5	3.2	4.9	2.9	2.1	2.1	5.8	-0.9	2.5	6.7	4.3	4.3	5.5	5.1	4.0	4.2	4.6	
7	48.2	49.3	51.2	50.5	52.3	53.6	50.9	0.8	1.3	2.5	4.9	2.3	0.5	2.1	5.1	0.5	2.8	4.6	4.3	4.2	4.7	4.4	3.7	3.8	4.2	
8	54.4	56.2	57.4	56.9	57.9	58.6	56.9	0.4	-0.7	2.7	3.5	0.9	-0.3	1.1	4.8	-0.9	2.0	5.7	3.7	3.4	3.3	2.7	3.3	2.8	3.2	
9	59.1	58.7	59.4	57.7	57.8	57.5	58.4	-2.1	-2.6	0.1	2.6	0.5	-1.6	-0.5	2.8	-2.9	0.0	5.7	2.8	2.7	2.5	3.2	3.6	3.8	3.1	
10	57.4	57.6	57.8	56.4	58.2	58.1	57.6	-4.4	-6.0	-0.5	4.8	1.0	-1.3	-1.1	5.4	-6.2	-0.4	11.6	3.3	2.8	3.5	2.7	3.2	3.1	3.1	
11	57.8	58.4	60.4	58.4	60.2	60.7	59.3	-2.8	2.0	7.2	7.6	1.9	-1.9	2.3	8.3	-3.4	2.5	11.7	3.0	3.3	3.6	3.8	4.1	3.6	3.6	
12	59.7	59.1	57.7	53.8	53.2	50.1	55.6	-2.5	-2.7	-0.5	0.7	4.3	2.9	0.4	4.6	-3.3	0.7	7.9	3.5	3.5	3.9	4.6	5.9	5.6	4.5	
13	46.5	45.4	44.9	42.5	43.3	42.8	44.2	2.9	3.1	5.0	8.5	5.6	4.1	4.9	8.7	2.0	5.4	6.7	5.5	5.7	6.1	6.2	5.4	4.7	5.6	
14	40.2	38.5	37.5	35.3	36.3	36.0	37.3	1.2	-0.9	5.0	7.1	3.4	4.1	3.3	7.9	-1.1	3.4	9.0	4.4	4.1	5.2	4.8	4.4	4.8	4.6	
15	36.4	37.2	38.5	38.6	40.7	41.8	38.9	3.4	2.1	4.4	4.3	1.5	1.4	2.9	5.8	1.3	3.6	4.5	4.2	4.1	4.5	3.5	3.6	3.4	3.9	
16	43.3	45.6	48.6	49.4	51.5	52.6	48.5	1.0	0.7	3.2	-0.3	0.1	-0.3	0.7	3.8	-0.8	1.5	4.6	3.5	3.8	3.7	4.5	3.4	3.2	3.7	
17	53.4	54.3	55.1	54.9	56.2	56.2	55.0	-1.7	-2.4	-1.0	-0.7	-1.6	-2.3	-1.6	0.3	-2.6	-1.1	2.9	3.4	3.5	4.1	3.9	4.1	3.9	3.8	
18	55.7	54.0	53.8	53.2	55.6	56.6	54.8	-3.0	-1.6	1.9	3.3	-0.2	-1.1	-0.1	4.9	-3.7	0.6	8.6	3.4	3.7	3.9	4.0	4.0	3.9	3.8	
19	56.5	57.3	58.6	57.7	57.1	58.6	57.6	-1.2	-0.5	0.5	2.2	2.2	-0.1	0.5	3.0	-1.3	0.9	4.3	4.0	3.6	3.6	3.3	3.8	4.3	3.8	
20	58.4	59.3	59.5	58.2	57.2	53.7	57.7	-1.0	0.5	4.6	3.9	1.1	0.3	1.6	5.5	-1.3	2.1	6.8	3.7	4.2	3.6	3.8	4.0	4.3	3.9	
21	53.3	56.1	58.0	56.7	58.5	59.5	57.0	0.1	-1.9	1.1	1.7	-0.7	-1.1	-0.1	2.1	-2.5	-0.2	4.6	4.3	3.4	3.2	2.9	2.9	2.8	3.3	
22	59.4	59.8	60.5	58.7	59.8	60.5	59.8	-1.3	-1.6	1.1	1.6	-0.2	-2.8	-0.5	1.8	-4.7	-1.4	6.5	2.4	2.5	2.9	3.0	2.7	2.7	2.7	
23	60.3	60.7	61.0	60.5	61.7	64.0	61.4	-4.8	-5.4	0.8	3.6	0.4	-1.3	-1.1	4.4	-5.9	-0.7	10.3	2.8	2.9	3.1	3.0	3.0	3.1	3.0	
24	64.5	65.8	66.0	63.1	63.3	62.0	64.1	-3.9	-5.4	2.0	6.2	1.9	0.1	0.2	7.0	-5.7	0.7	12.7	3.2	3.0	3.1	3.3	4.0	4.1	3.5	
25	60.0	57.9	56.0	51.4	51.0	51.5	54.6	-1.4	-1.5	0.3	2.8	2.7	2.5	0.9	3.8	-1.6	1.1	5.4	3.8	3.9	4.3	5.4	5.5	4.7	4.7	
26	51.6	53.2	54.8	53.3	54.8	55.1	53.8	2.3	3.3	5.5	11.8	5.5	2.5	5.2	12.3	0.9	6.6	11.4	5.4	5.2	5.3	4.7	5.5	5.2	5.2	
27	53.8	53.4	51.6	46.7	43.9	40.7	48.4	0.1	0.1	2.7	5.1	4.5	2.7	2.5	5.3	-0.1	2.6	5.4	4.5	4.6	4.8	5.6	6.2	5.4	5.2	
28	39.2	38.2	36.6	38.4	41.1	44.1	39.6	2.9	1.5	4.1	2.5	0.1	-2.1	1.5	5.1	-2.5	1.3	7.6	4.6	4.1	4.6	4.2	3.3	3.9	4.1	
Mean	53.3	53.5	53.9	52.4	53.2	53.2	53.3	0.0	-0.3	3.1	5.0	2.5	0.9	1.8	6.1	-1.5	2.3	7.7	4.1	4.0	4.3	4.3	4.4	4.3	4.2	

Day	RELATIVE HUMIDITY %						DIRECTION AND VELOCITY (m.p.s.) OF WIND															
2	6	10	14	18	<																	

FEBRUARY, 1949.

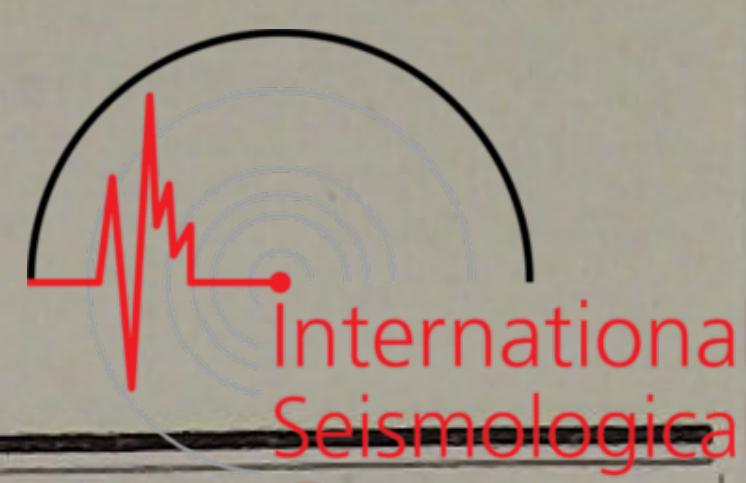


Day	DIRECTION AND SPEED OF CLOUDS ×							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	w7	—	—	10 sc	7 Cc,Ac	0 sc	10 Cs,Sc	3 Cs	2 Cs	5.3	—	—	—	—	—	—	—	
2	—	—	—	—	—	0—	6 Ac	1 Cs	4 Cu	6 sc	10 Sc,Cs	4.5	—	—	—	—	—	—	—	
3	—	—	w5	—	—	10 ns	10 sc	10 sc	8 Ac,Sc,Ci	9 sc	10 As	9.5	0.1	0.0	—	—	—	—	0.1	
4	—	—	E8	W8	—	10 ns	10 ns	10 ns	10 st	10 st	9 st	9.8	0.5	2.1	2.8	0.5	0.2	—	6.1	
5	—	—	W7	W8	W8	W7	10 St,Sc	10 As,Sc	10 As,Sc	9 Sc,Ns	2 sc	7 Sc	8.0	1.2	—	0.0	—	—	1.2	
6	—	—	—	—	—	1 sc	10 ns	10 ns	10 st,Sc	10 As,Sc,St	10 As,Sc	8.5	0.0	0.0	1.3	0.5	—	—	1.8	
7	—	—	w7	N7	—	10 As	10 As,St	10 As,Sc	7 sc	10 Cs,Sc	9.5	—	—	—	—	—	—	—	—	
8	—	—	w7	W7	W8	W7	10 Cs	8 Ac,Cs,Ci	4 Sc,Cc	6 sc	9 sc	10 sc	7.8	—	—	—	—	—	—	
9	—	w8	—	w8	—	2 Ac	9 sc	2 sc	10 As,Sc	9 sc	10 sc	7.0	—	—	—	—	—	—	—	
10	—	—	—	—	—	0 sc	10 ≡	0 cu	1 cu	0 sc	0 sc	1.8	—	—	—	—	—	—	—	
11	w8	w8	w7	—	—	5 sc	1 sc	2 Sc,Cu	0 cu	3 Cs	5 Ci,Cs	2.7	—	—	—	—	—	—	—	
12	s5	—	—	—	—	10 As,Cs	10 As	10 ns	10 ns	10 ns	10 ns	10.0	—	—	0.1	3.0	11.2	9.0	23.3	
13	—	—	W1W4	—	—	10 ns	10 ns	10 ns,As	10 Ci,St,Sc	10 Ac,Sc,Ci	9 As,Sc,Cs	9.8	5.1	8.0	4.5	0.0	—	—	17.6	
14	—	—	W7	W7	—	10 ci	2 Ci,Cc,Sc	10 Cs,Sc,Ac	10 As,Sc	10 Cs,Sc	10 As,St	7.0	—	—	—	—	0.0	0.0	0.0	
15	—	—	w1	w1	—	10 sc,St	4 St,Sc	10 Ci,St,Sc	10 Ci,NS,Sc	4 NS,Ci	10 As,NS,Sc	8.0	0.1	0.0	0.0	—	—	0.0	0.1	
16	—	w8	—	—	—	10 ci,Sc	10 As,St,Ci	10 Ci,NS,St	10 ns	10 sc,St	10 st,Sc	10.0	0.0	0.0	0.0	0.6	0.5	—	1.1	
17	w8	—	—	—	—	8 sc	10 ns	10 ns	10 ns	10 ns	10 ns	9.7	0.1	0.1	1.8	0.4	0.9	1.1	4.4	
18	—	—	w7	—	—	10 ns	10 ns	10 Cs,St,Sc	10 Cs,St,Sc	10 ns	10 ns	10.0	0.3	0.4	0.6	—	0.2	0.6	2.1	
19	—	—	—	—	—	10 ns	10 ns	10 ns	10 st,sc	10 ns	4 ns	9.0	1.0	1.1	0.2	0.0	0.0	0.3	2.6	
20	—	—	w8	—	—	10 ns	10 ns	6 Ci,Sc	9 Cs,Sc	10 As,Sc	10 ns	9.2	1.2	5.2	0.4	—	—	0.0	6.8	
21	—	—	—	—	—	10 st	4 St,Sc	2 ns,Cu	2 ns,Cu	2 ns,Cu	1 ns,Sc	3.5	3.2	—	—	—	—	—	3.2	
22	—	—	w8	w8	—	1 sc	4 sc	10 sc,St	9 sc,St	1 sc	0 sc	4.2	—	—	—	—	—	—	—	
23	—	—	w8	—	—	1 sc	2 Sc,As	1 sc,Cu	7 sc,Cu	0 sc	0—	1.8	—	—	—	—	—	—	—	
24	—	—	—	—	—	0 cs	0 cs	10 cs	10 cs	10 cs	10 cs,As	6.7	—	—	—	—	—	—	—	
25	—	—	—	—	—	10 As,Cs	10 As	10 st	10 ns	10 ≡	10 ≡	10.0	—	—	—	1.9	1.6	—	3.5	
26	—	w7	w7	w7	w7	—	10 ns	10 sc	9 sc,Cu	4 cu	6 sc	1 sc	6.7	0.1	0.2	—	—	—	0.3	
27	—	—	—	—	—	0—	10 sc	10 As	10 ns	10 ns	9 st,ns	8.2	—	—	—	0.4	1.8	—	2.2	
28	—	w8	w8	—	w8	—	8 ns	9 ns,Cs	10 St,Sc	10 ns	6 st	10 ns	8.8	0.1	0.1	2.3	2.3	0.3	4.8	9.9
						6.6	7.7	7.4	8.2	7.0	7.4	7.4	13.0	17.2	14.0	9.2	15.3	17.6	86.3	

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	8.44	2.3	1.3	Ø ² a. Ø ² , H ⁰ p.																	
2	4.95	(2.2)	1.0	U ¹ , H ¹ , Ø ⁰ a. Ø ² p.																	
3	4.22	(2.1)	0.7	Ø ⁰ a. Ø ⁰ , Ø ⁰ p. ● ⁰ 0130...0240.																	
4	—	(0.6)	0.5	● ⁰ 0100—1308, 1524...1637. ≡ ³ 2223—																	
5	2.70	(1.1)	0.5	Ø ⁰ a. Ø ⁰ , H ⁰ , U ⁰ p.—≡ ³ —● ⁰ 0020—0156, 1225—1231.																	
6	2.46	(0.7)	0.6	H ⁰ a. * ⁰ 0125...0500—● ⁰ 0845—0926...1349.																	
7	1.35	1.8	1.1	H ⁰ a. Ø ⁰ , H ⁰ , U ⁰ p.																	
8	7.15	3.9	2.1	H ⁰ , U ⁰ a. H ⁰ p.																	
9	3.67	1.9	1.0	H ¹ , Ø ² , Ø ⁰ a. Ø ⁰ , Ø ⁰ , H ⁰ , U ⁰ p.																	
10	8.08	2.5	1.4	H ¹ , U ² , V ¹ , Ø ⁰ a. H ⁰ p. ≡ ⁵ 0430—0820—0845.																	
11	9.46	(2.8)	1.5	H ¹ , U ⁰ , Ø ⁰ , Ø ⁰ a. Ø ² , Ø ⁰ , H ¹ , U ¹ p.																	
12	—	(2.4)	0.3	H ¹ , U ^{1</sup}																	

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

MARCH, 1949.



Day	AIR PRESSURE (700mm+°) mm							AIR TEMPERATURE °C								TENSION OF VAPEUR 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	45.9	49.6	53.1	54.5	55.9	56.7	52.6	-2.5	-3.8	-1.7	-0.8	-3.0	-3.9	-2.6	-0.5	-4.5	-2.5	4.0	3.8	2.9	2.6	2.3	2.2	2.2	2.7
2	56.2	55.2	52.4	46.5	45.3	42.4	49.7	-4.2	-4.7	-2.3	0.1	-0.8	-0.5	-2.1	2.0	-5.1	-1.5	7.1	3.1	3.1	3.1	4.4	4.2	4.2	3.7
3	47.3	52.4	56.6	58.9	62.3	63.1	56.8	-1.0	-2.5	-1.6	-0.4	-2.8	-3.0	-1.9	0.5	-3.1	-1.3	3.6	3.5	2.8	2.1	2.7	2.6	2.5	2.7
4	63.1	63.3	63.5	61.6	61.2	59.6	62.1	-2.5	-2.6	0.8	2.2	1.3	-1.2	-0.3	3.8	-2.7	-0.5	6.5	2.7	3.6	3.8	3.4	3.8	3.9	3.5
5	55.8	52.5	49.5	45.1	46.3	49.6	49.8	-3.8	-3.6	2.3	2.4	2.6	0.8	0.1	4.0	-4.3	-0.1	8.3	3.4	3.4	3.4	4.9	4.6	3.3	3.8
6	52.7	54.7	55.5	54.8	55.2	54.5	54.6	-1.1	-2.3	0.9	2.1	-0.5	-1.9	-0.5	2.3	-2.5	-0.1	4.8	2.2	2.4	2.8	2.4	2.8	2.9	2.6
7	51.8	49.8	48.3	46.3	49.1	54.6	50.0	-2.8	-4.1	1.5	2.7	0.3	-0.9	-0.5	3.6	-4.5	-0.4	8.1	3.0	3.2	2.9	3.4	3.2	2.7	3.1
8	56.8	60.6	61.7	62.1	62.3	61.7	60.9	-2.2	-1.9	0.9	4.0	0.9	-1.3	0.1	5.6	-2.6	1.5	8.2	3.7	3.1	2.9	3.0	3.1	3.5	3.2
9	60.2	58.3	57.6	54.9	55.5	55.6	57.0	-1.2	-1.7	2.5	10.8	7.3	3.1	3.5	11.6	-1.8	4.9	13.4	3.3	3.5	3.5	4.6	5.2	4.8	4.2
10	53.4	51.3	48.2	44.9	45.2	46.3	48.2	0.0	3.5	7.9	11.6	5.0	3.0	5.2	12.1	-0.3	5.9	12.4	4.2	4.9	5.3	6.2	5.2	3.8	4.9
11	47.6	51.0	52.8	53.1	54.6	55.5	52.4	3.5	1.9	4.4	5.2	2.7	1.7	3.2	6.4	0.3	3.4	6.1	3.6	4.2	3.7	4.7	3.7	3.2	3.9
12	54.7	54.1	54.3	53.6	56.0	57.0	55.0	1.4	-0.1	8.4	8.0	1.4	0.4	3.3	9.7	-2.5	3.6	12.2	3.2	3.3	4.1	3.1	2.5	2.9	3.2
13	57.9	57.8	58.8	58.1	58.2	58.4	58.2	0.3	-0.3	3.0	5.6	2.0	1.7	2.1	6.6	-1.0	2.8	7.6	2.7	4.2	3.0	2.1	2.9	2.7	2.9
14	57.5	57.5	58.5	57.5	59.4	60.7	58.5	1.4	-0.3	3.8	3.6	-1.1	-2.2	0.9	4.8	-2.6	1.1	7.4	2.6	2.6	2.6	3.1	2.4	2.3	2.6
15	60.9	61.0	60.7	59.3	59.3	59.2	60.1	-2.8	-2.8	0.7	2.5	-1.0	-2.8	-1.0	3.1	-3.3	-0.1	6.4	2.2	2.4	3.5	2.8	2.8	2.7	2.7
16	58.9	59.0	59.5	59.3	60.3	61.1	59.7	-2.8	-2.5	-1.4	-0.4	-2.6	-1.5	-1.9	2.5	-3.3	-0.4	5.8	2.7	2.7	3.0	3.7	3.3	2.5	3.0
17	60.6	60.6	59.5	56.5	54.9	53.4	57.6	-1.1	-0.9	3.1	6.6	3.5	2.3	2.3	7.6	-1.5	3.1	9.1	2.7	2.9	3.1	3.6	3.9	4.4	3.4
18	49.5	47.0	43.5	40.6	41.9	45.2	44.6	1.3	1.1	4.0	9.4	3.3	0.9	3.3	9.8	-0.1	4.9	9.9	4.1	4.6	5.5	5.4	5.1	3.7	4.7
19	44.2	44.1	44.1	46.6	50.3	53.8	47.2	-0.7	-0.5	3.5	2.3	-0.7	-2.5	0.2	4.5	-2.9	0.8	7.4	3.5	2.8	3.4	3.1	3.0	3.6	3.2
20	54.1	55.7	56.6	54.5	55.8	56.0	55.5	-2.3	-3.4	0.2	1.0	-1.6	-2.3	-1.4	2.1	-4.3	-1.1	6.4	2.9	3.1	3.0	3.6	2.6	2.6	3.0
21	55.5	55.8	56.6	55.7	56.4	56.1	56.0	-2.6	-1.9	0.3	1.1	-0.2	-1.5	-0.8	2.8	-4.3	-0.7	7.1	2.7	2.8	2.8	2.4	2.5	2.8	2.7
22	55.5	55.7	56.1	55.3	55.9	56.4	55.8	-2.5	-3.6	1.0	1.4	-1.1	-2.6	-1.2	2.5	-4.4	-0.9	6.9	3.6	2.7	2.9	2.5	3.5	3.5	3.1
23	55.9	56.4	56.6	55.4	57.1	58.1	56.6	-2.9	-2.9	1.5	5.0	-0.5	-2.4	-0.4	6.5	-3.4	1.6	9.9	3.7	2.8	3.3	3.4	3.0	3.2	3.2
24	57.8	58.1	58.3	57.2	58.7	60.3	58.4	-2.7	-4.6	1.1	3.1	0.3	-0.5	-0.5	3.9	-5.1	-0.6	9.0	3.6	3.0	3.6	3.0	3.2	3.6	3.3
25	61.1	62.2	62.2	61.2	62.0	62.2	61.8	-3.0	-3.2	3.8	4.1	2.3	-0.7	0.6	5.8	-3.9	1.0	9.7	3.3	3.5	2.9	3.8	4.0	3.9	3.6
26	62.0	61.5	61.7	59.9	60.7	62.3	61.4	-2.8	-4.6	5.4	9.5	3.1	0.5	1.9	9.9	-4.9	2.5	14.8	3.4	3.0	3.8	3.8	4.1	3.0	3.5
27	62.1	62.6	61.9	59.6	59.1	60.4	61.0	-1.6	-3.6	4.6	7.3	3.7	-0.3	1.7	7.9	-4.4	1.8	12.3	2.9	3.0	2.2	2.8	3.1	3.5	2.9
28	60.5	60.9	60.9	59.3	59.0	61.2	60.3	-1.6	-3.6	5.7	9.7	6.0	3.1	3.2	11.3	-4.3	3.5	15.6	3.8	3.3	3.3	3.9	4.0	4.1	3.7
29	60.9	62.1	63.6	61.0	60.9	61.1	61.6	1.6	1.3	6.7	8.7	3.7	-2.3	3.3	9.5	-3.4	3.1	12.9	2.9	3.3	2.7	2.8	3.5	3.2	3.1
30	59.7	59.2	60.4	61.4	62.6	63.2	61.1	-4.4	-2.5	3.8	5.5	1.3	-3.4	0.1	6.6	-5.2	0.7	11.8	3.1	3.6	2.9	2.9	4.4	2	



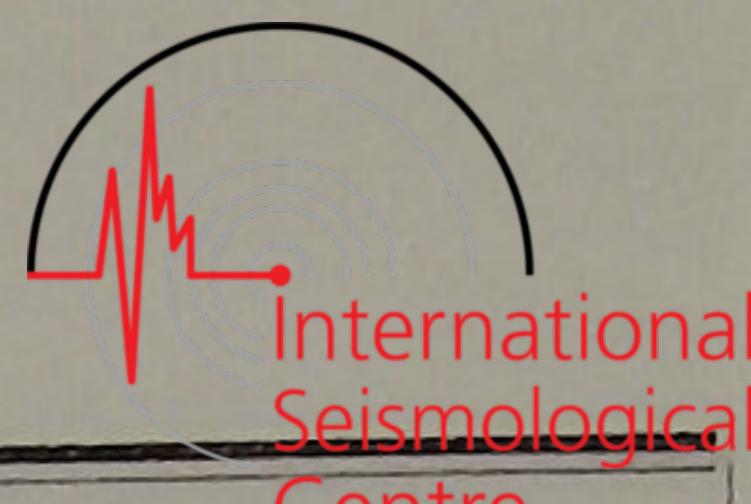
MARCH, 1949.

Day	DIRECTION AND SPEED OF CLOUDS ^x		AMOUNT (0-10) AND FORMS OF CLOUDS										PRECIPITATION														
	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	—	w8	w9	w8	—	—	10	NS	6	st,Sc	5	NS,Sc	6	st,Sc	1	sc	0	Ci	4.7	2.1	0.5	—	—	0.0	—	2.6	
2	—	—	—	—	—	—	10	NS	10	NS	10	As,Sc	10	NS	10	sc	10	NS,Sc	10.0	0.4	0.3	0.0	0.4	3.6	0.7	5.4	
3	—	w8	w9	w8	w8	—	3	NS	7	st,Sc	10	St,NS,Sc	9	NS,Sc	5	st	1	sc	5.8	1.0	0.1	—	0.0	0.0	0.0	1.1	
4	—	—	—	w7	—	—	1	Sc	10	NS	10	NS	10	Sc	6	Sc	10	Cs	7.8	—	0.1	0.1	0.0	—	—	0.2	
5	—	—	—	—	—	—	10	Cc	10	Cs,St,Sc	10	CS	10	AS,NS	10	Sc	1	st	8.5	—	—	—	0.2	0.0	—	0.2	
6	—	w8	w8	w8	—	—	3	Sc	2	Sc	7	Sc	9	Sc,st	1	Sc	0	Sc	3.7	—	—	—	—	0.0	—	0.0	
7	—	w7	—	—	—	—	0	—	10	Ac,Sc	10	Cs,Ci	10	AS	10	AS	10	AS	8.3	—	—	—	—	—	—	—	
8	—	—	w7	w8	w7	—	5	NS	10	NS,Sc	4	Sc,St	3	Sc,St	8	Sc,Cs	10	CS	6.7	0.2	0.0	0.0	—	—	—	0.2	
9	—	w5	SW2	w8	w9	w8	10	As,Cs	10	Ac,Cs	10	Cs,Ci	9	Sc	9	Sc	3	Sc	8.5	—	—	—	—	—	—	—	
10	—	—	—	w8	w8	—	8	Cs	10	AS	10	AS,Sc	10	AS,Sc,St	10	Sc,NS	6	AC	9.0	—	—	—	0.0	0.6	—	0.6	
11	w8	—	—	w8	w8	—	9	Sc	10	st	10	AS,NS	8	Sc,Cu	2	Sc	0	Sc	6.5	—	0.1	0.1	0.2	—	—	0.4	
12	—	—	—	—	—	—	0	Sc	2	Sc,St,Cs	2	Sc	1	Sc	1	Sc	0	Sc	1.0	—	—	—	—	—	—	—	
13	w8	—	w7	—	—	—	9	Sc,St	10	NS	6	Sc,Cu,Cc	10	Cs	9	Ci,Cc,Cu	10	CS	9.0	—	0.5	0.0	—	—	—	0.5	
14	—	—	w8	w8	w7	w8	10	Cs	10	Cc,Ci,As	8	Sc	8	Sc,St	10	CS,Sk	10	Sc,St	9.3	—	—	—	—	—	—	—	
15	w8	w7	w7	w8	w8	—	10	Sc,St	10	Sc,St	10	Sc,Cs	10	Sc,Cs	9	Sc,St	2	Ac	8.5	—	—	—	—	0.0	—	0.0	
16	w4	w8	w7	w8	—	w8	10	Ac,St	9	st,Sc	10	NS,Sc	10	NS,Sc	2	st,Sc	9	Sc	8.3	—	—	0.0	0.0	0.1	—	0.1	
17	—	w8	w7	—	—	—	10	Sc,St	10	Sc	9	Sc	10	Ac,Sc	10	CS	10	st	9.8	—	—	—	—	—	—	—	
18	—	—	w7	—	—	—	10	st	10	NS	9	Sc,St	10	Sc,St,NS	5	NS,Sc	5	St,Sc	8.2	—	0.1	0.4	0.2	0.0	0.6	1.3	
19	—	w8	w8	w8	w8	—	10	NS	7	st,Sc	10	Sc,St	10	St,Sc	10	Sc,St	10	NS	9.5	0.1	—	0.6	0.1	0.0	0.2	1.0	
20	—	w7	w7	w7	w8	—	9	Sc	10	Sc,St	10	Sc,St	10	NS,Sc	5	Sc,St	9	Sc	8.8	0.5	2.4	0.2	0.0	0.0	—	3.1	
21	w8	w8	w7	—	w7	w7	8	Sc	9	Sc,Cs	10	Sc,St	10	Ci,Cu	9	Sc	10	se	9.3	—	—	—	0.0	—	—	0.0	
22	—	w8	w7	w7	w7	w7	10	NS	5	Sc	7	Sc	9	Sc,St	10	Sc,St	3	st	7.3	0.1	0.1	—	0.0	0.0	0.2	0.4	
23	w7	w7	w7	—	—	—	8	Ns,St	2	st	6	Cs,Cu	6	Cs,Cu,Cc	3	Sc,Ac	5	Sc	5.0	0.3	0.0	—	—	—	—	0.3	
24	—	—	w7	w7	—	—	2	Sc	8	Sc	10	Sc,NS	10	St,Sc	10	st	10	NS	8.3	—	—	0.0	0.0	0.0	0.2	0.2	
25	—	w7	w8	w7	—	—	2	Sc	8	st,Sc	9	Sc	7	Cs,Sc,Cu	10	st	3	Sc	6.5	0.0	—	—	—	—	—	0.0	
26	—	—w1	w7	w7	w7	—	1	Sc	4	Sc,St	7	Sc,Cs	7	Cu,Sc	10	CS,Sc	2	Sc	5.2	—	—	—	—	—	—	—	
27	—	—	—	—	—	—	1	Sc	10	Cs,Ci	0	—	10	Cs,Cu	10	Cs	8	Sc	6.5	—	—	—	—	—	—	—	
28	—	—	w7	w7	w7	w7	10	Sc	1	st,Sc	5	Sc,Cu	3	Cu	10	AS,Sc	3	Sc	5.3	—	—	—	—	—	—	—	
29	w7	w7	—	—	—	—	7	Sc	6	Sc	4	Ac,Cu	8	Cs,Cu	10	Cs,AS	10	CS	7.5	—	—	—	—	—	—	—	
30	—	—	w7	w7	w7	w7	—	10	Cs,Sc	10	NS	7	Sc,Cu	8	Sc,Ci	10	CS,Sc	1	Sc	7.7	—	0.4	0.1	—	—	—	0.5
31	—	—	—	—	—	—	0	Sc	5	Cs	0	—	6	Sc,Cs	10	Sc,Ac,Cs	0	Sc	3.5	—	—	—	—	—	—	—	
							6.6		7.8		7.6		8.3		7.6		5.5		7.2		4.7		4.6		1.5		18.1

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	7.34	(2.8)	1.4	□ ⁰ a. □ ¹ p...* ⁰ 0500.* ⁰ 1420—1445.—■—. ✓0110,0340,1810—1850,1920—1930.
2	0.58	(1.3)	1.0	□ ¹ a. □ ⁰ p.* ⁰ 0040—0740,1230—1726,2015—* ⁰ 2330—, ▲0040,1538.—■—, ✓2350—
3	6.67	(2.4)	1.4	□ ⁰ a. □ ¹ p.—* ⁰ —* ⁰ 0120—* ⁰ 0440—0547,* ⁰ 1150...1830.—■—, —✓—0050,1020—1040.
4	2.55	1.7	1.3	□ ¹ a. □ ⁰ p.* ⁰ 0500—0705,0941—1120. ▲0500. —■—
5	1.93	(2.0)	1.8	□ ¹ , □ ⁰ , △ ⁰ , 0 ⁰ a. □ ⁰ p. ● ⁰ 1320—1420.—■—, ✓2320—
6	6.24	2.2	1.4	□ ¹ , 0 ¹ a. □ ⁰ p.—■—1043.* ⁰ 1424...1510.—✓—0010.
7	5.25	(2.8)	1.9	□ ¹ , □ ⁰ , 0 ⁰ , △ ⁰ a. 0 ⁰ , △ ⁰ , □ ⁰ p.
8	8.31	2.8	1.2	□ ¹ a. □ ⁰ , □ ⁰ p.* ⁰ 0100—0240...0700. ▲, ■0110—0900.
9	5.63	2.5	1.0	□ ⁰ , △ ⁰ a. △ ⁰ p.
10	—	(1.5)	1.5	□ ⁰ , □ ¹ a. ● ⁰ 1139...1743.
11	4.62	(2.3)	0.9	□ ⁰ , □ ⁰ p. ● ⁰ 0255...△ ⁰ 0604—0646.* ⁰ 0955—1120.
12	8.76	(2.2)	1.9	□ ⁰ , □ ⁰ , 0 ² a. □ ⁰ p. ✓1410,1430—1510,1600,2040—2210.
13	8.57	3.4	2.1	□ ⁰ , 0 ² a. 0 ² , □ ⁰ , □ ⁰ p.* ⁰ 0450—* ⁰ 10530—* ⁰ 0548—0634, ▲, ■0520—0730.* ⁰ 0647...0840.
14	8.26	3.3	1.9	□ ⁰ , □ ⁰ , 0 ² , △ ⁰ a. 0 ⁰ , □ ⁰ p.
15	5.09	2.8	1.6	□ ¹ , 0 ¹ a, p.
16	5.70	(2.8)	1.5	□ ¹ a, p.* ⁰ 0930...* ⁰ 1055—* ⁰ 1005...1310,1347...* ⁰ 1355—1415...1545,1555...1630,1718—1751. ✓1530,1630.
17	4.31	(2.3)	1.0	□a. *↑ ✓1530,1620—1630,1720—1920,1940,2120—2130,2220,2320.
18	2.31	(0.8)	1.3	●0533—0754,1220—1330,1415—1450,1500—1530,1540—1552,1610—1635,1747...△ ⁰ 2151—2157.*
19	2.86	(1.8)	1.5	□ ¹ a. □ ⁰ p.* ⁰ 0130—, ▲, ■0140—0230.—* ⁰ —0228,0623—0634,0806—* ⁰ 0820—* ⁰ 0840—0920. ▲, ■0820—0925.**
20	7.02	2.9	1.1	□ ¹ a. □ ⁰ p.—* ⁰ —0136,0318—0509. ▲0330.* ⁰ 0713—0945. ▲0746.—■—1150.* ⁰ 1155...1510, ✓1200. ** * ⁰ 0950...**
21	3.38	2.2	1.8	□ ¹ , 0 ⁰ a. 0 ¹ , □ ⁰ p.* ⁰ 1050—1210. ** 0955,1145—1310,1425—* ⁰ 1920—* ⁰ 2100—, ▲, ■1910—, ✓0040—0050,0720,1320**
22	1.78	(2.0)	1.5	□ ¹ , 0 ¹ a. 0 ¹ , □ ⁰ p.* ⁰ 110—, ▲, ■0138.—* ⁰ —0320.—■—0920.* ⁰ 1105...1230,1345...1355,1723..., ▲, ■2150— ** -1420.
23	9.94	3.0	1.2	□ ⁰ , 0 ¹ a. 0 ² , □ ⁰ , □ ⁰ p...* ⁰ ...0250.—■—0830.
24	3.48	(2.5)	1.2	□ ¹ , 0 ⁰ a. □ ⁰ p.* ⁰ 0850...1040,1447...1505,1825...2310. ▲, ■2110—
25	6.52	2.3	1.4	□ ⁰ a, p.—■—0610.
26	8.66	3.3	1.6	□ ¹ , □ ⁰ , 0 ⁰ a. 0 ⁰ p.
27	10.01	3.4	1.3	□ ⁰ , □ ⁰ , 0 ⁰ a. △ ⁰ , ✓ ⁰ , □ ⁰ p.
28	10.14	4.7	1.9	□ ¹ , □ ¹ , 0 ¹ a. 0 ⁰ p.
29	10.43	(2.7)	2.2	0 ² a. 0 ¹ , □ ⁰ p.
30	7.28	3.5	1.7	□ ¹ , □ ¹ a. □ ¹ p.* ⁰ 0440—* ⁰ 10550—* ⁰ 0610—0730, ▲, ■0450—0910.
31	10.60	3.8	1.8	□ ¹ , □ ¹ , △ ⁰ a.

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

APRIL, 1949.



Day	AIR PRESSURE (700mm+)° mm						AIR TEMPERATURE °C								TENSION OF 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	57.5	56.7	57.0	55.3	57.1	60.8	57.4	-1.0	-1.7	9.1	10.2	5.3	2.9	4.1	12.5	-2.1	5.2	14.6	4.1	3.7	5.2	6.2	4.9	3.6	4.6
2	61.6	63.7	64.7	64.9	66.0	67.6	64.8	1.8	-0.1	5.8	8.8	2.9	-1.7	2.8	9.6	-2.9	3.4	12.5	3.9	3.7	2.4	2.3	3.4	3.2	3.2
3	66.4	66.4	64.8	61.3	60.1	56.8	62.6	-4.2	-5.3	7.3	10.0	6.8	5.5	3.4	10.7	-5.9	2.4	16.6	3.1	2.8	3.4	4.3	5.2	6.1	4.2
4	53.2	50.7	52.3	51.1	53.8	56.1	52.9	8.4	8.2	6.7	8.4	6.1	4.1	7.0	9.6	3.5	6.6	6.1	7.6	7.4	6.7	5.0	4.3	3.8	5.8
5	57.8	59.0	59.2	58.5	59.6	59.9	59.0	2.2	-0.1	10.2	9.8	5.7	4.5	5.4	12.5	-0.5	6.0	13.0	4.9	4.3	5.2	5.5	4.6	4.9	4.9
6	58.1	57.3	54.2	49.8	48.7	48.0	52.7	4.1	2.9	4.4	5.7	4.4	3.1	4.1	6.6	1.2	3.9	5.4	4.9	5.5	5.7	6.5	5.1	4.4	5.4
7	47.3	47.2	47.1	44.9	45.4	47.2	46.5	2.3	1.5	6.1	3.1	2.5	1.1	2.8	7.0	0.9	4.0	6.1	5.0	4.8	4.9	5.4	4.7	4.6	4.9
8	49.3	50.8	52.9	53.3	55.4	57.5	53.2	0.1	0.8	3.0	5.7	3.9	2.9	2.7	7.1	0.1	3.6	7.0	4.4	4.2	4.8	4.4	4.3	4.2	4.4
9	58.0	59.6	61.4	60.7	61.3	61.8	60.5	3.1	2.9	7.9	10.0	6.5	1.5	5.3	10.6	0.4	5.5	10.2	3.9	3.4	4.2	3.8	3.8	4.1	3.9
10	61.0	60.6	59.0	54.7	51.5	50.3	56.2	-0.8	-0.3	7.6	8.6	6.9	5.5	4.6	9.0	1.3	5.2	7.7	4.0	4.2	6.4	5.4	6.1	6.6	5.5
11	50.1	50.4	50.9	48.3	48.3	47.5	49.3	4.7	3.3	10.2	11.2	6.2	5.5	6.9	11.8	2.3	7.1	9.5	4.7	5.0	5.7	5.3	6.1	5.5	5.4
12	43.9	44.8	45.9	47.5	50.7	53.5	47.7	4.3	4.0	9.3	8.4	5.3	4.8	6.0	9.5	3.4	6.5	6.1	4.1	3.8	4.5	4.7	4.4	3.7	4.2
13	55.8	57.6	59.1	57.6	57.0	57.0	57.4	3.9	4.4	10.2	12.4	9.6	4.2	7.5	14.0	3.5	8.8	10.5	3.5	3.9	4.6	4.5	5.6	5.5	4.6
14	54.3	54.3	54.6	53.7	55.0	55.8	54.6	4.0	4.3	4.8	7.3	6.9	4.9	5.4	8.3	3.4	5.9	4.9	5.4	5.9	6.0	5.2	4.7	4.4	5.3
15	55.9	56.9	58.1	56.0	54.6	55.9	56.2	3.1	3.1	5.9	9.4	7.3	2.3	5.2	11.3	1.3	6.3	10.0	5.2	5.5	4.2	3.7	5.2	5.0	4.8
16	55.9	56.5	58.0	59.5	61.7	63.7	59.2	0.2	-1.5	1.8	6.5	4.4	4.1	2.6	6.9	-2.1	2.4	9.0	3.0	3.9	3.7	4.3	4.8	3.9	3.9
17	63.7	64.7	64.3	61.3	60.9	61.1	62.7	2.4	2.5	9.3	13.4	9.2	4.9	7.0	13.6	1.2	7.4	12.4	4.1	4.1	4.4	5.2	6.0	6.0	5.0
18	60.7	60.4	59.3	56.9	56.5	55.7	58.3	1.1	0.7	15.6	23.2	14.4	10.8	11.0	23.4	-0.3	11.6	23.7	4.7	4.6	5.5	6.5	7.4	8.3	6.2
19	53.9	52.6	51.1	48.5	48.6	50.2	50.8	8.8	8.8	14.8	14.3	13.5	11.2	11.9	15.4	8.4	11.9	7.0	7.4	7.9	8.8	10.0	8.3	8.0	
20	51.4	52.6	54.5	53.8	55.9	58.0	54.4	10.4	10.8	14.7	17.7	12.0	5.9	11.9	18.3	2.2	10.3	16.1	8.1	7.2	5.8	5.2	5.4	4.6	6.1
21	58.1	59.5	59.1	56.6	54.7	53.0	56.8	1.1	0.6	10.2	11.4	9.8	9.2	7.1	12.5	-0.1	6.2	12.6	4.4	4.3	6.0	6.8	7.0	7.2	6.0
22	50.7	50.5	54.3	55.6	57.0	58.5	54.4	8.4	9.6	9.1	10.3	6.5	5.7	8.3	11.2	2.8	7.0	8.4	8.0	8.1	5.6	4.6	4.3	4.8	5.9
23	57.9	58.0	57.1	55.3	54.1	54.6	56.2	3.1	4.1	10.3	11.0	9.0	3.5	6.8	12.5	2.2	7.4	10.3	5.2	5.4	4.7	5.2	5.5	5.3	5.2
24	54.1	54.0	52.6	49.3	48.3	47.3	50.9	2.0	4.6	13.4	18.4	13.0	9.4	10.1	18.6	1.9	10.3	16.7	5.1	5.9	8.2	8.6	8.6	8.4	7.5
25	45.7	46.8	47.9	48.9	50.4	52.5	48.7	9.3	8.2	12.0	10.4	8.2	8.4	9.4	13.8	7.2	10.5	6.6	8.5	6.3	6.4	5.6	5.3	5.4	6.3
26	52.5	53.8	54.4	55.1	55.8	58.4	55.0	8.4	9.6	14.4	18.2	12.9	6.6	11.7	18.7	6.3	12.5	12.4	5.4	5.8	6.1	6.2	6.9	6.5	6.2
27	57.2	56.4	54.8	52.2	50.1	48.7	53.2	5.8	5.5	8.4	7.8	6.9	7.1	6.9	8.9	5.4	7.2	3.5	6.4	6.4	6.6	7.4	7.3	6.9	
28	47.4	48.4	49.0	48.5	48.7	49.8	48.6	7.8	8.2	10.2	10.3	7.3	6.5	8.4	11.1	6.2	8.7	4.9	7.6	7.7	5.9	6.0	5.8	6.0	6.5
29	49.8	51.2	52.7	52.3	53.5	55.3	52.5	6.3	7.9	8.8	9.6	7.1	5.5	7.5	10.3	4.4	7.4	5.9	6.3	4.7	4.7	4.0	3.2	3.9	4.5
30	56.3	57.9	58.9	58.7	59.6	61.3	58.8	6.3	6.9	12.6	14.3	10.6	3.7	9.1	14.6	3.0	8.8	11.6	4.6	4.9	5.6	4.9	4.9	5.1	5.0
Mean	54.9	55.3	55.6	54.3	54.7	55.5	55.1	3.9	3.8	9.1	10.9	7.7	5.1	6.8	12.0</										

APRIL, 1949.

Day	DIRECTION AND SPEED OF CLOUDS X							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION								
	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	—	W4	W7	W7	—	—	10 Sc	4 St,Sc,Ac	10 Sc,Ac	9 Ac,Sc	10 Sc,Cu	3 Sc	7.7	—	—	—	0.3	—	—	0.3	
2	—	W7	—	—	—	—	4 Sc	6 Sc	1 sc	2 Sc,Cu	10 Sc,Cs	4 Cs	4.5	—	—	—	—	—	—	—	
3	—	—	—	—	0	—	10 Cs,St	10 Cs	10 As,Sc	10 st	10 ns	8.3	—	—	—	—	—	—	2.9	2.9	
4	—	—	—	w8	w8	w8	10 ns	10 ns	10 ns	10 Sc,Ac	10 Sc	1 sc	8.5	9.7	9.1	20.3	3.1	—	—	42.2	
5	—	—	—	w8	—	—	2 Sc	2 Sc,St	3 Cu,Cs	7 sc	10 Sc	10 Sc	5.7	0.1	—	—	—	—	—	0.1	
6	—	—	—	—	w8	10 st	10 ns	10 ns	10 As,Sc	2 Sc	8.7	—	2.3	2.3	3.8	5.9	—	—	—	14.3	
7	—	w8	W7	—	—	—	9 St,Sc	10 ns,Sc	10 Sc,Cs	10 ns	10 ns	9.8	0.3	0.4	0.7	3.7	1.5	2.9	9.5	9.5	
8	—	—	—	w8	w7	w8	10 ns	10 ns	10 ns	10 Sc,Cs	10 Sc	10 Sc	10.0	1.8	2.0	0.4	0.0	—	—	4.2	
9	W7	w8	w8	—	—	—	8 Sc	8 Sc	2 Cu	1 Cu	0 Sc	10 Cs	4.8	—	—	—	—	—	—	—	
10	—	—	—	—	—	—	6 Cs,Ac,Cu	6 Sc	10 st	10 ns	10 st	10 As,Sc	8.7	—	—	—	0.1	0.2	0.6	0.9	
11	w8	W7	W7	—	—	—	6 Sc	4 Cs,Cu	10 Sc	10 As,Sc,Cu	10 As,Sc	10 st	8.3	—	—	—	—	—	—	—	
12	—	—	—	w7	w7	w7	10 As	10 As,Sc	10 Cs,Sc	10 Cs,Sc	10 Cs,Sc	6 Sc	9.3	—	—	—	0.0	—	—	0.0	
13	—	—	w8	W7	W7	—	5 Sc	4 Cu	4 Cu	6 Cu,Cs,Ci	10 Sc,Cs	4 Ci	5.5	—	—	—	—	—	—	—	
14	—	—	—	—	W7	—	10 st	10 ns	10 ns	10 Sc	10 As,Sc	1 Cu	8.5	—	0.6	5.0	0.8	—	—	6.4	
15	w7	—	W7	—	—	—	10 sc	10 sc,St	10 Sc	6 Cu,Cs	10 Cs,Sc	10 ns	9.3	—	0.1	0.0	—	—	—	2.4	
16	—	—	w7	w7	w7	—	6 st	10 ns	8 ns,St	5 Cu,Sc	9 Sc	3 Sc	6.8	0.1	2.3	3.6	0.0	—	—	6.0	
17	—	—	—	—	—	—	1 sc	4 Ci,Cs	8 Cc,Cs	4 Cc,Cs,Cu	1 Ac	0 —	3.0	—	—	—	—	—	—	—	
18	—	—	—	—	—	—	0 —	4 Cs	10 Cs	10 Cs,Ac	10 As	10 st	7.3	—	—	—	—	—	—	—	
19	—	—	—	—	—	—	w7	10 st	10 ns	10 st,NS	10 ns	10 Cs,Sc	3 Sc	8.8	—	0.2	0.2	0.3	1.2	—	
20	—	w7	—	—	—	—	8 sc	6 Cs,Sc	0 —	0 Cu	0 —	2.3	—	—	—	—	—	—	—		
21	—	—	—	—	—	—	0 —	3 St	10 Cs,Ac	10 Sc,St	10 st	10 st	7.2	—	—	—	—	1.5	—	1.5	
22	—	—	w7	W7	—	—	10 ns	10 ns	5 Sc	5 Sc	6 Sc	5 Sc	6.8	0.9	0.2	0.1	—	—	—	1.2	
23	—	—	—	W7	—	—	10 Sc	10 As	10 As	10 As,Sc	10 Cs,Sc	0 —	8.3	—	—	—	—	—	—	—	
24	—	—	s8	—	—	—	3 St	10 st	9 Sc,St	10 Cu,Cs	10 Cs,Sc	10 ns	8.7	—	—	—	—	—	—	1.6	
25	—	—	w7	W7	—	—	10 ns	10 sc	7 Sc	8 Sc	9 Sc	3 Sc	7.8	3.3	0.5	0.4	—	—	—	4.2	
26	—	—	—	w7	—	—	4 Sc	4 Cs,Sc	0 Cu	1 Cu	9 Sc	10 st	4.7	—	—	—	—	—	—	—	
27	—	w7	W7	—	—	—	10 st	10 st	10 sc	10 ns	10 ns	10 ns	10.0	—	—	0.0	0.1	8.5	7.7	16.3	
28	—	w7	W7	W7	w8	—	10 ns	10 sc,St	10 Sc,AS	10 Sc	10 Sc,AS	4 Sc	9.0	11.5	3.0	—	—	—	—	14.5	
29	—	w7	W7	W7	w8	—	8 Sc	7 Sc	10 Sc,St	10 Sc	2 Sc	3 Sc	6.7	—	—	—	1.0	—	—	1.0	
30	—	w8	W7	W7	—	—	10 Sc	10 Sc	6 Cu	1 Cu	8 Cs	10 Cs	7.5	—	—	—	—	—	—	—	
							7.0	7.7	7.8	7.5	8.5	6.1		7.4	27.7	20.7	33.0	13.2	18.8	18.0	131.4

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	6.32	(4.9)	2.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	9.89	3.8	2.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	8.07	(7.9)	2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4	1.48	(2.1)	1.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	9.48	(3.9)	1.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	(1.1)	0.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7	4.85	(1.8)	0.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	4.75	4.0	1.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	10.78	3.7	1.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10	1.74	(1.2)	0.6	—	—	—	—	—													

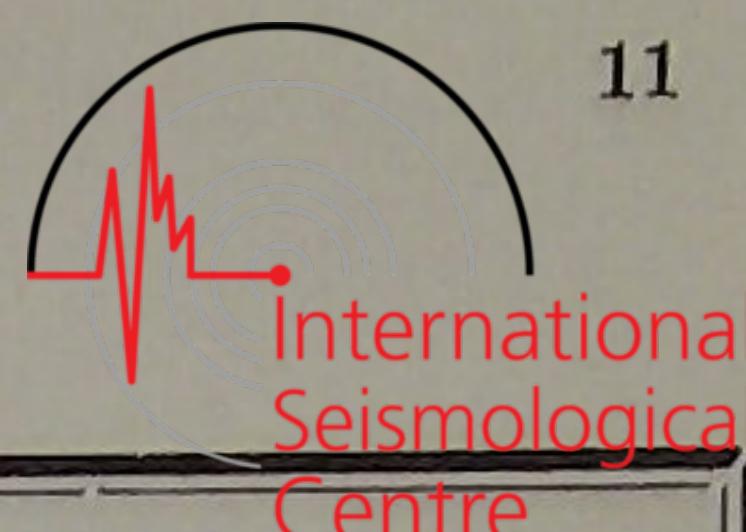
METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

MAY, 1949.



Day	AIR PRESSURE (700mm+)° mm							AIR TEMPERATURE C°								TENSION OF 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	60.6	59.3	56.0	54.8	52.5	57.4	1.1	1.5	13.2	13.8	10.0	10.4	8.3	14.5	0.2	7.4	14.3	4.5	4.6	5.0	5.2	8.5	9.1	6.2
2	50.3	48.8	48.6	48.0	49.2	50.7	49.3	10.8	10.5	14.0	12.4	10.4	8.4	11.1	15.6	8.2	11.9	7.4	9.4	9.3	7.9	6.2	6.0	6.3	7.5
3	51.2	51.6	53.1	53.4	53.9	55.6	53.1	8.0	7.8	11.8	13.8	9.9	8.6	10.0	14.4	6.3	10.4	8.1	6.3	6.4	5.7	5.1	4.6	4.8	5.5
4	56.6	58.1	58.5	57.6	58.0	58.6	57.9	8.6	8.2	16.0	17.0	13.0	8.4	11.9	18.3	7.0	12.7	11.3	5.1	6.3	5.9	5.5	6.5	7.5	6.1
5	58.3	59.1	59.1	57.1	56.6	57.3	57.9	5.1	5.7	12.0	18.4	17.4	14.0	12.1	20.1	4.8	12.5	15.3	6.1	6.3	7.4	8.1	7.9	8.7	7.4
6	54.4	52.2	50.1	48.3	47.8	48.4	50.2	11.6	11.3	12.8	16.8	16.2	14.1	13.8	18.8	10.9	14.9	7.9	9.3	9.5	10.3	11.6	10.6	8.2	9.9
7	46.4	46.0	45.7	44.4	45.5	46.3	45.7	15.0	13.5	19.3	22.8	17.8	12.8	16.9	24.0	10.6	17.3	13.4	6.7	7.9	8.9	7.6	7.9	7.5	7.8
8	45.5	45.6	44.4	45.9	49.0	52.6	47.2	9.6	13.0	17.8	10.8	10.4	7.6	11.5	19.3	6.0	12.7	13.3	7.4	7.9	7.3	7.1	5.8	5.1	6.8
9	53.4	54.3	54.3	52.7	53.1	54.9	53.8	5.3	7.1	15.9	23.1	18.7	11.5	13.6	24.0	1.9	13.0	22.1	5.6	6.2	5.8	6.1	9.8	8.5	7.0
10	54.9	54.9	54.1	51.6	51.8	53.1	53.4	6.9	8.0	23.5	28.9	22.1	13.2	17.1	29.6	4.7	17.2	24.9	7.1	7.5	9.7	9.3	8.8	9.3	8.6
11	53.5	54.8	54.1	52.8	54.2	56.1	54.3	9.6	10.0	24.0	28.3	22.3	14.4	18.1	29.2	6.7	18.0	22.5	7.4	7.7	8.5	10.6	10.1	10.3	9.1
12	56.1	55.9	54.3	51.7	50.9	49.8	53.1	10.8	11.6	24.4	25.0	18.8	15.9	17.8	27.4	9.5	18.5	17.9	9.1	9.5	10.9	9.9	11.4	11.4	10.4
13	48.5	49.9	50.4	50.3	50.2	49.5	49.8	15.0	15.9	21.5	25.3	20.7	17.9	19.4	25.6	14.8	20.2	10.8	12.0	12.8	14.7	13.7	13.6	14.4	13.5
14	49.1	49.7	48.8	47.8	48.1	48.4	48.7	16.8	17.0	20.9	18.7	14.6	11.0	16.5	21.8	8.9	15.4	12.9	13.9	13.7	10.3	12.1	11.6	8.7	11.7
15	50.0	51.5	52.7	52.5	54.0	55.6	52.7	8.2	8.8	12.8	16.8	14.3	6.9	11.3	17.1	5.6	11.4	11.5	7.1	5.9	6.6	6.6	7.6	6.9	6.8
16	54.9	55.6	56.9	57.7	59.6	61.9	57.8	6.3	10.0	14.0	19.3	15.0	9.8	12.4	19.9	5.1	12.5	14.8	6.8	6.5	7.2	6.3	5.8	6.3	6.5
17	63.4	65.1	64.2	62.7	63.1	62.7	63.5	3.9	6.5	17.9	21.7	16.3	13.6	13.3	23.0	2.7	12.9	20.3	5.7	6.2	7.5	8.8	7.7	9.7	7.6
18	61.4	61.8	61.7	59.6	58.7	59.3	60.4	13.8	14.2	17.4	21.3	18.5	13.6	16.5	22.2	11.5	16.9	10.7	10.4	10.5	12.3	10.1	10.9	10.7	10.8
19	59.0	59.3	58.1	55.1	55.1	55.4	57.0	10.4	13.6	20.9	25.1	19.2	16.2	17.6	26.0	10.2	18.1	15.8	8.9	9.6	12.8	11.9	13.0	13.0	11.5
20	52.7	52.2	51.7	50.4	49.7	50.8	51.3	16.0	15.6	16.4	17.0	17.7	13.2	16.0	19.5	11.0	15.3	8.5	13.0	12.9	13.0	12.3	12.9	11.0	12.5
21	50.2	51.7	52.2	50.9	52.9	55.9	52.3	10.0	13.2	19.9	24.8	16.6	11.2	16.0	25.5	9.5	17.5	16.0	9.0	9.0	10.6	8.5	9.3	8.4	9.1
22	55.8	56.6	56.0	54.6	54.8	56.2	55.7	8.3	9.0	19.1	23.3	16.6	13.1	14.9	23.4	6.0	14.7	17.4	7.8	8.3	10.3	9.0	8.5	9.8	9.0
23	54.4	53.7	53.3	52.2	51.7	53.1	53.1	13.4	14.8	17.4	17.5	15.4	14.1	15.4	18.9	12.9	15.9	6.0	10.1	10.4	11.2	9.7	10.0	11.1	10.4
24	52.6	53.2	52.6	51.0	51.3	50.9	51.9	13.4	14.0	21.9	26.6	19.2	15.9	18.5	26.8	12.8	19.8	14.0	11.1	11.4	12.0	11.6	11.6	10.8	11.4
25	49.6	49.6	49.5	48.6	50.0	51.3	49.8	14.5	15.3	23.1	23.5	18.7	15.2	18.4	24.7	12.6	18.7	12.1	11.2	11.2	12.0	13.0	12.8	11.9	12.0
26	51.6	51.4	51.5	51.1	52.6	53.2	51.9	11.0	13.0	19.3	22.0	16.0	12.5	15.6	22.6	10.8	16.7	11.8	9.6	11.0	9.0	8.7	8.3	8.7	9.2
27	53.3	54.1	54.5	54.4	55.4	56.6	54.7	10.0	13.5	17.0	17.5	14.0	12.0	14.0	18.9	9.2	14.1	9.7	8.0	8.6	7.7	7.9	8.2	9.0	8.2
28	56.3	56.5	56.0	54.9	55.3	57.2	56.0	8.2	11.0	19.2	22.5	19.9	11.9	15.5	23.6	7.1	15.4	16.5	7.7	8.7	8.2	8.0	10.6	8.9	8.7
29	57.6	58.7	58.8	57.1	57.7	60.0	58.3	7.8	10.2	2															

MAY, 1949.



Day	DIRECTION AND SPEED OF CLOUDS X							AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION						
	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	—	—	—	—	—	—	10 Cs	10 Cs	10 As	10 As	10 Ns	10 Ns	10.0	—	—	—	2.4	6.1	8.5	
2	—	—	W8	W8	W8	—	10 Ns	10 Ns	10 Sc	10 Sc	10 Cs, Sc	10 As	10.0	4.6	0.3	0.1	—	—	5.0	
3	—	W8	W8	W8	—	—	10 As	9 Sc, Ac	6 Sc	4 Cu	6 Sc	5 Sc	6.7	—	—	—	—	—	—	
4	—	—	—	—	—	10 Cs, Sc	10 Cs, Sc	10 Cs	10 Cs	10 As	5 Cs	9.2	—	—	—	—	—	—	—	
5	—	—	—	—	—	3 Cs	10 As	10 As, St	10 As	10 As	10 St	8.8	—	—	—	—	—	—	—	
6	—	—	—	W7	—	—	10 Ns	10 Ns	10 Ns, Sc	10 Ns, Sc	10 Cs	10.0	0.3	1.9	6.0	0.1	0.4	0.0	8.7	
7	—	—	—	W7	W7	—	10 Cs	6 Ci, Sc	6 Sc, Cu	4 Cu, Cs	5 Ac, Sc	7 Cs	6.3	—	—	—	—	—	—	—
8	—	—	W7	W8	W8	—	2 Cs	10 As, Sc	10 Cs, Sc	10 Sc, St	4 Sc	0—	6.0	—	—	—	0.6	—	0.6	
9	—	—	—	—	—	0 Ci	3 Ce, Sc	10 Ci, As	10 Ci, Cs, As	10 Cs, As	4 Cs	6.2	—	—	—	—	—	—	—	
10	—	—	—	W7	—	0—	0 Sc	0—	7 Cs, Cu	3 Cs	4 St, Cs	2.3	—	—	—	—	—	—	—	
11	—	—	—	W7	W7	—	2 Cs	2 Cs	10 Cs, Cu	9 Cs, Sc, Cu	10 Cs, Sc	10 Cs	7.2	—	—	—	—	—	—	—
12	—	—	—	—	—	10 Cs	10 St, Cs	10 Cs	10 As	10 As, Cu	10.0	—	—	—	—	—	—	—	—	
13	—	—	W7	—	—	10 Ns	10 Ns	4 Cu, Sc	7 Cs, Cu, Ci	10 As, Cu	10 Cs	8.5	4.7	6.0	0.2	—	—	—	10.9	
14	—	—	W7	S7	—	—	10 As	10 St	10 Ac, Sc, St	10 As, Sc	10 Ns	10 Ns	10.0	—	—	—	6.1	13.4	19.5	
15	—	W7	—	W7	—	—	10 Ns	10 Sc, Cu	10 Sc	8 Sc	5 Cu	0 Cu	7.2	6.2	0.1	—	—	—	6.3	
16	—	W7	W7	W8	—	—	5 Sc	8 Sc, St	7 Sc, Ns, Cu	4 Cu	5 Ci, Cs	2 Ci	5.2	—	0.1	1.2	—	—	—	1.3
17	—	—	—	—	—	2 Ci	3 Cs, Ci	10 Ci	10 Cs	10 As	10 As	7.5	—	—	—	—	—	—	—	
18	—	—	—	—	—	10 St	10 St	10 St	8 As, Sc	6 As, Sc	6 Cs, As, Sc	8.3	—	—	—	—	—	—	—	
19	—	—	—	—	—	10 As, Sc	10 St	3 Cs, Cu	4 Cs, Cu	10 As, St	10 As, St	7.8	—	—	—	—	—	—	—	
20	—	—	—	—	—	10 St	10 Ns	10 Ns	10 Sc, St	1 Cu	0—	6.8	—	3.4	7.5	3.3	—	—	14.2	
21	—	—	—	—	—	0—	7 Ci, Cs	4 Ci	10 Ci, Cs, Cu	6 Cs, Sc	10 Cs, As, Sc	6.2	—	—	—	—	—	—	—	
22	—	—	—	—	—	10 Cs, As, Sc	10 ≡	3 Cs, Ci	5 Cs, Ci, Cu	10 Cs, As	10 As	8.0	—	—	—	—	—	—	—	
23	—	S8	S8	S8	—	10 As, Sc	10 St, As, Sc	10 As, Sc	10 As, Sc	10 St	10 St	10.0	—	—	—	—	—	0.0	0.0	
24	—	—	—	—	—	10 St	10 St, Sc	10 Cs, Cu	10 Cs, As, Cu	10 Cs, Cu	10 As, Sc	10.0	—	—	—	—	—	—	—	
25	—	W7	—	—	—	10 As, Sc	6 Ac, Cs	6 Cs, Ci, Cu	10 As, Cu, Ns	10 As, Cu, Sc	5 Sc	7.8	—	—	—	0.2	0.4	—	0.6	
26	—	W8	W7	—	—	10 ≡	10 ≡	7 Sc	6 Sc, Cu, Ac	9 As, Sc, Ac	3 Sc	7.5	—	0.4	—	—	—	—	0.0	0.4
27	—	W7	W7	W7	W7	—	2 Sc	3 Sc	6 Sc	7 Sc	6 Sc	5.0	—	—	—	—	—	—	—	—
28	—	W7	W7	—	—	0—	2 Sc	5 Sc, Cs	4 Cu	2 Cu	2 Cs	2.5	—	—	—	—	—	—	—	—
29	—	—	—	—	—	1 Sc	2 Cs	0 Cu	0 Cu	1 Cs	0—	0.7	—	—	—	—	—	—	—	—
30	—	—	—	—	—	0—	10 Cs, St	10 Cs, Cu	10 Cs, Cu	9 Cs, Ac	5 Cs, Ac	7.3	—	—	—	—	—	—	—	—
31	—	W7	SSE7	W7	—	4 Ac	5 Cu, Ac	7 Sc, St, Cu	7 Sc, Ci, Cu	8 Sc, Cu, Cs	10 Sc	6.8	—	—	—	—	—	—	—	—
						6.5	7.6	7.5	7.8	7.6	6.6	7.3	15.8	12.2	15.0	4.2	9.3	19.5	76.0	

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	3.60	(2.5)	1.1	•	U	0	∞	0	⊕	0	a.	∞	0	p.	●	0	1516	—	⊖	0	10742.
2	4.38	4.7	1.7	—	●	0	—	0650, 0758...0946.	✓	1320—1330, 1740.											
3	6.73	4.9	2.5	∞	0	a.	∞	0	γ	0	p.	✓	1520—1530.								
4	6.30	2.8	1.3	∞	0	a.	∞	0	p.												
5	1.22	(2.2)	1.0	∞	0	a.	∞	0	p.												
6	0.58	(3.0)	1.9	●	0	134	—	0930, 0945	—	1025, 1250...	1425, 1600	—	1815.	⊖	1	73146.					
7	10.95	5.9	2.3	○	0	∞	0	a.	∞	p.	✓	0240—0310.									
8	3.04	(2.9)	1.5	○	0	p.	●	0	1154	—	1225.										
9	10.45	5.4	1.9	○	2	a.	○	1	0	1	γ	0	△	0	p.						
10	12.00	7.2	3.2	△	1	0	∞														

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

JUNE, 1949.



Day	AIR PRESSURE (700mm+) mm						AIR TEMPERATURE °C						TENSION OF 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	56.6	57.6	57.4	56.3	56.5	57.5	57.0	15.3	16.3	21.3	23.0	17.7	12.6	17.7	23.5	11.9	17.7	11.6	10.8	11.5	10.3	9.6	10.6	10.1	10.5
2	57.2	58.0	57.4	55.4	55.9	56.2	56.7	10.3	11.1	17.8	21.3	14.6	9.6	14.1	21.7	8.6	15.2	13.1	9.1	9.0	9.0	10.0	8.8	8.1	9.0
3	55.6	55.4	53.8	51.4	50.9	53.0	53.4	6.6	8.1	14.8	22.2	15.7	11.0	13.1	22.7	6.2	14.5	16.5	7.1	7.8	7.9	9.3	9.1	8.2	8.2
4	52.4	53.4	53.2	51.3	52.9	53.9	52.9	10.0	9.8	16.2	20.3	15.2	12.1	13.9	21.9	8.6	15.3	13.3	7.0	7.4	8.0	9.5	9.4	9.4	8.5
5	53.6	55.2	55.4	54.9	55.3	55.2	54.9	11.9	11.2	15.3	16.3	13.9	12.6	13.5	16.7	11.0	13.9	5.7	9.5	9.5	10.5	10.9	10.3	9.9	10.1
6	54.8	55.0	55.5	53.9	53.8	55.2	54.7	11.7	12.2	15.7	20.1	17.8	14.7	15.4	21.1	11.7	16.4	9.4	9.8	10.1	11.1	11.6	13.1	11.5	11.2
7	54.4	54.3	54.1	52.3	52.4	52.4	53.3	14.1	13.9	18.2	22.4	17.2	13.0	16.5	22.7	11.9	17.3	10.8	11.1	10.8	10.4	10.9	10.3	9.8	10.6
8	51.4	51.8	51.5	50.8	52.4	54.8	52.1	10.5	12.0	18.7	21.3	14.1	7.6	14.0	21.9	5.4	13.7	16.5	8.9	10.0	10.1	10.0	7.6	6.7	8.9
9	54.6	55.3	54.8	54.3	54.4	54.7	54.7	3.9	8.3	15.3	15.8	12.7	11.7	11.3	17.3	3.8	10.6	13.5	5.9	7.1	6.9	7.2	7.0	7.8	7.0
10	53.9	53.9	53.1	52.0	50.9	50.6	52.4	11.5	11.6	15.9	15.6	13.6	12.3	13.4	17.1	11.2	14.2	5.9	9.3	9.2	9.4	10.3	9.8	10.2	9.7
11	49.9	50.0	49.8	49.4	50.2	51.1	50.1	12.6	13.4	19.5	20.8	16.5	16.1	16.5	22.7	12.5	17.6	10.2	10.1	10.6	12.0	13.7	13.0	13.1	12.1
12	50.5	51.6	51.6	51.5	52.0	53.3	51.8	15.4	16.1	20.6	21.2	19.3	14.7	17.9	22.7	13.9	18.3	8.8	12.7	13.1	12.7	11.7	10.4	10.9	11.9
13	53.7	54.0	54.1	52.9	52.8	53.6	53.5	13.1	15.2	20.8	24.1	19.5	16.3	18.2	24.5	12.5	18.5	12.0	10.9	11.7	10.4	11.5	12.8	11.1	11.4
14	53.1	53.3	52.9	51.2	51.1	53.1	52.5	14.3	15.1	20.5	23.2	20.0	17.5	18.4	24.1	14.2	19.2	9.9	11.4	11.8	12.4	13.5	13.9	13.2	12.7
15	52.3	52.8	52.6	52.2	52.4	52.7	52.5	17.1	17.9	19.3	21.1	19.1	18.5	18.8	21.4	16.9	19.2	4.5	13.5	13.5	13.5	13.8	14.1	14.1	13.8
16	51.7	52.2	52.0	50.0	50.2	51.1	51.2	17.6	17.1	19.1	20.7	19.7	17.5	18.6	21.2	16.9	19.1	4.3	14.1	14.1	13.9	14.3	13.8	14.0	14.0
17	51.4	52.8	53.8	53.0	53.6	55.6	53.4	16.2	16.4	20.9	21.7	19.0	17.0	18.5	23.5	16.2	19.9	7.3	13.2	13.0	13.8	13.7	14.4	13.1	13.5
18	56.0	57.1	57.9	57.0	57.3	58.3	57.3	16.5	16.9	18.1	23.1	20.0	17.7	18.7	24.1	16.4	20.3	7.7	13.1	13.1	13.5	13.7	13.8	12.8	13.3
19	58.0	58.5	58.5	58.1	57.5	56.2	57.8	16.8	17.3	19.2	18.4	16.8	15.9	17.4	19.5	15.7	17.6	3.8	13.4	13.6	13.2	13.5	13.2	12.8	13.3
20	54.6	54.0	54.4	55.0	56.4	57.7	55.4	15.5	15.8	16.6	17.7	17.1	16.0	16.5	17.8	15.4	16.6	2.4	12.8	12.9	12.9	12.7	12.8	12.9	12.8
21	57.6	58.9	58.3	57.5	56.6	54.8	57.3	15.3	15.0	15.9	16.1	15.5	15.0	15.5	17.2	14.8	16.0	2.4	12.4	12.2	12.5	12.6	12.8	12.5	12.5
22	51.4	49.9	48.6	46.6	46.4	47.9	48.5	14.7	15.4	16.0	21.9	21.9	15.9	17.6	23.3	14.1	18.7	9.2	12.4	12.7	13.2	14.9	16.7	12.1	13.7
23	48.4	49.0	49.5	49.0	50.5	52.1	49.8	15.2	15.1	18.1	19.3	19.5	17.1	17.4	20.4	14.8	17.6	5.6	11.6	12.4	14.0	14.8	14.5	12.5	13.3
24	52.6	54.1	54.8	54.5	55.3	57.2	54.8	15.6	16.5	20.1	23.4	17.7	15.3	18.1	24.7	14.2	19.5	10.5	11.6	10.8	10.9	11.3	12.4	11.7	11.5
25	56.8	57.9	57.3	57.3	57.4	58.4	57.5	15.3	15.6	21.0	21.8	16.9	13.5	17.4	22.4	13.5	18.0	8.9	12.0	12.1	11.6	11.7	10.5	9.8	11.3
26	57.9	58.2	57.6	56.4	57.0	57.7	57.5	13.9	13.9	16.7	21.0	18.4	15.0	16.5	21.5	13.0	17.3	8.5	10.3	10.9	10.6	10.7	11.3	10.2	10.7
27	57.4	58.2	57.5	56.8	57.0	58.4	57.6	13.2	13.2	19.1	21.1	18.0	12.7	16.2	22.1	12.2	17.2	9.9	9.8	9.8	11.1	12.2	11.4	9.9	10.7
28	57.8	58.6	58.6	57.5	57.0	57.8	57.9	12.7	13.0	18.1	22.4	19.9	15.1	16.9	22.7	12.3	17.5	10.4	9.8	10.0	11.0	11.9	11.1	10.2	10.7
29	57.1	57.2	56.5	54.6	54.0	54.8	55.7	12.6	13.8	18.3	23.4	21.2	18.1	17.9	24.3	12.2	18.3	12.1	10.4						

JUNE, 1949.



Day	DIRECTION AND SPEED OF CLOUDS ×							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION							
	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	—	w7	s7	—	—	—	10 st,sc	5 Sc,Ci	8 Sc,Ci	1 Ci,Cu	0 —	0 —	4.0	—	—	—	—	—	—	—
2	—	w7	—	—	—	—	1 st	10 Sc	2 Cu	10 Cs,Sc	10 Cs,Sc	8 Cs,Sc	6.8	—	—	—	—	—	—	—
3	—	—	—	—	—	—	10 Cu	10 st	0 Ci,Cs	0 Cu	0 Cu	3 Cu,Cs	3.8	—	—	—	—	—	—	—
4	—	w7	—	—	—	—	10 Sc	9 Sc,St	2 Sc,Cu,Ci	5 Ac	2 Ac	10 st	6.3	—	—	—	—	—	—	—
5	—	—	—	—	—	—	10 st	10 st	10 Sc	10 st	10 st	10 st	10.0	—	0.1	0.0	—	—	0.0	0.1
6	—	—	w7	w7	—	—	10 st	10 st	10 st	7 Cu,Sc,Ac	8 Sc,Ns,Ac	10 st,Sc	9.2	2.5	0.1	0.0	—	0.3	—	2.9
7	—	—	w7	N7	N7	—	10 st	10 st,Sc	7 Sc,Cs,Cu	10 Cs,Cu,Sc	10 Cs,Sc	10 As,St	9.5	—	—	—	—	—	—	—
8	—	—	—	—	—	—	7 Sc	10 st	10 As	10 Cs,Sc	10 Cs	6 Cs	8.8	—	—	—	—	—	—	—
9	—	—	E8	E8	S7	—	6 Cs,Sc	10 Sc	8 Ce,Sc,Cs	10 Cs,Sc,Cc	10 Sc,Cc	10 sc	9.0	—	—	—	—	—	—	—
10	—	—	—	—	—	—	10 st	10 st,Sc	10 Sc	10 Ns	10 st	10 st	10.0	—	—	—	0.4	2.0	0.7	3.1
11	—	—	—	—	—	—	10 Ns	10 Sc,St,Ac	6 Sc,Ac,Ci	9 Sc,Ns	10 Ns	10 Ns	9.2	0.1	0.2	—	1.2	48.5	0.4	50.4
12	—	—	—	—	—	—	W7	10 st	10 Sc	3 Cu,Sc	10 Sc,Cu	9 Sc,Cc	7.3	0.0	0.2	0.0	—	—	—	0.2
13	—	—	w7	w7	—	—	8 Ac	2 Sc,Cc	9 Sc	10 Ce,Sc,Cu	10 Cs,Sc,Cu	10 Cs,Sc	8.2	—	—	—	—	—	—	—
14	—	—	—	—	—	—	10 Cs	10 As	10 Ac,Sc	10 Cs,Cu	8 Ci,Sc	10 As	9.7	—	—	—	—	—	—	—
15	—	—	—	—	—	—	10 st	10 St,As	10 st	10 Sc	10 st	10 st	10.0	—	—	—	—	—	—	—
16	—	—	—	—	—	—	10 Ns	10 Ns	10 st	10 As,Sc	10 Ce,Sc	10 sc	10.0	0.3	12.3	0.7	0.0	—	—	13.3
17	—	—	—	—	—	—	10 Sc	10 st	10 As,Sc	10 Sc	10 st,Ns	10 st	10.0	—	—	—	5.2	4.8	—	10.0
18	—	—	S8	—	10 st	—	10 As,St	10 st,Sc	8 Ci,Cu	10 Ci,St	10 st	10 st	9.7	—	—	—	—	—	—	—
19	—	—	N8	—	10 Sc,St	—	10 Sc,St	10 Sc,St	10 st	10 st	10 Ns	10.0	1.1	—	—	0.0	0.1	2.7	—	3.9
20	—	—	—	—	—	—	10 Ns	10 Ns	10 Ns	10 st	10 st	10 st	10.0	7.9	9.0	4.8	2.7	0.2	0.0	24.6
21	—	—	—	—	—	—	10 st	10 Ns	10 Ns	10 Ns	10 Ns	10 Ns	10.0	—	0.1	1.4	3.2	9.6	13.5	27.8
22	—	—	—	—	—	—	10 Ns	10 Ns	10 st	9 Cs,Sc	10 sc	10 Ns	9.8	9.5	1.3	0.6	0.0	—	8.1	19.5
23	—	—	—	—	—	—	10 Ns	10 Ns	10 Ns	10 st	10 sc	10 sc	10.0	0.6	5.2	2.1	0.1	0.0	—	8.0
24	—	—	sw2	S8	—	—	3 Sc	6 Cs,Cu	3 Ci,Cu	7 Ci,Cs,Cu	10 Ci,St,Sc	10 st	6.5	—	—	—	—	—	—	—
25	—	E7	—	—	10 st,Sc	—	10 st,Sc	7 Ci,Cu,Sc	8 Cs,Sc	10 Cs,Sc	10 sc	9.2	—	—	—	—	—	—	—	—
26	—	—	N7	—	10 st	—	10 As,Sc,St	10 Cs,Sc	8 Sc	6 Sc	5 Sc	8.2	—	—	—	—	—	—	—	—
27	—	—	—	—	10 As	—	10 sc	10 Sc,Ci,Cu	10 Ci,Sc,Cu	10 Ci,Sc	7 Cs	9.5	—	—	—	—	—	—	—	—
28	—	—	—	—	10 st	—	10 st	1 Ci	1 Cu	0 Cu	1 Sc	3.8	—	—	—	—	—	—	—	—
29	—	—	—	—	10 st	—	10 st	10 sc	0 —	10 Ci	10 As	8.3	—	—	—	—	—	—	—	—
30	—	—	S8	—	10 As	—	10 st	10 st	10 Ns,Sc	10 Ns	10 Ns	10.0	—	—	—	0.0	2.3	12.8	—	15.1
							9.2	9.4	7.9	8.1	8.4	8.4	8.6	22.0	28.5	9.6	7.6	68.2	43.0	178.9

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	11.27	6.7	2.2	∞ ⁰ , 0 ⁰ a,p.																	
2	9.70	5.6	1.9	△ ¹ , ∞ ⁰ a, ∞ ⁰ , △ ⁰ p.																	
3	9.03	6.7	2.3	△ ¹ , 0 ⁰ , ∞ ⁰ a, 0 ⁰ , ∞ ⁰ , △ ⁰ p.																	
4	9.16	(5.3)	1.8	0 ² a, ∞ ⁰ p.																	
5	—	(1.8)	0.7	∞ ⁰ a,p. ≡ ⁰ 225 — ≡ ¹ 0428 — ≡ ⁰ 0500 — 0700, 1950 — 2110. ● ⁰ 2215 —																	
6	3.19	(3.0)	0.8	△ ⁰ p. — ● ⁰ 0140, 0235 — 0247. ≡ ⁰ 0830 — 1100. ● ⁰ 1602 — 1755.																	
7	8.85	6.1	1.8	0 ⁰ , □ ⁰ p.																	
8	7.00	5.0	1.7	△ ⁰ a, ∞ ⁰ , γ ⁰ , △ ⁰ p.																	
9	8.24	(5.0)	1.9	△ ¹ , ∞ ⁰ a, ∞ ⁰ p.</td																	

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

JULY, 1949.



Day	AIR PRESSURE (700mm+)° mm							AIR TEMPERATURE °C							TENSION OF 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	44.8	43.8	44.3	45.2	47.0	48.9	45.7	17.2	17.7	19.7	17.9	17.3	16.4	17.7	21.1	16.3	18.7	4.8	14.1	14.5	14.9	13.2	14.2	13.4	14.1
2	50.1	52.5	52.8	53.1	53.8	54.6	52.8	15.9	15.9	19.0	19.4	17.2	15.1	17.1	20.2	14.7	17.5	5.5	13.1	13.1	13.0	12.9	12.7	11.5	12.7
3	54.4	55.7	55.8	55.0	55.3	56.1	55.4	14.3	14.8	16.2	17.7	15.6	13.6	15.4	18.3	12.0	15.2	6.3	11.5	11.1	11.4	12.1	11.2	10.8	11.4
4	55.5	55.9	55.3	54.8	54.8	56.2	55.4	10.5	12.7	19.0	22.9	21.5	15.5	17.0	24.1	10.6	17.4	13.5	9.0	10.2	11.1	13.2	12.8	12.0	11.4
5	55.7	56.5	56.0	54.8	54.3	54.9	55.4	14.5	14.8	19.6	23.4	21.0	18.3	18.6	24.1	13.5	18.8	10.6	12.0	11.7	13.2	14.3	14.5	13.7	13.2
6	53.9	52.7	51.8	49.8	47.5	45.1	50.1	18.5	20.2	21.5	20.3	19.1	17.9	19.6	22.3	17.9	20.1	4.4	14.1	14.8	15.8	15.1	15.7	14.0	14.9
7	40.4	40.7	41.8	42.1	44.1	45.7	42.5	19.2	18.4	17.9	18.9	17.5	16.7	18.1	19.7	16.4	18.1	3.3	12.7	13.1	13.5	12.6	12.5	13.5	13.0
8	46.1	48.0	48.9	48.3	49.0	49.3	48.3	16.3	17.6	21.8	24.1	22.5	17.1	19.9	24.5	16.2	20.4	8.3	13.1	13.1	12.7	12.9	13.6	13.5	13.2
9	49.1	50.3	51.0	51.8	52.3	53.7	51.4	16.4	17.8	20.9	22.0	20.7	17.4	19.2	22.5	15.3	18.9	7.2	13.2	12.6	13.3	13.6	14.1	13.9	13.5
10	53.4	53.8	53.6	52.4	53.1	54.1	53.4	17.1	17.3	22.5	25.8	22.3	18.1	20.5	26.3	16.7	21.5	9.6	14.1	13.3	12.5	14.2	15.3	12.7	13.7
11	53.1	53.7	53.8	53.1	54.0	54.7	53.7	17.6	17.9	20.5	26.0	22.8	21.1	21.0	26.1	17.6	21.9	8.5	14.4	14.9	15.5	16.6	17.1	17.2	16.0
12	54.4	55.2	55.8	54.9	55.6	56.7	55.4	20.9	20.9	24.8	26.7	24.2	21.7	23.2	28.2	20.7	24.5	7.5	17.6	17.9	18.3	20.6	18.8	18.3	18.6
13	56.0	55.5	55.9	55.0	55.1	55.7	55.5	21.5	21.7	21.5	22.7	22.9	21.3	21.9	22.9	20.2	21.6	2.7	18.6	18.7	18.6	19.4	19.5	18.0	18.8
14	55.4	55.5	55.5	55.4	54.9	55.9	55.4	18.9	18.9	24.5	23.5	22.8	21.3	21.6	25.2	18.2	21.7	7.0	15.1	15.5	17.9	18.9	19.2	17.0	17.3
15	55.4	56.3	56.7	55.8	55.2	56.3	56.0	20.1	20.1	21.3	23.9	24.3	23.3	22.2	24.8	20.1	22.5	4.7	16.9	16.9	17.6	19.6	20.6	19.1	18.5
16	56.3	56.4	57.0	56.1	55.9	56.4	56.4	21.0	21.4	26.2	26.5	25.5	21.3	23.7	27.5	19.3	23.4	8.2	16.7	17.9	17.9	18.1	18.1	17.2	17.7
17	55.6	56.4	55.2	53.3	53.5	54.5	54.8	18.6	20.1	28.9	32.2	28.5	23.3	25.3	33.4	17.6	25.5	15.8	15.4	16.7	18.3	18.9	20.0	18.9	18.0
18	54.0	54.5	54.5	52.6	52.3	52.8	53.5	20.7	21.6	30.2	33.5	30.5	25.5	27.0	33.9	19.3	26.6	14.6	16.8	17.3	21.2	19.0	20.8	21.4	19.4
19	52.8	53.5	53.2	52.3	52.4	52.9	52.9	24.1	24.3	29.3	28.7	27.9	24.1	26.4	31.9	23.4	27.7	8.5	21.4	21.4	20.4	24.1	23.2	21.2	22.0
20	52.1	53.3	53.9	53.9	54.4	55.2	53.8	22.7	22.7	26.7	27.7	27.0	24.3	25.2	28.1	22.4	25.3	5.7	19.8	20.1	20.6	21.7	21.0	21.2	20.7
21	54.8	54.9	54.9	54.1	54.7	55.2	54.8	23.8	23.9	28.0	28.8	28.3	24.1	26.2	29.8	23.1	26.5	6.7	21.4	21.3	21.7	20.2	20.4	20.3	20.9
22	53.7	53.7	53.1	52.3	51.9	52.4	52.9	22.4	22.7	27.6	28.5	27.1	24.6	25.5	29.5	22.3	25.9	7.2	19.5	20.1	18.9	20.6	19.7	19.9	19.8
23	51.4	52.1	52.4	51.9	52.6	52.8	52.2	23.1	22.9	28.1	30.9	26.5	24.2	26.0	31.1	22.5	26.8	8.6	19.3	19.5	21.4	18.8	19.3	19.2	19.6
24	52.9	53.5	55.1	54.8	55.7	56.1	54.7	23.3	23.8	24.6	23.8	21.9	20.6	23.0	25.3	20.4	22.9	4.9	19.5	19.5	20.1	19.7	18.3	16.5	18.9
25	55.4	55.4	55.0	53.5	54.3	55.6	54.9	20.1	20.0	21.7	22.8	20.7	19.7	20.8	23.1	19.8	21.5	3.3	16.1	16.8	17.9	19.5	15.5	16.3	17.0
26	54.6	55.5	55.4	54.8	54.0	55.2	54.9	19.5	19.1	23.2	24.3	21.8	20.1	21.3	25.3	19.0	22.2	6.3	15.7	15.7	16.1	16.7	16.1	15.8	16.0
27	54.0	54.4	54.5	54.1	54.1	55.0	54.4	19.1	19.3	21.9	23.0	22.8	21.7	21.3	23.9	18.8	21.4	5.1	14.6	14.8	17.1	17.6	17.5	17.7	16.6
28	54.5	55.5	56.0	55.3	55.7	56.9	55.7	21.3	21.9	27.1	28.8	25.9	24.5	24.9	29.5	21.3	25.4	8.2	18.4	19.3	19.4	19.1	20.2	19.5	19.3
29	56.3	56.7	56.6	54.9	54.6	54.9	55.7	23.8	23.9	27.3	28.2	26.5	24.5	25.7	29.1	21.6	25.4								

JULY, 1949.



Day	DIRECTION AND SPEED OF CLOUDS ^x							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION							
	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	Mean
1	—	—	—	—	—	—	10 NS	10 St,Ac	10 st	10 NS	10 NS	10 NS	10.0	7.9	0.5	0.1	3.0	3.9	1.0	16.4
2	—	—	—	—	—	—	10 st	10 NS	10 sc	10 sc,st	10 AS	10 AS	10.0	0.4	1.0	0.1	0.0	0.0	—	1.5
3	—	—	—	—	—	—	10 AS	8 st	10 st,sc	10 NS,Sc	10 Ac,NS,Sc	7 Ac,As	9.2	0.1	0.0	0.0	0.0	0.2	0.0	0.3
4	—	—	—	—	—	—	5 Cs	5 st	1 Ac,Sc	0 sc,Cu	1 sc	—	2.2	—	—	—	—	—	—	—
5	—	—	—	w8	—	—	8 Sc	10 st	7 sc,st	10 cs,st,sc	10 sc	10 sc	9.2	—	—	—	—	—	—	—
6	—	—	—	—	—	—	10 Sc	10 Sc,Cs	10 sc,st	10 NS	10 NS	10 NS	10.0	—	—	1.2	0.2	6.2	3.5	11.1
7	—	—	—	—	—	—	10 Sc	10 NS	10 NS	10 sc,st	10 AS,St	10 st	10.0	0.1	0.2	1.6	0.4	—	—	2.3
8	—	w8	w8	s7	—	—	10 Sc	9 Sc	7 Sc	6 sc,Ci	7 Sc	0 Cs	6.5	—	—	—	—	—	—	—
9	—	—	—	—	—	—	0 Ac	9 Sc	10 As,Sc	10 As,Sc	10 NS,Sc	10 st	8.2	—	—	—	—	—	0.6	0.6
10	—	—	—	—	—	—	10 st	4 st	1 Cu	2 sc,Cu	8 Cs,Sc,st	9 Cs,Ac,Sc	5.7	—	—	—	—	—	—	—
11	—	—	—	—	—	—	10 st	10 st	10 sc	9 Cc,Sc	10 sc	10 sc	9.8	0.1	0.2	0.1	—	—	—	0.4
12	—	—	—	—	—	—	10 st	10 st	10 Ci,Ce,Sc	10 NS,St,Sc	10 st,Sc	10 NS	10.0	—	—	—	0.0	0.1	4.0	4.1
13	—	—	—	—	—	—	10 NS	10 st	10 NS	10 NS	10 Cs,Sc,St	10 st	10.0	2.8	0.3	1.0	5.3	3.2	—	12.6
14	w2	—	—	—	—	—	10 Cc,St	10 sc	10 sc	10 NS	10 NS	10 st	10.0	—	—	—	1.0	2.0	0.2	3.2
15	—	—	—	—	—	—	10 NS	10 st	10 NS,Sc	10 st,Sc,Ci	10 sc,St,CC	2 cu	8.7	0.0	0.8	5.6	0.4	—	—	6.8
16	—	w8	w8	—	—	—	3 Cs,Cc,Ci	7 sc	9 sc	9 sc	2 sc	0 sc	5.0	—	—	—	—	—	—	—
17	—	—	—	—	—	—	0 —	3 st	0 —	1 Cu	2 Cs,Sc	3 Cs	1.5	—	—	—	—	—	—	—
18	—	—	—	—	—	—	0 —	1 Cs	0 Cc	2 Ci,Cu	9 Ci,Cc,Cu	5 Cs	2.8	—	—	—	—	—	—	—
19	w5	—	—	—	—	—	10 Ac	10 Cs,Sc	10 Cs	10 NS	10 Ac,NS	10 st	10.0	—	—	—	0.6	0.3	0.9	1.8
20	—	—	—	—	—	—	10 Sc	10 Ac,St,Sc	10 sc	10 sc	10 sc	10 sc	10.0	—	7.1	—	0.1	0.0	—	7.2
21	—	—	—	—	—	—	10 NS	10 ≡	10 sc,Ci	10 Sc,Ci,Ac	10 Ci,Cu	0 —	8.3	0.3	0.4	—	0.0	—	—	0.7
22	—	w7	w7	w8	—	—	5 Cs	10 ≡	10 sc	10 Cs,Sc	10 Cs,Sc	10 sc	9.2	—	—	—	—	—	—	—
23	—	w7	w7	w7	—	—	10 Sc	10 sc	10 sc,Cc	10 Sc,Cc	10 sc	8 Sc	9.7	—	—	—	—	—	—	—
24	—	—	—	w8	—	—	10 Sc	10 sc	10 NS,Sc	10 NS,Sc	10 st,Ac	10 st	10.0	—	0.0	0.4	1.1	0.5	—	2.0
25	—	—	—	w7	—	—	10 NS	10 st	10 st	10 NS	10 sc	10 st	10.0	0.7	0.0	—	5.4	6.8	—	12.9
26	—	—	—	—	—	—	10 st	10 st	8 sc	10 Cs,Sc,Cu	6 Cs,Sc	10 st	9.0	—	—	—	—	—	—	—
27	—	—	—	—	—	—	10 sc	10 st	10 st	10 st,sc	10 st	10 st	10.0	—	—	0.0	—	—	—	0.0
28	—	s7	—	—	—	—	10 st	10 st	10 Cs,Sc,St	10 Ci,Cu	10 Cs,Sc,St	10 sc	10.0	—	—	—	—	—	—	—
29	—	s8	s8	s8	—	—	6 sc	10 sc	10 sc	10 sc	8 sc	10 sc	9.0	—	—	—	—	—	—	—
30	—	—	—	—	—	—	10 sc,st	9 sc,st	10 As,Cu,St	10 As,St,Sc	10 st	10 st	9.8	—	1.3	—	—	—	—	1.3
31	—	—	—	—	—	—	10 st	10 st,Sc	10 st	10 st	10 st	10 st	10.0	—	—	—	—	—	—	—
							8.3	8.9	8.5	8.7	8.8	7.9	8.5	12.4	11.8	10.1	17.5	23.2	10.2	85.2

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	0.53	(0.7)	0.5	—	●°—0420,0628—0647,1215—1919,2035—																
2	—	(1.9)	0.8	—	●°—0050,0243—0820,1145—1210,1300—1320.≡°1510—1540.●°2315—2330.																
3	0.30	(1.9)	0.7	∞°a.≡°0540—0610.●°1050...1825.																	
4	11.03	5.3	1.8	△'a.∞°,△'p.																	
5	7.81	(5.8)	1.8	△'a.∞°,△'p.																	
6	1.42	(2.7)	1.4	∅°a.●°0825...1400—●°1650—●°1825—2230.																	
7	—	(3.0)	1.1	●°0530—1110. ∫°0030.																	
8	8.64	5.5	1.9	△'p.																	
9	0.65	(3.8)	1.1	△',△'a.△'p.●°1810—2113.																	

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

AUGUST, 1949.



Day	AIR PRESSURE (700mm+)* mm						AIR TEMPERATURE °C								TENSION OF 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	55.9	55.3	54.9	53.1	53.6	55.0	54.6	18.9	19.7	25.9	27.9	24.1	22.1	23.1	28.4	19.0	23.7	9.4	15.5	15.9	18.4	18.6	17.6	18.5	17.4
2	53.8	54.7	55.3	55.1	55.2	55.6	55.0	21.4	21.0	23.8	22.9	21.5	19.4	21.7	25.7	19.4	22.6	6.3	17.9	17.1	18.1	17.3	16.1	15.4	17.0
3	55.1	56.0	55.9	54.4	54.2	55.3	55.2	19.2	19.1	23.9	27.3	23.9	19.3	22.1	28.2	18.8	23.5	9.4	15.3	15.7	15.4	15.8	17.6	15.4	15.9
4	55.0	55.4	55.2	53.3	53.1	54.1	54.4	19.3	19.2	25.4	29.9	27.1	22.0	23.8	29.9	18.6	24.3	11.3	15.9	16.0	14.8	17.2	18.8	17.8	16.8
5	53.6	54.0	53.9	52.8	53.3	54.5	53.7	21.1	20.8	27.4	29.0	26.6	24.0	24.8	29.8	20.7	25.3	9.1	17.8	17.8	17.4	19.8	17.6	16.8	17.9
6	54.7	55.0	55.1	53.9	54.6	56.9	55.0	21.0	22.7	28.7	31.3	26.5	21.9	25.4	32.3	20.1	26.2	12.2	16.7	17.8	18.4	19.5	19.9	17.5	18.3
7	56.4	56.7	56.6	55.1	55.4	56.7	56.2	21.3	21.9	26.5	30.7	25.4	22.3	24.7	31.7	21.3	26.5	10.4	17.6	18.3	18.7	16.6	20.5	18.5	18.4
8	56.4	56.7	57.2	55.6	55.1	56.7	56.3	22.6	22.6	27.3	31.2	27.0	23.7	25.7	31.3	21.8	26.6	9.5	19.3	19.3	19.5	18.6	21.5	20.0	19.7
9	56.5	57.6	57.4	56.1	56.3	57.6	56.9	23.4	22.4	27.4	33.4	29.8	23.7	26.7	34.2	21.9	28.1	12.3	19.9	18.5	20.0	16.9	23.1	19.8	19.7
10	57.0	58.0	57.4	55.8	56.0	56.9	56.9	20.0	20.0	28.9	34.2	28.5	22.3	25.7	34.6	18.6	26.6	16.0	16.0	16.8	18.4	18.1	20.6	17.7	17.9
11	56.5	56.3	54.9	53.0	51.8	52.5	54.2	19.4	19.6	25.9	31.5	29.4	23.3	24.9	33.1	18.1	25.6	15.0	16.0	16.8	19.0	16.1	23.9	19.9	18.6
12	51.3	52.7	51.6	49.8	49.1	50.8	50.9	20.9	19.5	28.5	32.3	28.1	23.1	25.4	32.7	18.8	25.8	13.9	17.7	15.9	18.6	18.0	20.4	18.9	18.3
13	50.1	51.1	50.4	48.9	49.4	51.2	50.2	20.1	20.7	29.2	32.6	28.3	23.8	25.8	33.5	19.5	26.5	14.0	16.9	17.3	18.6	15.8	20.8	18.9	18.1
14	51.3	52.2	51.8	51.0	52.3	53.3	52.0	21.1	21.3	27.8	32.3	26.3	23.6	25.4	32.6	20.0	26.3	12.6	17.7	18.4	20.4	20.5	18.1	19.9	19.2
15	53.4	54.0	54.4	53.7	54.2	55.3	54.2	21.7	22.0	27.9	30.9	25.9	24.4	25.5	31.3	21.1	26.2	10.2	17.9	18.0	19.8	19.2	19.8	20.0	19.1
16	54.8	55.8	55.6	54.4	54.7	55.8	55.2	22.8	22.9	29.2	29.5	25.0	21.0	25.1	30.6	19.6	25.1	11.0	19.1	19.5	19.0	17.1	18.7	16.9	18.4
17	55.6	55.1	55.2	53.0	53.3	52.8	54.2	19.1	19.7	25.7	27.6	24.6	20.7	22.9	27.9	17.8	22.9	10.1	15.9	16.1	15.0	15.5	15.6	14.4	15.4
18	49.9	48.8	47.3	46.5	48.0	49.7	48.4	20.2	21.0	25.3	28.3	22.0	21.7	23.1	29.2	19.6	24.4	9.6	14.8	14.9	20.3	18.9	18.2	18.7	17.6
19	49.1	49.6	49.0	48.0	47.7	48.4	48.6	22.5	22.2	25.1	26.3	24.3	23.1	23.9	26.7	21.2	24.0	5.5	18.4	18.8	20.3	19.5	20.1	19.7	19.5
20	47.7	47.3	48.3	46.8	47.4	49.0	47.8	22.5	22.8	26.3	30.4	27.7	22.9	25.4	31.7	21.6	26.7	10.1	19.6	20.0	20.5	19.8	19.6	18.6	19.7
21	49.2	50.2	50.6	49.5	50.7	52.1	50.4	21.2	21.2	27.7	30.3	25.5	23.3	24.7	31.6	20.5	26.1	11.1	17.9	17.3	20.0	20.7	20.6	20.4	19.5
22	52.0	52.7	53.6	52.4	52.7	54.0	52.9	22.9	23.2	27.5	29.7	25.1	23.0	25.2	30.1	22.8	26.5	7.3	20.1	20.5	20.2	20.5	19.4	19.0	20.0
23	53.7	53.6	53.2	52.0	51.9	52.6	52.8	22.6	22.7	27.6	29.5	25.3	22.2	25.0	29.8	21.9	25.9	7.9	19.3	19.2	19.7	20.1	20.5	18.2	19.5
24	51.8	51.9	52.2	51.6	51.5	52.0	51.8	21.6	21.7	25.1	24.9	22.5	22.0	23.0	27.3	21.2	24.3	6.1	18.4	18.7	18.4	21.1	19.6	19.0	19.2
25	51.5	52.8	53.2	51.9	52.6	53.5	52.6	20.7	20.4	24.3	27.1	22.5	19.6	22.4	27.7	19.3	23.5	8.4	17.7	17.2	17.7	17.7	17.0	15.1	17.1
26	53.1	54.0	54.0	53.6	53.9	55.2	54.0	18.1	17.9	23.6	26.6	22.8	21.1	21.7	27.1	17.2	22.2	9.9	15.1	14.9	15.8	16.0	17.1	16.8	16.0
27	54.3	54.8	54.8	53.7	54.1	54.7	54.4	21.2	21.7	26.1	28.7	25.3	24.4	24.6	29.5	20.8	25.2	8.7	17.3	17.7	19.9	20.3	20.7	20.2	19.4
28	53.9	54.2	54.1	52.3	52.9	54.0	53.6	23.9	23.7	28.3	29.3	25.6	24.1	25.8	30.7	23.7	27.2	7.0	20.3	20.0	20.2	20.4	20.9	21.0	20.5
29	53.6	54.7	54.0	53.1	54.0	54.6	54.0	23.1	23.1	28.4	29.7	25.3	24.2	25.6	30.7	22.9	26.8	7.							

AUGUST, 1949.



Day	DIRECTION AND SPEED OF CLOUDS ^x							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION							
	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	—	—	W7	—	—	—	10 st	10 st	7 sc	7 sc	10 sc	10 ns	9.0	—	—	—	—	0.0	0.2	0.2
2	—	—	W8	W8	W7	—	10 ns	10 ns	10 As,Sc,st	10 sc,st,Cu	8 sc,Cc,st	9 cc,Ac,Sc	9.5	0.1	0.2	0.0	—	—	—	0.3
3	—	—	W7	W7	—	—	10 st	10 ns	9 sc,Ci,st	7 sc,Cu	0 sc	0 cu	6.0	—	0.0	0.0	—	—	—	0.0
4	—	—	—	—	—	—	10 st	10 st	3 Ci,Cu	4 sc,Cu,Ci	7 sc,Cs	10 cs	7.3	—	—	—	—	—	—	—
5	—	—	W8	NW7	—	—	10 st	10 st	10 Ci,Cu	8 Ci,Sc,Cu	8 Ci,Cc	6 Ci,Cs	8.7	—	—	—	—	—	—	—
6	—	E8	—	—	—	0	—	1 sc,Cs,Ci	8 Cs,Sc,Cu	4 cb,Cu	2 Ac,Cu	10 sc	4.2	—	—	—	—	—	—	—
7	—	—	—	—	—	10 st	10 st	4 sc,Ci	6 Cu,Ac	4 sc,Ac,Cb	6 sc,Ci	6.7	—	—	—	—	—	—	—	
8	—	—	—	—	—	10 sc	10 ns	5 Ci,Cu	3 cu,Ci	3 cc,Ci	10 st	6.8	—	0.1	0.0	—	—	—	0.1	
9	—	—	—	—	—	10 st	10 st	10 Cs,Sc	6 cc,Cb	10 cs	10 cs	9.3	—	—	—	—	—	—	—	
10	—	—	—	—	—	10 Cs	4 st,Ci	0	—	0	—	0	2.3	—	—	—	—	—	—	—
11	—	—	—	—	—	5 Cs	10 ≡	5 ci	5 Ci,Cu	8 Ci,Cc,Cu	10 Cs	7.2	—	—	—	—	—	—	—	—
12	—	—	—	—	—	6 Ci	10 ci,cc	8 cc,Ac,Sc	5 sc,Cc	4 cc,Ac	0	—	5.5	—	—	—	—	—	—	—
13	—	—	—	—	—	3 ≡	4 ≡	0 Cu,Ac	3 sc,Cs,Cu	7 Cs,Cb	5 Sc,Cs	3.7	—	—	—	—	—	—	—	—
14	—	—	—	—	—	w8	10 Cs	10 ≡	0 Ci,Cu	10 ci,Cs,Cu	10 Ci,Cs	10 sc,Ci	8.3	—	—	—	—	—	—	—
15	—	S7	S7	S7	—	10 sc	9 ci,st,sc	10 sc	10 Cs,Sc,Cu	10 Cs,Sc,Cu	10 sc	9.8	—	—	—	—	—	—	—	—
16	S7	S7	S7	—	—	5 sc	10 sc,st	8 sc	4 cu	6 sc	3 sc	6.0	—	—	—	—	—	—	—	—
17	—	—	E8	E7	—	5 sc	4 sc	7 Cu,Sc	7 sc,Cu	10 sc,Cu	0 sc	5.5	—	—	—	—	—	—	—	—
18	—	E8	E8	E8	NE8	—	9 Sc,Cc	10 sc,ns	10 Cs,Sc,Ns	9 sc,ns	10 ns	10 ns	9.7	—	0.3	0.5	0.1	1.5	10.6	13.0
19	N5	S8	—	S7	—	9 Ac,Sc	10 Ac,Sc,Cc	10 ns	10 sc	10 ns	10 st	9.8	0.2	—	0.2	4.1	0.1	0.0	4.6	—
20	—	N7	—	—	—	10 st	10 st	9 sc,Cc	3 cu,Cc	9 sc,Cb,Cu	0 sc	6.8	—	—	0.2	—	—	—	0.2	—
21	—	E7	N7	—	—	9 ci,Cs,Ac	8 st,Ci,Ac	7 cc,Cu,Sc	9 sc,Cu,Ac	10 sc,ns	10 st	8.8	—	—	—	—	—	—	1.1	1.1
22	—	—	—	—	—	10 st	10 st	10 sc,Ac	6 sc	9 sc	10 sc	9.2	0.1	—	—	—	—	—	0.0	0.1
23	—	W7	W7	—	—	10 sc	10 sc,st	7 cu	7 sc,Cu,Ac	10 sc,Cu	10 st	9.0	—	—	—	—	—	—	—	—
24	—	—	—	—	—	10 st	10 ns	10 st	10 ns	10 st	10 ns	10.0	—	—	0.0	0.7	1.4	0.4	2.5	—
25	—	—	—	—	—	10 ns	10 ns	8 sc,Cc	7 sc,Ci	10 sc	10 sc	9.2	4.6	3.1	0.1	—	—	—	7.8	—
26	—	—	s8	—	—	10 sc	10 st	2 cu	6 sc,Cu	10 sc,st	10 sc,st	8.0	—	—	—	—	—	—	—	—
27	—	S7	S7	S7	—	10 st	10 ns,Sc	10 st	10 Cs,Sc	10 st	10 st	10.0	—	—	0.3	—	—	—	0.3	—
28	—	s8	s8	—	—	10 st	10 st	8 sc	6 sc,Cs	10 ns,st	10 st,ns	9.0	—	—	—	—	—	—	0.1	0.1
29	—	—	—	—	—	10 ns	10 st	4 Ci,Cu	5 Ci,Cu	10 ns,Cs	10 st	8.2	2.5	0.1	—	—	0.0	—	0.6	3.2
30	—	s9	s8	s8	s8	10 st	10 st,Sc	10 sc,st	4 sc,Cu,Ac	10 sc	8 sc	8.7	—	—	0.0	—	0.0	—	—	0.0
31	—	—	—	—	—	2 sc	10 cs,Sc	10 sc,st,Ci	10 sc,ns,Sc	10 ns,Sc	10 ns	8.7	—	—	—	0.0	0.2	1.8	—	2.0
							8.5	9.0	7.1	6.5	7.9	7.6	7.8	7.5	3.8	1.3	4.9	3.2	14.8	35.5

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm	REMARKS																		
			Open Air	in the Shelter																	
1	4.65	(4.2)	1.5	—	○ ⁰ p. ● ⁰ 1725—1729,1940—2005,2015—2105,2112—2220,2229—2240.	● ⁰ 120—0215. ≡ ⁰ 0230—● ⁰ 0430—≡ ⁰ 0455—0630,0820—0855.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	2.18	3.7	1.0	—	○ ⁰ a.∞ ⁰ ,○ ⁰ ,△ ¹ p. ≡ ⁰ 0543—0720.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
3	7.00	5.6	1.5	—	≡ ⁰ 0020—≡ ⁰ 0546—0640.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
4	9.02	5.9	1.6	—	△ ¹ ,○ ⁰ a.○ ⁰ p. ≡ ⁰ 0130—≡ ⁰ 0450—≡ ⁰ 0620—0640.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
5	8.15	6.4	2.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
6	12.17	6.6	2.2	—	△ ⁰ ,○ ⁰ ,∞ ⁰ a.○ ⁰ p.	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
7	8.58	(6.2)	1																		

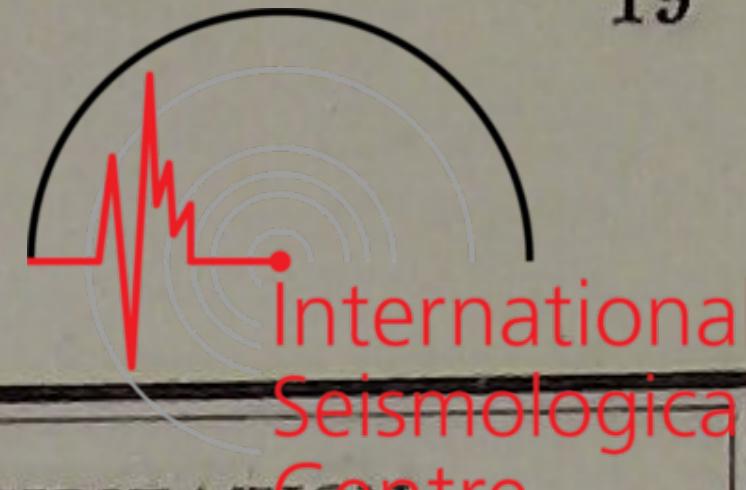
METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

SEPTEMBER, 1949.



Day	AIR PRESSURE (700mm+)* mm						AIR TEMPERATURE °C								TENSION OF 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	47.1	45.6	49.4	51.5	53.1	54.6	50.2	24.3	23.9	23.9	24.0	22.2	21.8	23.4	24.6	21.7	23.2	2.9	19.9	20.3	20.7	20.2	18.4	18.8	19.7
2	54.0	54.6	55.7	54.6	55.4	56.0	55.1	21.7	21.8	24.5	28.3	24.1	22.9	23.9	28.5	21.6	25.1	6.9	18.9	19.0	20.2	21.2	20.1	19.7	19.9
3	55.6	56.8	57.1	56.6	56.4	57.1	56.6	22.1	21.7	24.6	26.7	25.0	21.2	23.6	28.9	19.5	24.2	9.4	19.3	18.9	19.2	20.2	19.7	17.9	19.2
4	56.8	57.2	56.4	55.0	54.6	54.9	55.8	18.9	18.7	25.1	28.3	21.9	18.5	21.9	28.7	17.0	22.9	11.7	15.7	15.7	17.1	17.7	15.8	14.4	16.1
5	54.0	55.1	54.1	52.9	53.7	55.1	54.2	16.7	16.2	23.9	27.5	22.1	17.5	20.7	27.7	15.1	21.4	12.6	13.6	13.5	23.9	15.4	16.6	14.0	16.2
6	55.0	55.3	56.7	54.8	55.6	57.1	55.8	17.7	14.5	21.0	26.9	21.7	17.8	19.9	28.4	14.2	21.3	14.2	14.7	12.0	13.5	12.9	16.3	13.3	13.8
7	57.1	57.7	58.0	56.7	56.2	56.8	57.1	14.1	14.6	21.5	27.6	21.7	16.7	19.4	28.1	13.4	20.8	14.7	11.6	12.4	14.0	12.2	15.8	13.5	13.3
8	56.1	55.9	55.3	52.4	52.4	52.7	54.1	16.3	16.9	22.2	27.1	23.1	21.7	21.2	27.3	15.6	21.5	11.7	13.1	13.6	14.7	17.7	20.1	18.7	16.3
9	52.9	52.9	53.2	52.2	52.8	53.7	53.0	20.3	18.5	24.9	27.5	21.7	19.8	22.1	28.7	17.7	23.2	11.0	16.4	15.5	17.4	16.8	15.8	14.4	16.1
10	52.8	53.6	54.6	53.6	53.9	54.8	53.9	18.6	18.1	19.9	22.8	18.1	16.7	19.0	23.9	15.3	19.6	8.6	15.0	14.0	14.2	11.7	13.0	13.1	13.5
11	55.0	55.2	54.8	54.2	55.0	55.2	54.9	14.5	13.1	22.1	22.5	18.2	14.6	17.5	23.3	11.4	17.4	11.9	11.8	11.2	11.8	12.3	13.1	11.6	12.0
12	54.6	54.4	54.7	53.2	54.2	55.1	54.4	12.1	12.5	19.1	23.6	19.1	14.7	16.9	23.9	11.6	17.8	12.3	9.9	10.4	9.9	9.9	14.1	11.8	11.0
13	55.7	56.9	56.9	56.4	57.6	59.8	57.2	11.6	11.6	17.7	22.3	16.9	13.4	15.6	23.3	10.3	16.8	13.0	10.0	10.0	13.3	12.5	11.7	10.3	11.3
14	60.6	62.1	63.0	61.8	63.5	65.0	62.7	10.4	8.4	19.6	23.5	16.9	12.0	15.1	23.9	7.6	15.8	16.3	9.3	8.0	9.9	10.9	11.5	10.0	9.9
15	64.2	64.3	63.2	61.3	61.2	60.5	62.5	8.9	9.1	21.2	23.7	17.4	15.3	15.9	23.7	7.8	15.8	15.9	8.2	8.6	11.0	10.1	11.4	12.0	10.2
16	58.8	57.6	56.2	53.2	51.8	52.9	55.1	15.5	15.3	18.3	19.1	19.4	19.0	17.8	20.0	14.2	17.1	5.8	12.0	11.7	11.9	13.6	14.4	15.8	13.2
17	52.9	53.9	53.4	51.2	52.2	53.0	52.8	18.9	18.5	21.4	21.5	18.7	18.4	19.6	22.1	18.0	20.1	4.1	15.8	15.5	15.7	17.4	15.7	15.4	15.9
18	53.9	55.4	56.8	56.1	56.6	57.2	56.0	17.3	16.6	20.1	18.1	16.3	14.3	17.1	21.1	14.2	17.7	6.9	12.0	13.2	13.2	14.6	12.8	11.8	12.9
19	56.4	55.9	56.3	54.6	54.3	55.2	55.5	14.4	14.7	16.7	18.5	18.1	17.9	16.7	18.9	14.3	16.6	4.6	12.0	12.1	13.5	14.4	14.7	14.9	13.6
20	53.2	53.5	54.7	54.9	56.5	57.8	55.1	18.0	19.0	22.5	23.9	21.5	19.8	20.8	24.5	17.8	21.2	6.7	15.1	16.1	17.0	17.8	16.3	13.7	16.0
21	58.4	59.3	59.9	59.0	60.0	60.7	59.6	18.9	17.9	21.8	24.8	19.3	18.4	20.2	25.5	17.8	21.7	7.7	14.4	14.9	14.1	13.7	15.0	14.5	14.4
22	60.0	60.0	60.2	58.5	57.2	55.6	58.6	16.9	16.1	19.7	18.5	17.0	16.7	17.5	20.1	15.8	18.0	4.3	12.0	12.9	12.3	14.1	13.2	13.5	13.0
23	54.2	52.7	52.5	50.9	50.2	50.7	51.9	17.1	22.3	25.6	24.6	22.8	20.4	22.1	26.3	16.6	21.5	9.7	14.1	17.6	18.4	17.4	17.1	16.8	16.9
24	51.4	52.4	52.6	52.0	52.8	53.5	52.5	18.1	16.7	23.7	22.3	19.8	15.1	19.3	24.1	13.4	18.8	10.7	14.4	13.5	12.5	12.0	14.3	12.1	13.1
25	53.3	53.7	54.2	53.4	53.7	54.2	53.8	11.7	12.3	20.2	22.7	18.1	14.5	16.6	24.1	10.8	17.5	13.3	10.0	10.5	11.9	9.9	12.4	11.3	11.0
26	54.2	54.4	54.8	53.7	54.3	53.6	54.2	14.5	12.9	20.0	24.9	21.2	18.9	18.7	25.5	12.1	18.8	13.4	12.1	10.8	12.9	12.8	14.4	14.8	13.0
27	52.2	52.1	53.7	53.4	54.1	54.4	53.3	18.4	18.5	19.1	18.9	16.9	13.7	17.6	20.2	12.4	16.3	7.8	14.8	14.7	11.5	12.4	12.3	11.2	12.8
28	55.6	57.2	57.8	57.0	57.8	58.8	57.4	10.5	10.7	18.7	20.5	16.5	10.4	14.6	22.5	9.7	16.1	12.8	9.3	9.4	11.7	12.0	11.8	9.0	10.5
29	58.3	59.1	58.5	57.5	57.7	58.2	58.2	11.0	10.8	19.1	23.5	16.6	13.4	15.7	24.8	9.6	17.2	15.2							

SEPTEMBER, 1949.

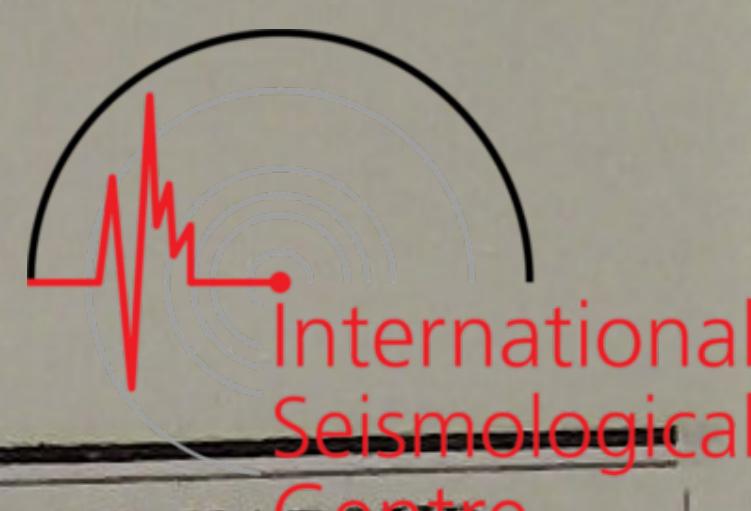


Day	DIRECTION AND SPEED OF CLOUDS ×							AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION						
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	S8	S8	S7	—	10 NS	10 NS	10 NS	10 st	10 Sc	10 NS	10.0	3.7	19.9	6.4	8.5	0.1	0.1	38.7
2	—	—	S7	S7	S7	—	10 NS	10 NS	10 Cs,St	10 As,Sc,St	10 Cs,St	10 st	10.0	0.2	0.8	0.0	—	0.1	—	1.1
3	—	W7	—	—	—	—	10 St	10 St,Ce	10 As,NS	6 Ac,Sc	4 Sc,Ac	4 Sc	7.3	—	—	—	0.0	—	—	0.0
4	—	—	—	—	—	6 Ci	10 St	3 Cu,Ac	1 Cu	5 Ce,Cb,Ac	0 Ce	4.2	—	—	—	—	—	—	—	—
5	—	—	—	—	W8	—	1 Cu	10 ≡	4 Ac,Sc	3 Sc,Cu	6 Sc	0—	4.0	—	—	—	—	—	—	—
6	—	—	—	—	—	—	10 St	10 st	0 Cu	1 Cu	2 Sc,Ac	0—	3.8	—	—	—	—	—	—	—
7	—	—	—	—	—	—	4 Cs	10 ≡	0 Cu	0 Sc	0—	0—	2.3	—	—	—	—	—	—	—
8	S7	—	S7	S7	—	—	10 St	10 st	6 Sc	9 Sc,Cs	10 NS	10 Sc,As,Cs	9.2	—	—	—	5.8	1.8	—	7.6
9	—	—	W7	W7	—	—	10 Sc	10 Sc,Ac,Cc	9 Sc,Ac	10 Cs,As,Sc	10 As,Sc	10 NS	9.8	—	—	—	—	0.1	0.1	0.1
10	—	—	—	S7	—	—	10 As	10 Sc,As,St	10 As,Sc	8 Cs,Sc	8 St,As,Sc	9 Sc	9.2	0.3	0.2	0.0	—	—	—	0.5
11	—	—	W7	W7	—	—	5 Sc	10 ≡	10 Cu,Sc,Ci	10 Ac,Cu,Sc	10 As,Ac	5 Ce,Ac,Cu	8.3	—	—	—	—	—	—	—
12	W4	W4	—	—	—	—	9 Ac,Sc,Cc	10 Ac,As,Sc	9 Ce,Sc	6 Ce,Sc	8 Sc,Ce	4 As,Sc	7.7	—	—	—	—	—	—	—
13	—	N8	—	—	—	—	6 Sc,As	9 St,Cs	10 As,Sc	9 Ci,Cs,Cu	10 Ci,Cs,Cu	8 Ci	8.7	—	—	—	—	—	—	—
14	—	—	—	—	—	—	9 Ci	1 Cs,St	2 Sc,Cu	4 Ci,Cu	1 Ac	0—	2.8	—	—	—	—	—	—	—
15	—	—	—	—	—	—	0—	10 ≡	2 Ce,Cu	5 Ci,Cu	3 Ci,Cu	10 As,Sc	5.0	—	—	—	—	—	—	—
16	—	—	—	W8	—	10 Sc	10 As,Ac	10 st	10 st	10 Sc,St	10 NS	10.0	—	—	—	0.0	—	0.5	—	0.5
17	W7	—	—	—	—	10 NS	10 sc	10 As,Sc	10 NS,Sc	10 NS	10 As,St	10.0	0.2	0.1	0.0	0.7	5.0	—	6.0	
18	—	—	—	—	—	10 As,Sc	10 As	10 As,Cu	10 NS	10 st	10 st	10 NS	10.0	5.0	0.4	0.3	—	0.7	10.3	14.1
19	—	—	—	—	—	10 NS	10 ns	10 st	10 st	10 st	10 st	10 NS	10.0	—	1.3	—	0.0	—	5.7	—
20	—	—	W7	—	—	10 St	10 st	10 As,St	10 Sc,St	10 Sc	10 Sc	10.0	1.3	—	—	—	—	—	—	1.3
21	—	—	—	—	—	10 NS	10 NS,Ac,St	8 Ci,Ac,Cc	10 Ci,Ac,Cu	10 Sc	10 Sc	9.7	0.0	2.2	0.1	—	—	—	—	2.3
22	—	—	—	—	—	10 St	10 Sc	10 Sc	10 NS	10 NS	10 NS	10.0	—	—	—	1.9	0.7	3.9	6.5	
23	S8	S8	S8	S8	—	10 NS,Sc,Cs	8 NS,Sc,Cc	5 Sc,Ac	10 Ce,Sc,Ns	10 As,Sc,St	10 st	8.8	2.2	—	0.1	0.3	—	12.1	14.7	
24	—	—	—	—	—	10 St	9 Cs,Cc,Sc	10 Cs,Ci,Sc	10 Cs,Sc,Cu	5 Sc	10 As,Sc	9.0	0.9	—	—	—	—	—	0.9	
25	—	—	—	—	—	5 St,Cs	10 ≡	2 Cu	2 Cu,Cs	7 Ce,Cs	10 As	6.0	—	—	—	—	—	—	—	
26	—	—	W7	—	—	10 Cs	10 Ac,≡	8 Ac,Cu	10 Ac,Sc,Cu	10 Sc	10 Sc	9.7	—	—	—	—	—	—	—	
27	W7	W7	—	—	—	10 Sc	10 Sc	10 Sc,As	10 As,Sc	10 As,Sc	10 Cs,Sc	10.0	—	—	—	0.0	0.1	—	0.1	
28	—	W7	W7	—	—	10 St,Cs	10 st	9 Sc	9 Sc,Cu	0 Sc	0 Sc	6.3	—	—	0.1	1.6	—	—	1.7	
29	—	W7	—	—	—	10 Sc	10 Sc,St	1 Cu	1 Cu,Cs	7 Sc,Ce,Ac	9 Sc	6.3	—	—	—	—	—	—	—	
30	—	W8	W8	W7	W7	—	10 Sc,Ci	10 Sc,Ci,Cs	9 Cs,Sc	8 Sc,Ci,Cs	7 Sc,Cs	10 As,NS,Sc	9.0	0.4	—	—	—	0.3	0.0	0.7
							8.5	9.6	7.2	7.4	7.4	7.3	7.9	14.2	23.6	7.1	16.0	12.8	28.8	102.5

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm	Open Air	in the Shelter	REMARKS																	
					REMARKS																	
1	—	(2.8)	0.4	—●°—●°1113—●°0120—0150...●°0340—●°0745—0825,0955...●°1035—●°1039—●°1045—●°1047—*	—●°—●°0010,0245—≡°0635—0700.●°1553—1607. * ●°1052—●°1054—1120.●°1155—1230,1250—1305,*																	
2	1.45	(3.6)	0.9	—●°—●°0010,0245—≡°0635—0700.●°1553—1607. * ●°1052—●°1054—1120.●°1155—1230,1250—1305,*	—●°—●°1500—1545,2045,— —1040.																	
3	3.60	2.4	0.7	△¹a.∞°,∞°p.●°1019...1030.																		
4	8.92	5.5	1.4	△¹,∞°a.∞°,∞°p.●°0410—≡°0450—≡°0530—0620.																		
5	8.32	4.8	1.3	△¹a.0²,△¹p.●°0450—≡°0705—0743.																		
6	8.53	4.4	1.1	∞°a.0¹,△¹p.●°0534—0638.																		
7	8.12	4.9	1.4	△¹,0²a.0²,△°p.●°0440—≡°0520—≡°0843—≡°0850—0905.																		
8	5.01	(3.6)	0.9	∞°a,p.●°1601—●°1635—●°1640—●°1715—●°1720—●°1725—●°1732—2020.																		
9	4.49	(2.9)	1.3	0²p.●°2133—2310.																		
10	2.65	2.9	1.0	γ°,△¹p.●°0255—0350,0715—0820.																		
11	3.31	2.3	0.9	0²a.0²,△¹p.●°0455—≡°0520—≡°0540—≡°0705—0730.																		
12	5.40	2.7	0.9	△¹,∞°a.0²,△°p.																		
13	3.53	2.9	1.0	△¹,∞°a.0¹,∞°,△																		

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

OCTOBER, 1949.



Day	AIR PRESSURE (700mm+)* mm							AIR TEMPERATURE °C								TENSION OF 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	56.5	56.2	55.9	54.4	54.9	55.8	55.6	10.5	8.8	17.7	17.1	13.2	10.4	13.0	20.3	8.6	14.5	11.7	9.2	8.3	9.4	7.5	9.0	8.7	8.7
2	54.3	54.5	56.7	57.3	59.5	61.1	57.2	10.4	9.1	12.3	19.7	13.2	9.3	12.3	19.9	7.8	13.9	12.1	8.7	8.2	9.8	7.9	9.2	8.2	8.7
3	61.6	63.3	63.5	61.9	62.7	63.4	62.7	7.1	7.0	14.1	19.5	14.1	8.9	11.8	20.9	6.8	13.9	4.1	7.5	7.5	9.1	7.4	9.1	8.2	8.1
4	63.3	63.0	62.5	60.7	61.0	60.8	61.9	5.8	5.4	16.4	18.8	14.7	13.2	12.4	19.5	5.2	12.4	14.3	6.8	6.6	9.2	10.0	10.6	10.4	8.9
5	59.8	59.8	59.5	58.6	58.4	58.1	59.0	11.4	10.6	15.7	15.6	13.2	12.6	13.2	16.3	10.2	13.3	16.1	9.5	9.2	9.8	10.3	10.4	10.4	9.9
6	57.2	56.9	56.9	55.4	55.8	56.7	56.5	12.2	11.6	14.3	16.4	13.9	12.1	13.4	16.7	11.3	14.0	5.4	10.1	9.7	9.8	10.4	10.9	8.4	9.9
7	56.6	57.7	58.1	57.4	59.1	60.5	58.2	10.5	9.0	15.3	18.4	13.2	9.9	12.7	19.7	7.4	13.6	12.3	8.1	7.7	7.3	7.0	9.6	8.7	8.1
8	60.1	60.9	61.5	59.3	59.9	60.5	60.4	5.8	4.0	12.5	20.1	10.3	9.9	10.4	20.3	4.0	12.2	16.3	6.8	6.0	8.4	8.2	9.9	8.6	8.0
9	60.0	60.3	59.1	57.2	55.5	54.6	57.8	7.1	8.1	13.5	16.9	15.9	17.3	13.1	17.3	6.2	11.8	11.1	7.4	7.9	9.8	11.3	12.1	13.5	10.3
10	53.3	52.1	51.8	51.1	53.2	55.5	52.8	16.9	16.5	18.5	18.3	16.0	14.7	16.8	22.5	11.8	17.2	10.7	13.6	13.6	13.6	12.4	11.5	9.8	12.4
11	55.9	58.0	59.3	59.1	60.6	61.6	59.1	9.5	8.1	15.5	20.7	14.3	14.1	13.7	20.9	7.8	14.4	13.1	8.6	7.7	10.3	10.6	11.2	11.5	10.0
12	61.4	62.6	63.1	61.1	61.4	60.6	61.7	11.9	10.9	17.7	19.1	15.3	14.1	14.8	19.9	10.0	15.0	9.9	10.2	9.7	11.1	11.4	11.3	11.3	10.8
13	59.6	58.7	57.8	55.8	55.4	55.6	57.2	14.1	13.5	20.7	21.2	17.0	15.9	17.1	22.4	13.2	17.8	9.2	11.6	11.2	12.9	13.5	13.7	12.9	12.6
14	55.0	55.0	54.8	54.8	56.1	57.1	55.5	15.1	12.9	17.7	18.1	15.1	13.2	15.4	19.4	11.0	15.2	8.4	12.1	10.8	10.6	10.4	10.9	10.6	10.9
15	57.6	58.9	59.6	58.4	59.7	60.3	59.1	14.1	10.2	16.7	20.2	15.3	12.0	14.8	21.5	10.0	15.8	11.5	12.0	9.1	10.6	10.7	10.9	10.0	10.6
16	59.8	59.9	60.9	59.5	60.1	60.4	60.1	11.7	12.3	17.7	19.2	14.7	11.9	14.6	19.5	9.9	14.7	9.6	10.0	10.4	8.6	8.9	8.7	9.2	9.3
17	60.0	60.5	60.2	59.2	60.3	61.3	60.3	10.1	7.6	14.6	17.5	14.3	13.3	12.9	18.4	7.6	13.0	10.8	8.7	7.6	9.0	10.4	10.0	10.7	9.4
18	61.2	61.7	62.1	60.5	60.1	59.7	60.9	12.5	11.7	16.4	17.3	15.7	14.7	14.7	18.1	10.4	14.3	7.7	10.2	9.9	11.0	12.7	10.8	11.5	11.0
19	57.3	55.7	54.5	52.0	51.8	52.2	53.9	15.1	15.3	14.5	15.3	16.2	14.9	15.2	16.7	13.4	15.1	3.3	12.1	12.4	11.8	12.3	9.6	10.2	11.4
20	53.4	55.6	58.3	59.3	61.6	62.9	58.5	13.2	11.4	15.6	15.1	13.4	10.3	13.2	16.1	9.5	12.8	6.6	7.7	7.8	8.4	9.0	7.5	8.3	8.1
21	63.4	63.8	64.3	61.9	62.4	62.3	63.0	8.2	5.7	11.3	18.5	13.9	9.1	11.1	18.7	5.1	11.9	13.6	7.7	6.7	8.1	7.8	9.6	8.1	8.0
22	61.3	60.7	59.6	57.1	57.1	57.1	58.8	7.4	4.7	11.9	15.6	12.0	11.1	10.5	16.7	4.7	10.7	12.0	7.3	6.3	8.5	7.9	7.6	7.2	7.5
23	57.1	58.0	58.4	58.1	60.0	62.2	59.0	9.8	10.5	17.4	17.1	12.1	6.5	12.2	18.5	6.5	12.5	12.0	7.9	6.2	6.5	6.8	6.3	6.3	6.7
24	62.0	63.0	62.8	60.0	59.1	58.5	60.9	3.4	1.4	9.8	16.6	11.4	10.3	8.8	16.8	1.2	9.0	15.6	5.6	4.9	6.3	7.4	7.7	8.0	6.7
25	56.9	56.1	55.2	54.3	53.8	53.3	54.9	9.8	8.3	10.9	12.4	11.7	8.0	10.2	12.9	6.2	9.6	6.7	8.2	7.8	8.4	8.8	9.5	7.9	8.4
26	52.7	53.3	55.2	54.5	57.0	58.2	55.2	7.1	11.2	15.3	16.8	9.2	4.8	10.7	16.9	2.5	9.7	14.4	7.4	6.8	6.2	5.8	6.4	5.9	6.4
27	57.8	58.4	58.7	57.2	57.1	56.2	57.6	3.0	2.8	8.0	11.3	10.4	9.1	7.4	11.4	2.3	6.9	9.1	5.6	5.4	6.1	6.9	8.5	8.4	6.8
28	54.1	53.0	50.0	50.3	53.1	55.6	52.7	9.1	8.8	9.2	10.9	10.6	10.9	9.9	12.7	8.5	10.6	4.2	8.4	8.3	8.3	9.2	7.9	6.4	8.1
29	55.8	57.3	57.7	55.2	52.6	48.6	54.6	10.3	8.7	11.8	11.7	10.3	11.0	10.6	12.7	7.8	10.3	4.9	6.1	6.5	7.3	7.8	8.3	8.8	7.5
30	43.7	42.6	41.1	42.0	46.9	50.4	44.5	10.7	11.6	13.3															

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

OCTOBER, 1949.

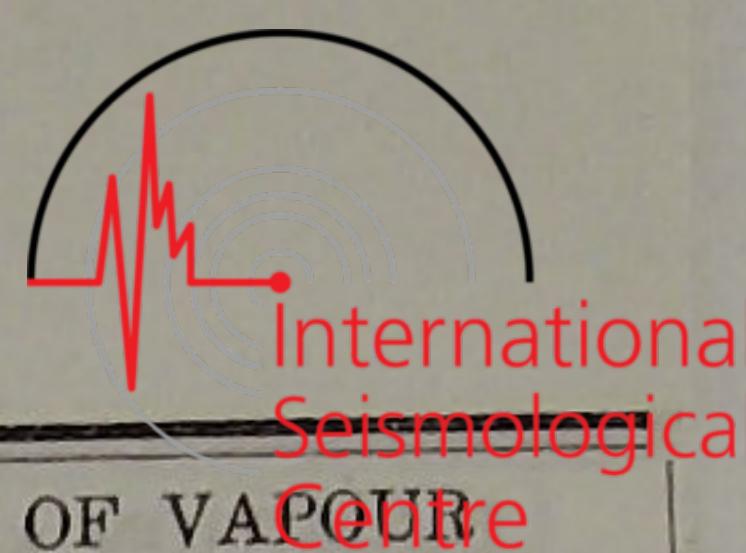


Day	DIRECTION AND SPEED OF CLOUDS ×							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	W7	w8	—	—	10 As,Ns	10 ≡,Sc	7 Sc,Cu,Ci	5 Cu,Ci	1 Cu,Ac	10 NS	7.2	0.8	0.0	—	0.0	—	0.0	0.8
2	—	W7	—	w7	w7	—	10 AS	10 Sc,Ns	9 Ns,Sc	6 Sc,Cu	9 Sc	1 Ac	7.5	1.3	—	0.3	0.0	—	—	1.6
3	—	—	—	—	—	8 ≡	10 ≡	3 Sc,Cu	5 Cu	0 Cu	1 Sc	4.5	—	—	—	—	—	—	—	—
4	—	—	—	W7	—	—	8 ≡,Sc	10 ≡,Ci	9 Ci,Sc,Cu	10 Sc,Cu	8 Ci,Sc,Ac	10 Sc	9.2	—	—	—	—	0.7	—	0.7
5	—	—	—	—	—	7 sc	10 Sc,Ac	10 Sc	10 Sc,St	10 St	10 St	9.5	—	—	—	—	0.7	—	0.7	
6	—	—	—	—	—	10 NS,Sc	10 NS,Sc	10 NS	10 As,NS	10 sc	10 Sc	10.0	0.1	0.2	0.3	0.1	0.4	—	1.1	
7	—	—	—	—	—	9 sc	6 Ac,As	7 Ac,Cu	3 Cu	0 Cu	3 Cu	4.7	—	—	—	—	—	—	—	—
8	—	—	—	—	—	10 Cs,Ci	10 ≡	1 Sc,Ci	10 Cs,Sc	8 Sc	1 Ac	6.7	—	—	—	—	0.1	1.6	1.7	
9	—	—	—	—	—	0 Cu	10 st,≡	10 st	10 Sc	10 NS	10 NS	8.3	—	—	—	—	0.1	1.6	1.7	
10	—	—	W7	—	—	10 NS	10 NS	7 Sc,St,Cs	10 Ns,Sc	4 Cc,Ci,St	0 Sc	6.8	0.3	2.4	0.3	1.7	0.1	—	4.8	
11	—	—	—	—	—	0 Cc,Ci	3 Sc,St,Cs	5 Sc,Cc	8 Sc,Cs	8 Sc,NS	10 NS,Sc	5.7	—	—	—	—	4.5	1.8	6.3	
12	—	—	—	—	—	0 sc	10 ≡	7 Cs,Cu	10 As,Ac,Cu	10 As	10 Ns,St	7.8	0.2	—	—	—	—	0.1	0.3	
13	—	S7	—	—	—	10 NS	10 st	10 Cs,Ac,Sc	10 Cs,Sc	10 st	10 NS	10.0	0.3	0.0	—	—	6.8	0.5	7.6	
14	—	W7	—	W7	—	9 sc	10 Sc,As	10 Cs,Sc	10 Cs,Sc	3 Sc	10 Cs,Sc,Ci	8.7	2.4	—	—	—	0.0	—	2.4	
15	—	—	—	—	—	10 ≡	10 ≡	7 Sc,Ci	7 Sc,Ci	10 Sc	10 Cs,Sc	9.0	—	—	—	—	—	—	—	
16	—	—	W7	—	—	10 sc	9 Ns,Sc,Cs	8 Cu,Cc,Ac	3 Cu,Cc	8 Sc	0 Ac	6.3	—	0.2	0.0	—	—	0.0	0.2	
17	—	—	—	—	—	8 Ac,Cc	2 Cc	2 Sc,Cu	9 Sc,Cu	10 Sc	10 st	6.8	—	—	—	—	0.0	0.2	0.2	
18	—	S7	—	—	—	10 sc	10 Sc,Cc,Ci	10 Sc	10 Cs,Sc,NS	10 Sc	10 NS	10.0	—	—	—	0.0	—	1.3	1.3	
19	—	—	W8	—	—	10 NS	10 NS	10 NS	10 Ns,As,Cc	1 Ac	10 st	8.5	2.9	6.1	4.8	3.5	0.0	0.3	17.6	
20	—	W8	W7	W7	—	2 st	8 Sc,St,Cc	10 Sc	10 Sc	9 Sc	9 Sc	8.0	—	—	—	0.8	—	—	0.8	
21	—	—	—	—	—	6 sc	6 Ci,Sc	2 Cu,Ci	2 Cu,Ci	4 Ac,Cu	6 Ac,As	4.3	—	—	—	—	—	—	—	
22	—	W5	W8	—	—	10 AS	8 Ac,As,Sc	10 Ac,Cs,Cu	10 Sc,Cs,Cu	7 Cs,Sc	2 Sc	7.8	—	—	—	0.0	—	0.0	0.0	
23	—	—	W8	—	—	4 cu	1 Cu	2 Cu	7 Sc,Cu	0 Sc	0 Sc	2.3	—	—	—	—	—	—	—	
24	—	—	—	—	—	0 cu	0 —	0 Ci	5 Ci,Sc	9 Sc,Cs	10 Cs,Sc,St	4.0	—	—	—	—	0.2	0.0	0.2	
25	—	—	—	—	—	10 As,Sc	10 As,Sc,Cs	10 As,Sc	10 As,Sc	10 NS	0 —	8.3	—	—	—	—	0.2	0.0	0.2	
26	—	—	—	—	—	10 ≡	1 Cu	0 Sc	1 Sc,Cu	0 —	0 —	2.0	—	0.2	—	—	—	—	0.2	
27	—	—	—	—	—	8 sc	10 Cs,Cc,St	10 As	10 As,Sc	10 As,Sc	10 NS	9.7	—	—	—	—	0.7	0.7	0.7	
28	—	—	W7	—	—	10 NS	10 NS	10 NS	10 Sc,NS	0 Cu	3 Sc	7.2	9.0	6.8	9.8	3.0	0.2	—	28.8	
29	—	W8	—	—	—	10 sc	10 Sc,Ci	10 Sc	10 Sc	10 Sc	10 Sc	10.0	—	—	—	—	0.1	0.1	0.1	
30	—	W8	—	W8	—	10 sc	9 Sc,Ac	10 st,Sc	9 NS,Sc	8 NS,Sc	10 NS	9.3	—	—	—	1.4	0.7	1.0	3.1	
31	—	—	W7	W7	—	10 sc	6 st,Sc	8 st,Ac,Ci	8 Sc,Cu,St	5 Sc	10 NS,Sc	7.8	2.7	—	1.5	0.0	—	0.3	4.5	
						7.7	8.0	7.2	8.0	6.5	6.6	7.4	20.0	15.9	17.0	10.5	13.7	7.9	85.0	

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	7.29	(3.1)	1.3	0 0 a. 0 2 p. ● 0 240—0 250, = 1 0 410—= 3 0 540—= 1 0 625—0 720. ● 0 1 250—1 3 10, 2 1 58—2 2 52.																	
2	4.73	3.1	1.0	0 1, △ 1 p. ● 0 603—1 0 32.																	
3	6.28	2.9	1.1	△ 1, ∞ 0 a. 0 1, △ 1 p. ≡ 5 0 100—= 4 0 748—= 3 0 813—= 2 0 820—0 850.																	
4	4.52	2.1	0.8	0 0, ∞ 0 a. 0 0 p. ≡ 3 0 120—= 5 0 220—= 4 0 430—= 3 0 740—= 2 0 810—0 840.																	
5	—	(0.8)	0.5	● 0 1 524—1 720.																	
6	—	(2.3)	1.1	● 0 1 48—0 2 30, 0 5 47—0 6 39, 0 7 46—0 9 20, 0 9 25—1 0 25, 1 1 45...1 2 15, 1 2 25...1 2 40, 1 3 15...1 3 43—1 3 50,*																	
7	7.23	2.4	0.4	0 2 a. 0 2, △ 1 p.																	* L ● 0 1 415...1 4 25, 1 5 15...1 5 25—1 5 35...1 5 55—1 6 30...1 7 20.
8	5.70																				

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

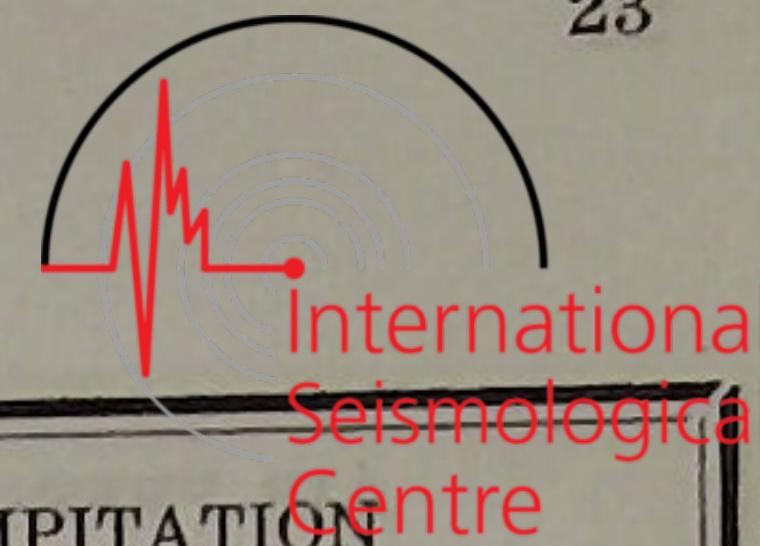
NOVEMBER, 1949



Day	AIR PRESSURE (700mm+)* mm							AIR TEMPERATURE °C								TENSION OF 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	57.3	57.5	57.4	56.2	57.1	56.7	57.0	5.1	6.0	13.2	14.5	10.3	8.9	9.7	16.1	5.0	10.6	11.1	5.3	5.5	6.7	7.3	7.3	7.6	6.6
2	56.6	56.5	57.3	57.5	58.4	59.9	57.7	7.7	6.1	9.5	10.1	5.5	4.1	7.2	10.9	2.7	6.8	8.2	6.4	6.6	5.9	4.7	4.5	5.4	5.6
3	60.2	62.0	62.9	61.6	62.6	63.0	62.1	2.1	-0.9	7.9	8.9	6.8	1.6	4.4	9.9	-1.0	4.5	10.9	4.5	4.1	5.0	4.2	5.0	4.8	4.6
4	62.3	61.7	61.0	57.9	56.9	54.4	59.0	-0.4	-0.3	7.8	12.1	8.9	7.3	5.9	12.7	-0.4	6.2	13.1	4.4	4.5	5.9	5.4	6.5	7.3	5.7
5	50.0	48.0	47.8	48.5	51.2	53.7	49.9	6.6	6.8	9.9	12.4	9.5	6.7	8.7	14.1	6.4	10.3	7.7	7.1	7.1	8.2	7.6	6.6	7.0	7.3
6	54.2	55.3	56.1	56.5	58.8	60.3	56.9	4.9	5.1	10.5	10.8	8.4	5.1	7.5	11.8	4.9	8.4	6.9	6.5	6.6	7.6	7.0	6.0	5.6	6.6
7	60.5	61.3	61.1	58.8	59.7	60.7	60.4	4.5	2.4	10.3	9.2	8.5	7.2	7.0	10.7	2.4	6.6	8.3	5.6	5.1	6.3	7.8	5.5	6.5	6.1
8	60.8	62.6	63.6	62.2	61.8	61.4	62.1	7.5	6.7	9.7	11.7	5.2	2.5	7.2	12.5	2.0	7.3	10.5	4.7	4.9	5.0	5.1	5.6	5.2	5.1
9	59.8	58.2	58.6	57.7	59.5	60.1	59.0	1.5	0.3	9.4	10.3	6.7	4.6	5.5	11.1	0.2	5.7	10.9	5.0	4.6	6.5	4.9	4.2	4.7	5.0
10	59.2	59.4	60.1	59.3	60.9	61.7	60.1	4.0	2.2	7.7	8.0	5.3	3.5	5.1	9.0	1.7	5.4	7.3	4.5	3.8	3.7	3.9	3.7	4.0	3.9
11	62.1	62.4	63.6	62.6	63.8	63.7	63.0	1.7	-0.9	7.1	9.0	2.8	-0.8	3.2	10.7	-1.0	4.9	11.7	3.8	3.6	4.0	4.1	4.8	4.2	4.1
12	62.2	61.1	61.1	58.1	57.4	57.1	59.5	-3.3	-1.9	0.5	5.0	4.9	2.2	1.2	6.8	-3.1	1.9	9.9	3.6	4.0	4.5	5.5	5.8	5.2	4.8
13	57.4	58.0	57.5	53.6	51.8	49.2	54.6	1.7	3.3	10.5	10.8	10.1	9.9	7.7	12.7	1.3	7.0	11.4	5.1	5.7	7.9	8.6	9.2	9.1	7.6
14	47.3	47.6	50.4	51.4	53.3	54.4	50.7	9.5	9.5	12.8	14.0	8.9	8.1	10.5	17.8	6.1	12.0	11.7	8.7	8.7	10.0	6.7	5.8	5.6	7.6
15	56.2	58.6	60.6	59.1	60.3	60.2	59.2	5.1	2.7	3.4	3.6	3.1	3.4	3.6	6.8	1.0	3.9	5.8	4.7	4.6	3.9	3.6	4.1	4.2	4.2
16	60.4	61.8	62.7	61.0	60.3	57.1	60.6	3.9	2.9	6.3	8.9	1.9	5.1	4.8	9.4	1.8	5.6	7.6	3.8	3.3	3.6	4.0	4.5	4.6	5.1
17	52.1	49.5	52.7	52.0	53.4	54.3	52.3	7.9	6.9	7.1	4.9	1.5	-0.2	4.7	9.3	-0.3	4.5	9.6	6.4	6.4	5.3	4.0	4.1	4.5	5.1
18	55.1	57.6	60.0	60.8	63.0	64.5	60.2	-0.7	-1.5	0.2	-0.1	0.6	-1.4	-0.5	1.8	-1.5	0.2	3.3	4.2	4.0	4.0	4.2	3.3	3.7	3.9
19	66.0	67.8	69.4	68.2	68.9	70.1	68.4	0.4	-0.8	2.5	6.5	1.6	-0.5	1.6	6.9	-1.6	2.7	8.5	3.0	3.3	3.5	4.2	4.5	4.3	3.8
20	70.4	71.5	72.1	70.5	71.0	71.6	71.2	-2.0	-2.9	0.8	3.5	2.4	2.3	0.7	4.1	-2.9	0.6	7.0	4.0	3.7	3.9	4.0	4.5	4.0	4.6
21	71.6	71.9	72.0	68.3	69.4	68.6	70.3	1.1	0.1	3.8	9.1	3.9	1.5	3.3	9.6	-0.1	4.8	9.7	3.8	3.8	4.2	5.5	5.2	4.9	4.6
22	66.4	64.7	63.3	59.3	58.3	56.4	61.4	-0.8	1.3	11.2	13.9	11.0	9.7	7.7	14.2	-0.9	6.7	15.1	4.3	4.9	6.7	7.7	8.8	8.4	6.8
23	54.4	54.5	55.4	55.3	56.1	57.5	55.5	9.6	9.2	9.3	9.3	6.9	5.6	8.3	10.3	4.8	7.6	5.5	7.8	7.7	6.3	5.8	5.3	4.8	6.3
24	56.9	55.5	55.7	55.1	58.6	61.0	57.1	4.3	3.3	3.8	6.5	4.6	1.1	3.9	6.7	-0.5	3.1	7.2	4.4	4.1	4.3	4.6	4.6	4.4	4.4
25	61.8	63.5	65.0	64.4	65.9	66.8	64.6	-1.6	-0.9	4.2	9.1	2.2	-0.3	2.1	10.3	-1.7	4.3	12.0	4.0	4.1	5.0	4.8	4.8	4.2	4.5
26	67.3	68.1	67.9	65.5	66.6	67.6	67.2	-0.6	-1.8	1.9	7.6	5.5	2.9	2.6	8.3	-2.4	3.0	10.7	3.9	3.7	4.2	4.7	5.6	5.0	4.5
27	67.1	67.7	68.2	66.0	67.2	67.4	67.3	1.9	-0.8	4.4	7.2	4.1	3.0	3.3	7.9	-1.0	3.5	8.9	4.4	4.0	4.0	3.8	4.9	4.7	4.3
28	66.5	67.0	68.0	66.5	68.1	69.2	67.6	1.8	0.6	4.1	8.3	0.8	-2.8	2.1	8.9	-3.3	2.8	12.2	4.6	4.6	3.9	2.9	4.0	3.6	3.9
29	70.4	71.3	71.9	70.2	70.7	70.7	70.9	-4.5	-5.9	1.9	7.7	0.3	-2.7	-0.5	8.4	-6.1	1.2	14.5	3.1	2.9	3.2	3.3	3.9	3.6	3.3
30	70.6	70.3	69.7	66.6	66.6	65.7	68.3	-3.9	-4.3	0.6	8.6	5.2	2.8	1.5	10.0	-4.6	2.7	14.6	3.3	3.3	3.5	4.9	5.3	5.3	4.3
Mean	60.8	61.1	61.8	60.4	61.3	61.5	61.1	2.5	1.8	6.4	8.7	5.2	3.3	4.7	10.0	0.3	5.1								

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

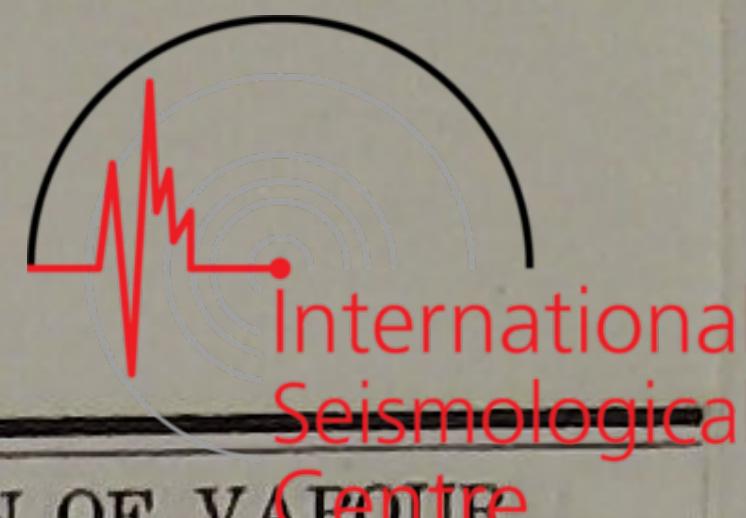
NOVEMBER, 1949.



Day	DIRECTION AND SPEED OF CLOUDS ^x							AMOUNT (0-10) AND FORMS OF CLOUDS					PRECIPITATION							
	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	—	—	—	w8	—	9 st	6 Sc	3 sc	7 Sc,Ac	10 sc	10 sc	7.5	0.4	—	—	—	—	—	—	0.4
2	—	w7	—	w8	—	10 sc	10 Sc,Ac	10 sc,As	4 Sc	8 sc	10 Ns	8.7	—	0.2	—	0.0	—	0.0	0.0	0.2
3	—	—	w7	w7	—	2 sc	1 Sc	2 Sc,Cu	9 Sc,Cu	9 Sc,Cu	1 Cu	4.0	0.1	—	—	—	—	—	—	0.1
4	—	—	—	—	—	10 Cs,Ci	10 Cs,Ci,Cu	10 Cs,Ac	10 As,Ac	10 As	10 Ns	10.0	—	—	—	—	—	—	—	0.6
5	—	—	w9	w8	w8	—	10 Ns	10 Ns,Sc	8 Ns,Sc	9 Ns,Cu	9 Ns,Sc	9.0	4.9	0.8	1.3	0.2	0.2	4.4	11.8	
6	—	w8	—	w8	—	8 Sc,Cs	9 Sc	10 sc	10 Sc	4 Sc,Cu	0 Sc	6.8	0.7	0.4	—	0.1	0.0	—	—	1.2
7	—	w7	—	w8	—	5 sc	7 Ns,Sc	10 Cs,Sc	10 Ns	10 Sc,Ns	10 Sc	8.7	—	—	0.1	2.8	1.7	0.2	4.8	
8	—	w7	w7	—	—	s5 4 sc	5 Sc	6 sc	2 Cu	5 Ci	10 Ac	5.3	—	—	—	—	—	—	—	—
9	—	w7	—	—	—	10 Ac	6 Cs,Ac	10 sc,Ci,Cu	10 Ci,Sc	10 Cs,Sc	10 As,Cs	9.3	—	—	—	—	—	—	—	—
10	—	w7	—	—	—	9 Ac	0 Sc	7 sc	5 Sc,Cu	7 Sc	7 Sc	5.8	—	—	—	—	—	—	—	—
11	—	—	w7	—	—	0 —	4 Ce,Sc	0 Cu	2 Cu	0 —	0 Cs	1.0	—	—	—	—	—	—	—	—
12	—	—	—	—	—	5 cs	10 Ac,Cs	10 As	10 As	6 Sc,Ac	5 Sc,Ci	7.7	—	—	—	—	0.1	—	0.1	0.1
13	—	—	—	—	—	10 sc	10 Sc	10 St	10 Ns	10 Ns	10 St	10.0	—	—	—	0.6	8.0	5.0	13.6	
14	—	—	w8	—	—	10 cs	10 Ns	7 Sc	4 Cu,St	4 Cs,Sc	5 Sc,Cs	6.7	—	0.5	0.6	0.0	—	—	1.1	
15	—	—	w9	—	—	8 Sc,Cs	9 Ns,Sc	4 Ns,Cu	5 Cu	9 Sc	0 Sc	5.8	—	0.1	0.0	0.0	—	—	0.1	
16	—	—	—	—	—	0 st	1 Cu,Ci	0 Sc	0 Sc	1 Sc	10 St	2.0	0.4	—	—	—	—	—	0.4	
17	—	w8	w8	—	—	10 st	10 Sc,Ns	8 Ns,Sc	10 Ns	10 Ns	10 Ns	9.7	—	0.2	0.4	0.0	0.0	0.4	1.0	
18	—	—	—	—	—	10 ns	10 Ns	10 Ns	10 Ns	10 Ns	10 St	10.0	3.0	8.8	2.0	0.2	0.1	—	14.1	
19	—	—	N8	w8	—	10 sc	10 Sc,St	10 Cs,Sc,Ci	10 Sc,Cs	4 Sc	0 —	7.3	—	—	—	—	—	—	—	
20	—	—	—	—	—	0 —	1 Ac	10 Ac	10 Ac	10 sc	10 sc	6.8	—	—	—	—	—	—	—	
21	—	—	—	—	—	10 sc	10 Sc	0 Sc,Cu	7 Sc	0 —	10 Sc	6.2	—	—	—	—	—	—	—	
22	—	—	w7	—	—	0 —	10 As	1 Ac	5 Cs,Sc,Ac	10 Ns	10 Ns	6.0	—	—	—	—	0.2	0.8	1.0	
23	W7	—	—	—	—	10 st	10 Sc	10 Sc	10 As,Sc	10 Sc	10 Sc	10.0	0.1	—	—	—	—	—	0.1	
24	—	—	sw5	—	—	10 sc	10 Sc	10 As,Sc	8 Ac,As,Sc	10 Sc,Ac	1 Sc	8.2	—	—	—	—	—	—	—	
25	—	w8	w8	w8	—	3 cs	10 Sc	9 Sc,Ac	7 Sc,Ce	4 Sc	0 Sc	5.5	—	—	—	—	—	—	—	
26	—	w8	—	—	—	3 sc	10 Cs,Sc	10 Cs,Sc	6 Sc,Cc,Ac	9 Cs,Ac,Sc	8 As	7.7	—	—	—	—	—	—	—	
27	—	—	w5	—	—	10 As	10 Sc,Ac,Cc	10 Ac,Cc	9 Ac,Ci,Sc	10 As	10 Sc	9.8	—	—	—	—	—	—	—	
28	—	w4	—	—	—	10 As	9 As,Cs,Ci	9 Ac	0 Ac	0 —	0 —	4.7	—	—	—	—	—	—	—	
29	—	—	—	—	—	0 —	0 —	0 —	1 Ci	1 Ci	0 —	0.3	—	—	—	—	—	—	—	
30	—	—	—	—	—	s5 2 cs	5 Cs	0 Sc	1 Cu,Ci	10 Cs,Ci	10 Ac	4.7	—	—	—	—	—	—	—	
						6.6	7.4	6.8	6.7	7.0	6.5	6.8	9.6	11.0	4.4	3.9	10.3	11.4	50.6	

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	5.14	(2.0)	1.2	... ●°...0020. ✓1350, 1400.																	
2	2.81	(1.8)	1.0	○°a. ○°p. ●°0513—0531, 1055—1110, 1950...2025, 2100...2215—2240.																	
3	5.45	2.3	1.1	□°U°, ○°a. ○°U°, ○°p.																	
4	1.68	(1.7)	0.9	□°U°, ○°a. ○°p. ●°2052—																	
5	1.98	(1.3)	0.7	— ●°—0230, 0536—0543, 0559—0637... ●°10905—●°0913...1820—●°1850—●°1855—●°12005—●°2100—*																	
6	2.88	(1.2)	0.8	○°, ○°a, ○°p.—●°—0105, 0230—0550, 1155—1215, 1528—1532.																	
7	2.95	(2.2)	1.6																		

DECEMBER, 1949.



Day	AIR PRESSURE (700mm+)* mm							AIR TEMPERATURE °C								TENSION OF VAPOR 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	64.5	63.4	62.2	61.2	60.6	60.2	62.0	2.1	2.6	4.2	5.2	5.8	5.1	4.2	5.9	1.4	3.7	4.5	5.1	5.2	5.6	6.4	6.8	6.6	6.0
2	60.9	61.1	61.3	59.5	61.0	61.1	60.8	4.3	0.7	7.8	12.4	4.1	1.0	5.1	13.2	-0.1	6.6	13.3	6.2	4.8	6.4	5.4	5.6	4.8	5.5
3	60.4	60.4	59.9	57.3	57.8	57.7	58.9	1.3	0.1	5.0	10.3	6.6	3.9	4.5	10.4	-0.2	5.1	10.6	5.0	4.6	5.6	6.5	6.0	5.7	5.6
4	56.7	57.1	58.3	57.1	58.2	58.1	57.6	4.7	3.2	7.4	10.3	7.3	6.1	6.5	10.3	3.0	6.7	7.3	5.7	5.5	5.7	6.3	7.1	6.8	6.2
5	58.1	58.0	57.6	54.7	54.5	56.0	56.5	6.0	5.7	9.1	12.0	9.5	7.2	8.3	12.9	5.7	9.3	7.2	6.9	6.8	7.5	7.3	8.6	5.7	7.1
6	56.2	56.4	56.5	56.8	58.2	58.2	57.1	3.1	0.7	5.9	2.9	-0.5	-1.5	1.8	7.3	-2.1	2.6	9.4	4.9	4.4	4.7	4.2	3.5	3.8	4.3
7	56.6	55.7	54.9	53.2	53.0	53.2	54.4	-1.0	-2.3	0.2	0.5	0.1	-1.4	-0.6	0.7	-3.1	-1.2	3.8	4.3	3.9	3.9	4.2	4.6	4.1	4.2
8	54.7	57.7	60.4	60.3	60.8	60.9	59.1	-3.3	-4.8	-3.1	-2.3	-2.3	-2.5	-3.0	-1.3	-6.8	-4.0	5.5	3.6	3.2	2.5	3.5	3.9	3.8	3.4
9	60.2	61.0	61.8	60.6	61.5	61.6	61.1	-0.5	0.0	1.3	0.2	0.9	1.2	0.5	4.2	-2.8	0.7	7.0	4.0	3.6	3.5	4.3	3.3	3.0	3.6
10	61.1	61.4	61.3	59.0	59.0	56.2	59.7	1.0	-2.1	2.9	3.8	-0.6	-1.7	0.6	6.1	-2.4	1.9	8.5	2.9	3.1	3.2	3.5	3.3	3.6	3.3
11	52.8	54.4	56.4	56.2	57.0	57.0	55.6	0.3	0.6	5.5	5.5	4.5	3.5	3.3	5.7	-1.6	2.1	7.3	4.2	4.4	3.9	3.8	3.4	3.5	3.9
12	54.9	53.7	53.4	53.1	54.4	55.3	54.1	2.9	3.1	4.4	4.3	3.1	2.7	3.4	4.6	0.2	2.4	4.4	3.7	4.3	5.0	5.0	3.7	3.4	4.2
13	57.7	59.3	60.4	58.8	58.8	57.4	58.7	1.7	0.3	2.8	4.6	-0.1	-2.5	1.1	5.1	-3.4	0.9	8.5	3.2	2.8	3.0	3.5	3.7	3.6	3.3
14	55.4	51.8	48.1	41.8	40.0	38.2	45.9	-3.0	-1.5	-0.1	1.5	1.4	5.7	0.7	6.9	-3.5	1.7	10.4	3.5	3.9	4.2	4.8	5.0	4.3	4.3
15	41.6	47.2	49.8	49.6	51.4	51.6	48.5	4.9	3.9	5.3	6.3	2.7	2.5	4.3	7.1	0.3	3.7	6.8	4.6	3.6	4.1	4.3	4.2		
16	51.7	52.8	54.8	54.3	56.4	56.2	54.4	0.9	1.7	4.3	6.1	1.9	-2.1	2.1	7.1	-2.3	2.4	9.4	4.7	4.7	4.2	3.6	3.8	3.6	4.1
17	55.6	56.1	57.7	56.2	58.4	60.1	57.4	-1.8	-0.7	0.3	4.4	3.4	2.3	1.3	5.0	-2.4	1.3	7.4	3.8	4.1	4.3	4.7	4.4	3.1	4.1
18	61.2	62.0	62.6	60.5	61.1	61.4	61.5	0.9	-2.2	4.1	5.5	8.1	-0.2	1.9	6.3	-3.2	1.6	9.5	2.4	2.9	3.0	3.5	4.7	4.5	3.5
19	60.4	60.7	61.1	58.4	60.3	60.7	60.3	-1.2	-1.6	1.5	3.3	2.1	1.1	0.9	3.4	-1.8	0.8	5.2	4.2	4.0	4.7	5.2	5.0	2.7	4.3
20	61.8	62.6	63.1	63.2	62.9	62.0	62.6	0.0	-0.1	1.7	2.1	-0.4	-1.9	0.2	3.5	-1.9	0.8	5.4	3.0	2.5	2.9	3.0	2.9	3.6	3.0
21	59.5	57.1	55.1	53.7	54.3	55.9	55.9	-2.0	-2.1	-0.9	3.2	2.6	0.7	0.3	3.7	-2.5	0.6	6.2	3.4	3.5	3.7	3.9	3.8	3.6	3.7
22	56.7	58.4	58.8	59.3	60.7	62.5	59.4	-0.1	-1.3	-0.1	0.3	-1.2	-1.3	-0.6	1.2	-1.5	-0.1	2.7	3.1	2.8	3.0	2.9	3.0	2.9	3.0
23	62.8	63.7	64.5	62.8	62.4	59.9	62.7	-1.7	-1.9	0.8	2.7	-1.7	-0.4	-0.4	4.1	-2.4	0.9	6.5	2.6	2.6	2.7	2.7	3.0	3.4	2.8
24	55.8	53.7	50.2	46.8	47.2	49.4	50.5	2.0	0.4	1.3	6.5	3.4	0.6	2.4	6.6	0.0	3.3	6.6	4.1	4.2	4.5	4.9	4.2	3.4	4.2
25	51.6	52.5	54.3	56.1	58.8	59.8	55.5	-1.1	-2.4	-1.3	-3.4	-5.5	-6.4	-3.3	0.6	-6.4	-2.9	7.0	3.0	2.6	2.4	3.0	2.7	2.8	2.8
26	60.0	60.2	60.4	60.0	60.6	60.1	60.2	-6.1	-6.7	-2.9	-3.1	-3.8	-4.1	-4.4	-1.3	-11.8	-6.5	10.5	2.8	2.7	3.1	3.4	2.5	2.1	2.8
27	59.2	56.9	54.4	47.5	43.5	41.6	50.5	-13.9	-10.1	-6.6	-4.0	-3.2	-0.8	-6.4	1.5	-14.2	-6.3	15.7	1.6	2.1	2.3	3.0	3.6	4.3	2.8
28	45.2	47.9	50.6	50.2	51.1	51.7	49.5	-1.9	-4.7	-4.4	-6.4	-7.5	-7.3	-5.4	-0.4	-7.5	-3.9	7.1	2.8	3.2	2.6	2.1	2.6	2.7	2.7
29	52.5	54.7	56.8	56.8	59.0	59.3	56.5	-7.5	-7.9	-6.8	-6.4	-7.5	-8.9	-7.5	-6.0	-10.3	-8.1	4.3	2.6	2.4	2.4	2.8	2.6	2.3	2.5
30	59.5	60.0	60.4	58.8	59.7	59.7	59.7	-12.2	-9.2	-5.2	-1.6	-3.3	-3.9	-5.9	-0.9	-13.9	-7.4	13.0	1.8	2.3	3.0	2.4	2.5	2.4	2.4
31	59.0	59.1	60.4	57.6	57.3	56.6	58.3	-2.1	-2.0	0.1	1.6	-2.3	-1.9	-1.1	3.1	-3.4	-0.1	6.5	2.6	2.8	2				

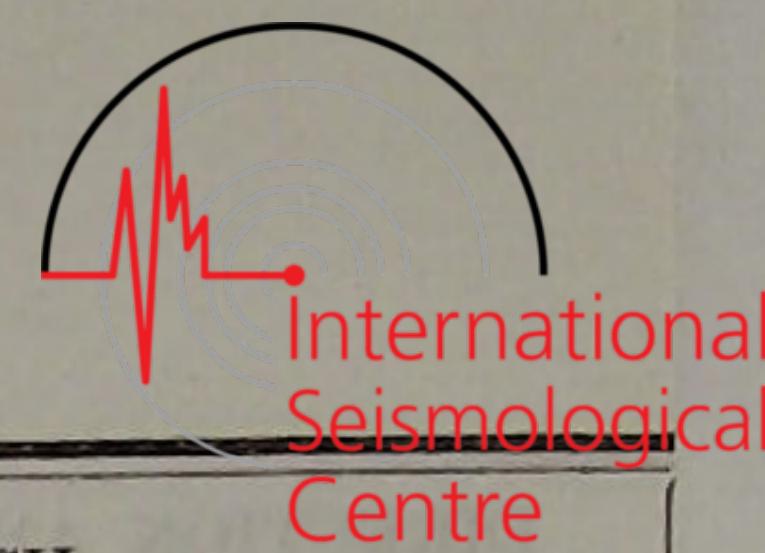
DECEMBER, 1949.



Day	DIRECTION AND SPEED OF CLOUDS X						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION							
	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	—	—	—	—	—	—	10 As	10 As	10 st	10 ns	10 ns	10 sc,st	10.0	—	—	—	4.1	5.1	0.2	9.4
2	—	—	—	—	—	—	9 Sc	4 ≡, Ac	0 Sc, Ac	8 Cs, Sc	4 Ci	10 Cc	5.8	—	—	—	—	—	—	—
3	—	—	—	SW4	10 Cs, Sc	10 Cs, Ci, Sc	10 Cs, Sc	10 As, Sc	10 As, Sc	10 As, Sc	10 As, Sc	10 Ac, As	10.0	—	—	—	—	—	—	—
4	—	—	—	—	10 As, Ac	10 As	10 As	10 As	10 As	10 As	10 ns	10 st	10.0	—	—	—	—	2.1	0.3	2.4
5	—	—	s7	—	10 ns	10 st, ≡	9 Sc	9 Sc	9 Sc	9 Sc	9 Sc	10 Sc	9.5	0.2	0.4	—	—	—	0.6	1.2
6	—	—	—	w9	4 Sc	8 Cs, Sc	10 ns, Sc	7 ns, Sc	3 st, Sc	8 ns	8 ns	6.7	—	—	0.0	0.1	—	0.0	0.1	0.1
7	—	—	—	—	10 ns	10 ns, Sc	10 ns	10 ns	10 ns	10 ns	10 ns	10.0	1.0	1.9	4.7	3.4	4.1	5.0	20.1	
8	—	—	—	—	10 ns	10 ns	0 Sc	10 ns	10 ns	10 ns	10 ns	10 ns	8.3	1.5	3.7	0.2	0.0	0.4	1.5	7.3
9	—	w8	—	w8	10 ns, Cs	10 ns	9 sc, st	10 ns, Sc	1 ns	2 sc	2 sc	7.0	0.4	0.1	0.0	0.0	0.0	—	0.5	
10	—	—	—	—	0 Sc	4 sc, st	9 Sc	5 sc	9 sc	10 st	10 st	6.2	—	—	—	—	—	—	—	
11	—	w7	w7	—	10 As	4 sc, st	7 sc	8 sc, st	7 sc, st	7 sc, st	7 sc, st	7.2	—	—	—	—	—	—	—	
12	—	—	—	—	6 Sc	8 Sc	10 ns	10 st, ns	4 sc	2 sc	2 sc	6.7	—	—	0.5	0.7	—	—	1.2	
13	—	w7	w8	—	3 Sc	5 Sc	7 Sc	4 sc	1 sc	0 sc	0 sc	3.3	—	—	—	—	—	—	—	
14	—	—	—	—	10 As	10 st	10 ns	10 ns	10 st	10 ns	10 ns	10.0	—	—	1.1	0.9	0.2	0.2	2.4	
15	—	w8	—	10 ns	8 st, sc	3 sc	7 sc	1 ac	0 sc	4.8	1.4	0.2	—	—	—	—	—	—	1.6	
16	—	—	—	—	5 ns	10 st, sc	7 sc	2 sc	1 sc	0 —	4.2	0.2	0.3	—	—	—	—	—	0.5	
17	—	w8	—	10 sc	10 st	10 sc, st	8 sc	10 st, sc	4 sc	8.7	—	0.0	1.3	—	—	—	—	—	1.3	
18	—	w7	—	0 —	0 cu	0 cu	10 sc, ac	10 ns	1 st	3.5	—	—	—	—	—	—	0.4	0.4	0.8	
19	—	—	—	—	1 sc	1 sc	10 sc	10 ns, sc	4 sc	2 sc	4.7	—	—	—	—	0.4	0.7	—	1.1	
20	—	—	—	—	2 sc	1 cu	10 cs, sc	10 cs, sc	4 cs	10 ac	6.2	—	—	—	—	—	—	—	—	
21	—	—	—	—	10 As	10 As	10 sc, ci	2 st	0 —	7.0	—	—	—	—	—	—	0.0	—	0.0	
22	—	w8	—	5 ns	6 Sc	7 Sc, ns	9 Sc, ns	9 Sc	9 Sc	7.5	0.0	0.0	—	0.0	0.0	—	—	—	0.0	
23	—	—	—	8 Sc	1 Sc	0 Cu	0 —	1 sc	10 cs	3.3	—	—	—	—	—	—	—	—	—	
24	—	—	—	—	10 As	9 Sc	10 As, ns	9 cc, sc, ac	8 sc	0 —	7.7	—	—	0.0	0.0	—	—	—	0.0	
25	—	—	—	—	10 Sc	3 Sc	2 ns, cu	9 ns	10 ns	10 ns	10 ns	7.3	—	—	—	0.5	0.3	0.1	0.9	
26	—	—	—	—	10 ns	10 ns	10 ns	10 ns	4 sc	0 sc	7.3	1.7	1.2	0.5	0.6	0.1	—	4.1		
27	—	—	—	0 —	10 cs	10 As	10 ns	10 ns	10 ns	10 ns	8.3	—	—	—	0.0	1.3	1.0	2.3		
28	—	—	—	—	10 ns	10 ns	10 ns	10 ns	10 ns	10 ns	10 ns	10.0	0.1	0.5	3.2	0.5	0.7	2.6	7.6	
29	—	—	—	—	10 ns	10 ns	10 ns	10 ns	10 ns	9 sc, st	9.8	3.2	1.8	0.6	1.0	0.2	0.1	—	6.9	
30	—	w8	—	6 st	10 ns	10 ns	5 sc, st	2 sc	5 sc	5 sc	0.1	0.4	0.8	0.1	—	—	—	—	1.4	
31	—	—	—	6 Sc	7 Sc	6 Sc, Ci	10 Ci, Cs, Sc	10 sc, st	10 sc	8.2	—	—	—	—	—	—	—	—	—	
					7.3	7.4	7.6	8.4	6.6	6.4	7.3	9.8	10.5	12.9	12.3	15.6	12.0	73.1		

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	—	(0.9)	0.2	∞ ⁰ a. ● ⁰ 1109—1840.																	
2	7.90	1.1	0.6	∞ ⁰ , 0 ⁰ a. 0 ⁰ , △ ⁰ p. ≡ ⁰ 530—≡ ⁰ 556—≡ ⁰ 642—≡ ⁰ 736—0756.																	
3	2.57	0.8	0.4	△ ¹ , ∞ ⁰ , ▲ ⁰ , ∞ ⁰ a. ∞ ⁰ p. ≡ ⁰ 730—≡ ⁰ 750—≡ ⁰ 800—≡ ⁰ 830—0950.																	
4	0.22	(1.0)	0.4	∞ ⁰ a. ● ⁰ 1514—1827.																	
5	4.08	1.8	1.0	∞ ⁰ a. 0 ⁰ p. ≡ ⁰ 120—● ⁰ 0132—, —≡ ⁰ 0148—, —● ⁰ 0254.—≡ ⁰ 347—≡ ⁰ 523—0711. ● ⁰ 1855—2030. ⊖ ¹ 235218.																	
6	7.22	(1.5)	1.0	∞ ⁰ , 0 ⁰ a, p. ● ⁰ 0958—1018, 1306—× ⁰ 1307—1333, 2135—, ✕, ✕2150—																	
7	—	(0.2)	0.0	∞ ⁰ p.—× ⁰ —, —■—																	
8	4.48	(1.1)	1.0	∞ ¹ , 0 ⁰ a, ▲ ¹ p.—× ⁰ —0647, 13																	

AIR PRESSURE (Mean sea level) 700 mm+ 1949.



Day	JANUARY							FEBRUARY							MARCH						
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean
1	67.0	60.7	55.8	49.4	46.9	45.7	54.3	64.5	64.6	65.6	63.3	64.3	65.3	64.6	51.5	55.2	58.7	60.1	61.6	62.4	58.3
2	46.1	48.0	50.3	52.0	55.8	61.1	52.2	65.3	66.2	67.1	64.7	66.2	66.7	66.0	61.8	60.9	57.9	52.1	50.8	47.9	55.2
3	63.4	64.6	64.2	60.2	58.2	52.3	60.5	66.2	66.0	65.7	63.6	64.0	63.9	64.9	52.8	58.1	62.3	64.5	68.0	68.8	62.4
4	50.9	49.8	48.9	46.2	48.4	48.2	48.7	62.2	61.4	60.7	57.6	55.7	53.5	58.5	68.8	69.0	69.1	67.2	66.8	65.2	67.7
5	47.3	46.7	47.6	46.8	48.9	50.4	48.0	51.9	50.4	50.3	48.3	47.9	46.8	49.3	61.4	58.1	55.0	50.6	51.8	55.2	55.4
6	50.1	51.5	52.7	52.2	54.8	57.8	53.2	46.7	47.1	48.4	48.8	52.0	53.1	49.4	58.2	60.4	61.1	60.3	60.8	60.1	60.2
7	58.5	59.5	61.5	60.5	62.9	63.7	61.1	53.7	54.8	56.7	55.9	57.8	59.2	56.4	57.4	55.4	53.7	51.8	54.7	60.2	55.5
8	63.8	64.7	65.2	62.6	61.9	60.4	63.1	59.9	61.8	62.9	62.4	63.5	64.2	62.5	62.4	66.3	67.3	67.7	67.9	67.3	66.5
9	59.3	59.3	60.5	58.6	61.6	63.5	60.5	64.8	64.4	65.1	63.2	63.4	63.2	64.0	65.8	63.9	63.1	60.2	60.9	61.1	62.5
10	64.6	65.9	66.4	64.8	66.2	67.9	66.0	68.1	68.3	68.4	68.1	68.8	68.7	68.2	58.9	56.8	53.5	50.1	50.6	51.8	53.6
11	68.4	69.4	70.5	68.3	68.9	69.1	69.1	68.4	64.0	65.9	63.9	65.8	66.4	64.9	53.0	56.5	58.3	58.5	60.1	61.0	57.9
12	68.3	68.3	70.2	67.9	67.4	65.6	68.0	65.4	64.8	63.3	59.4	58.7	55.6	61.2	60.3	59.7	59.7	59.0	61.6	62.6	60.5
13	62.8	60.7	60.9	61.7	64.9	66.5	62.9	52.0	50.9	50.3	47.8	48.7	48.2	49.7	63.5	63.4	64.4	63.6	63.8	64.0	63.8
14	67.2	68.5	69.4	66.9	67.6	66.1	67.6	45.6	44.0	42.9	40.6	41.7	41.3	42.7	63.1	63.1	64.0	63.0	65.0	66.4	64.1
15	63.4	60.3	59.2	55.4	55.0	54.1	57.9	41.8	42.6	44.0	44.0	46.1	47.3	44.3	66.6	66.7	66.3	64.8	64.9	64.8	65.7
16	53.5	53.9	54.9	54.8	55.9	57.2	55.0	48.8	51.1	54.1	54.9	57.1	58.2	54.0	64.6	64.7	65.2	64.9	65.9	66.8	65.4
17	58.7	61.2	63.5	63.4	65.4	66.3	63.1	59.0	59.9	60.7	60.5	61.8	61.8	60.6	66.2	66.2	65.0	61.9	60.4	58.9	63.1
18	65.6	64.0	63.1	59.2	59.4	57.8	61.5	61.3	59.6	59.3	58.7	61.2	62.2	60.4	55.0	52.5	48.7	45.9	47.3	50.7	50.0
19	57.8	59.5	61.9	62.3	64.8	64.8	61.9	62.1	62.9	64.2	63.2	62.7	64.2	63.2	49.7	49.6	49.5	52.1	55.9	59.4	52.7
20	64.1	64.2	66.4	65.4	66.1	66.1	65.4	64.0	64.9	65.0	63.8	62.8	59.2	63.3	59.8	61.3	62.2	60.0	61.4	61.6	61.1
21	65.8	66.6	67.6	65.8	65.6	64.9	66.1	58.8	61.7	63.6	62.3	64.1	65.2	62.6	61.2	61.4	62.2	61.2	62.0	61.7	61.6
22	63.3	62.0	62.1	59.9	60.4	60.9	61.4	65.0	65.4	66.1	64.3	65.4	66.1	65.4	61.1	61.4	61.7	60.8	61.5	62.1	61.4
23	60.8	62.1	63.8	63.3	64.6	64.5	63.2	66.0	66.5	66.6	67.3	69.7	67.0	67.0	61.5	62.0	62.2	60.9	62.7	63.7	62.2
24	65.0	66.1	67.0	65.7	66.7	66.4	66.2	70.3	71.5	71.6	68.6	68.8	67.6	69.7	63.5	63.8	63.9	62.8	64.3	65.9	64.0
25	66.0	65.8	65.3	61.8	61.4	59.8	63.4	65.7	63.5	61.6	56.9	56.5	57.0	60.2	66.8	68.0	67.8	66.7	67.6	67.9	67.5
26	57.7	58.0	58.4	57.3	58.8	59.6	58.3	57.1	58.7	60.2	58.6	60.3	60.6	59.3	67.7	67.2	67.2	65.3	66.3	67.9	66.9
27	59.5	59.9	60.2	57.8	57.9	60.2	59.3	59.4	58.9	57.1	52.1	49.3	46.1	53.8	67.7	68.3	67.5	65.0	64.6	66.0	66.5
28	62.5	63.7	64.3	62.1	63.1	63.0	63.1	44.6	43.6	42.0	43.8	46.6	49.6	45.0	66.1	66.6	66.4	64.7	64.5	66.7	65.8
29	63.5	63.6	64.8	62.5	63.6	62.6	63.4								67.5	67.7	69.1	66.5	66.4	66.7	67.3
30	60.0	56.9	56.4	53.7	57.7	60.7	57.6								65.4	64.9	65.9	66.9	68.2	68.9	66.7
31	61.0	61.9	63.5	63.0	64.0	65.2	63.1								69.6	69.6	68.7	65.3	65.0	64.7	67.2
Mean	60.8	60.9	61.5	59.7	60.8	61.0	60.8	58.9	59.1	59.4	57.8	58.7	58.8	58.8	61.9	62.2	62.2	60.8	61.7	62.5	61.9
Day	APRIL							MAY							JUNE						
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean
1	63.2	62.3	62.4	60.7	62.6	66.4	62.9	66.6	66.1	64.7	61.2	60.1	57.9	62.8	61.9	62.9	62.6	61.4			

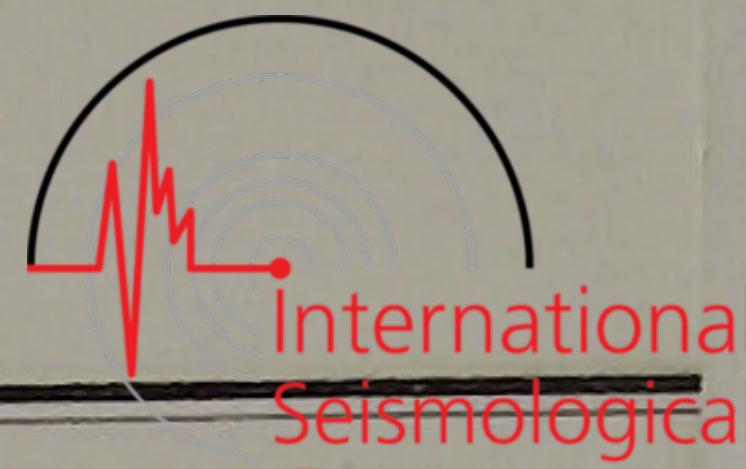
AIR PRESSURE (Mean sea level) 700 mm+ 1949.



Day	JULY						AUGUST						SEPTEMBER								
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean
1	50.0	48.9	49.4	50.3	52.2	54.1	50.8	61.1	60.5	60.0	58.1	58.6	60.1	59.7	52.1	50.7	54.4	56.5	58.2	59.7	55.3
2	55.4	57.7	58.0	58.3	59.1	59.9	58.1	59.0	59.8	60.3	60.2	60.4	60.8	60.1	59.1	59.7	60.7	59.6	60.5	61.1	60.1
3	59.7	60.9	61.0	61.2	60.6	61.4	60.8	60.3	61.2	61.0	59.5	59.3	60.5	60.3	60.7	62.0	62.2	61.7	61.4	62.3	61.7
4	60.9	61.2	60.5	59.9	59.9	61.5	60.7	60.0	60.6	60.2	58.2	58.1	59.2	59.4	61.9	62.4	61.5	60.0	59.7	60.1	60.9
5	60.9	61.8	61.1	59.9	59.4	60.1	60.5	58.7	59.2	58.9	57.8	58.3	59.6	58.8	59.2	60.3	59.2	58.0	58.8	60.3	59.3
6	59.1	57.9	56.9	54.9	52.6	50.2	55.3	59.8	60.1	60.1	58.9	59.7	62.1	60.1	60.2	60.6	61.9	59.8	60.7	62.3	60.9
7	45.5	45.8	46.9	47.2	49.2	50.9	47.6	61.6	61.9	61.6	60.1	60.5	61.8	61.3	62.4	63.0	63.1	61.7	61.3	62.1	62.3
8	51.3	53.1	54.0	53.3	54.1	54.4	53.4	61.6	61.8	62.3	60.5	60.2	61.8	61.4	61.4	61.1	60.4	57.4	57.5	57.9	59.3
9	54.3	55.4	56.1	56.9	57.4	58.9	56.5	61.6	62.7	62.5	61.0	61.3	62.8	62.0	58.0	58.1	58.3	57.3	57.9	58.8	58.1
10	58.6	59.0	58.7	57.5	58.2	59.3	58.6	62.2	63.2	62.4	60.7	61.0	62.0	61.9	58.0	58.8	59.8	58.7	59.1	60.0	59.1
11	58.3	58.9	59.0	58.1	59.1	59.8	58.9	61.7	61.5	59.9	57.9	56.8	57.5	59.2	60.3	60.5	59.9	59.3	60.2	60.4	60.1
12	59.6	60.3	60.9	60.0	60.7	61.8	60.6	56.4	57.8	56.6	54.7	54.1	55.9	55.9	59.9	59.8	59.8	58.3	59.4	60.4	59.6
13	61.1	60.6	61.0	60.1	60.2	60.9	60.7	55.3	56.2	55.4	53.8	54.4	56.2	55.2	61.0	62.2	62.2	61.6	62.8	65.2	62.5
14	60.6	60.7	60.6	60.5	60.0	61.0	60.6	56.4	57.4	56.8	55.9	57.4	58.4	57.1	66.0	67.6	68.2	66.9	68.8	70.4	68.0
15	60.5	61.5	61.8	60.9	60.3	61.4	61.1	58.3	59.1	59.4	58.6	59.3	60.4	59.2	69.6	69.7	68.4	66.4	66.5	65.8	67.7
16	61.5	61.5	62.0	61.1	61.0	61.6	61.5	59.9	60.9	60.6	59.4	59.8	60.9	60.3	64.0	62.9	61.5	58.4	56.9	58.1	60.3
17	60.8	61.6	60.2	58.3	58.5	59.6	59.8	60.8	60.3	60.2	58.0	58.3	57.9	59.3	58.0	59.1	58.6	56.3	57.4	58.2	57.9
18	59.2	59.6	59.5	57.5	57.3	57.8	58.5	55.1	53.9	52.4	51.4	53.1	54.8	53.5	59.1	60.7	62.0	61.3	61.8	62.3	61.2
19	57.9	58.5	58.2	57.2	57.4	57.9	57.9	54.2	54.7	54.0	53.0	52.7	53.5	53.7	61.7	61.1	61.5	59.8	59.5	60.4	60.7
20	57.2	58.4	58.9	58.9	59.4	60.3	58.9	52.7	52.4	53.3	51.7	52.3	54.1	52.8	58.4	58.7	59.8	60.0	61.6	62.9	60.2
21	59.9	60.0	59.9	59.1	59.7	60.3	59.8	54.3	55.3	55.6	54.5	55.7	57.2	55.4	63.6	64.5	65.1	64.1	65.2	65.9	64.7
22	58.8	58.1	57.2	56.9	57.4	57.9	57.9	57.0	57.8	58.6	57.4	57.8	59.1	58.0	65.2	65.3	65.4	63.7	62.4	60.8	63.8
23	56.5	57.1	57.3	56.8	57.6	57.9	57.2	58.8	58.7	58.2	57.0	56.9	57.8	57.9	59.5	57.7	57.6	55.9	55.3	55.8	57.0
24	58.0	58.6	60.2	59.9	60.9	61.3	59.8	56.9	57.0	57.2	56.6	56.6	57.1	56.9	56.6	57.6	57.7	57.1	58.0	58.8	57.6
25	60.6	60.6	60.1	58.5	59.4	60.7	60.0	56.7	57.9	58.3	56.9	57.7	58.7	57.7	58.6	59.0	59.3	58.5	58.8	59.5	59.0
26	59.7	60.7	60.5	59.9	59.1	60.4	60.1	58.3	59.2	59.1	58.6	59.0	60.3	59.1	59.5	59.7	59.9	58.8	59.4	58.8	59.4
27	59.2	59.6	59.6	59.2	59.2	60.2	59.5	59.5	60.0	59.8	58.7	59.2	59.8	59.5	57.2	57.3	58.8	58.6	59.3	59.7	58.5
28	59.6	60.6	61.1	60.3	60.7	62.0	60.7	59.0	59.3	59.1	57.3	57.9	59.1	58.6	60.9	62.5	63.0	62.2	63.1	64.1	62.6
29	61.4	61.8	61.7	59.9	59.7	60.0	60.8	58.7	59.8	59.0	58.1	59.1	59.7	59.1	63.7	64.5	63.7	62.6	63.0	63.5	63.5
30	58.2	61.5	62.1	62.1	63.5	64.1	61.9	58.7	60.0	60.1	60.3	60.7	61.3	60.2	63.0	63.1	62.1	60.8	61.6	62.3	62.2
31	63.6	63.6	63.4	62.5	61.6	62.0	62.8	60.7	60.5	60.2	57.4	56.6	54.9	58.4							
Mean	58.3	58.9	59.0	58.3	58.5	59.3	58.7	58.6	59.1	58.8	57.5	57.8	58.9	58.4	60.6	61.0	61.2	60.0	60.5	61.3	60.8
Day	OCTOBER						NOVEMBER						DECEMBER								
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean
1	61.8	61.5	61.1	59.7	60.2	61.2	60.9	62.8	63.0	62.8	61.4	62.5	62.1	62.4	70.1	69.0	67.7				

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

1949.



Month	AIR PRESSURE (700mm+)												TENSION OF THE VACUUM mm					
	2	6	10	14	18	22	Mean	Max.	Date	Min.	Date	2	6	10	14	18	22	Mean
January	55.3	55.3	56.0	54.2	55.3	55.5	55.2	65.0	11	40.2	1	4.0	3.8	4.1	4.2	4.3	4.1	4.1
February	53.3	53.5	53.9	52.4	53.2	53.2	53.3	66.5	24	35.3	14	4.1	4.0	4.3	4.3	4.4	4.3	4.2
March	56.3	56.6	56.7	55.3	56.2	56.9	56.3	63.8	31	40.6	18	3.2	3.2	3.2	3.5	3.5	3.3	3.3
April	54.9	55.3	55.6	54.3	54.7	55.5	55.1	67.6	2	43.6	12	5.3	5.2	5.4	5.4	5.4	5.4	5.3
May	54.2	54.5	54.2	53.1	53.5	54.5	54.0	65.1	17	44.1	8	8.5	8.8	9.3	8.9	9.3	9.3	9.0
June	54.2	54.7	54.5	53.4	53.6	54.4	54.1	59.1	21	45.8	30	10.9	11.2	11.5	12.0	11.9	11.2	11.4
July	53.1	53.8	53.9	53.2	53.4	54.2	53.6	58.9	30	40.2	7	15.9	16.1	16.8	17.3	17.2	16.6	16.7
August	53.4	53.9	53.8	52.5	52.8	53.8	53.4	58.1	10	46.5	18	17.8	17.9	18.9	18.5	19.5	18.5	18.5
September	55.4	55.8	56.1	54.9	55.4	56.0	55.6	65.0	14	45.3	1	13.1	13.1	14.3	14.1	14.6	13.6	13.8
October	57.5	57.8	57.9	56.8	57.5	58.1	57.6	64.3	21	40.9	30	8.7	8.1	8.9	9.1	9.3	9.0	8.9
November	60.8	61.1	61.8	60.4	61.3	61.5	61.1	72.2	20	44.7	5	4.8	4.8	5.2	5.2	5.3	5.2	5.1
December	56.9	57.3	57.7	56.2	56.8	56.8	56.9	65.3	1	38.0	14	3.8	3.7	3.9	4.1	4.1	3.8	3.9
Annual	55.4	55.8	56.0	54.7	55.3	55.9	55.5	72.2	XI20	35.3	II14	8.3	8.3	8.8	8.9	9.1	8.7	8.7
Month	AIR TEMPERATURE °C												RELATIVE HUMIDITY %					
	2	6	10	14	18	22	Mean	Max.	Mix.	Range	Absolute	2	6	10	14	18	22	Mean
Max.	Date	Min.	Date	2	6	10	14	18	22	Mean								
January	0.5 -0.2 2.3	3.9 1.6 1.0	1.5	5.1	-1.6	6.7	11.6	29	-9.0	11	83	84	76	69	82	83	79	
February	0.0 -0.3 3.1	5.0 2.5 0.9	1.8	6.1	-1.5	7.7	12.3	26	-6.2	10	88	88	75	66	78	86	80	
March	-1.7 -2.2 2.6	4.7 1.3 -0.5	0.7	5.8	-3.3	9.1	12.1	10	-7.5	31	79	81	59	55	69	74	70	
April	3.9 3.8 9.1	10.9 7.7 5.1	6.8	12.0	2.0	10.1	23.4	18	-5.9	3	85	85	63	57	69	80	73	
May	10.0 11.2 18.3	20.8 16.7 12.6	15.0	22.2	8.1	14.0	29.6	10	0.2	1	90	87	59	49	65	84	72	
June	13.6 14.2 18.3	20.7 17.6 14.6	16.5	21.7	12.6	9.0	24.7	24	3.8	9	93	92	73	67	79	89	82	
July	19.4 19.7 23.4	24.7 22.9 20.4	21.7	25.8	18.4	7.3	33.9	18	10.6	4	94	93	78	75	82	92	86	
August	21.3 21.4 26.8	29.4 25.6 22.6	24.5	30.3	20.5	9.8	34.6	10	17.2	26	94	94	72	62	80	91	82	
September	16.0 15.7 21.3	23.5 19.6 16.9	18.8	24.5	14.2	10.3	28.9	3	7.6	14	95	97	74	66	85	93	85	
October	9.9 9.0 14.3	16.6 13.0 11.1	12.3	17.7	7.5	10.1	22.5	10	1.2	24	94	93	73	64	82	90	83	
November	2.5 1.8 6.4	8.7 5.2 3.3	4.7	10.0	0.3	9.7	17.8	14	-6.1	29	87	90	71	61	78	88	79	
December	-0.8 -1.3 1.4	2.8 0.7 -0.2	0.5	4.4	-3.3	7.7	13.2	2	-14.2	27	84	86	74	72	82	83	80	
Annual	7.9 7.7 12.3	14.3 11.2 9.0	10.4	15.5	6.2	9.3	34.6	VIII10	-14.2	XII27	89	89	71	63	78	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	2	6	10	14	18	22	Mean								
January	18.3 13.4 16.5	14.8 10.1 18.6	91.7	35.0	1	11.3	1	7.9	8.0	8.0	8.5	8.4	8.7	8.3	8.3	8.3		
February	13.0 17.2 14.0	9.2 15.3 17.6	86.3	23.3	12	11.2	12	6.6	7.7	7.4	8.2	7.0	7.4	7.4	7.4	7.4		
March	4.7 4.6 1.5	1.1 4.3 1.9	18.1	5.4	2	3.6	2	6.6	7.8	7.6	8.3	7.6	5.5	7.2	7.2	7.2		
April	27.7 20.7 33.0	13.2 18.8 18.0	131.4	42.2	4	20.3	4	7.0	7.7	7.8	7.5	8.5	6.1	7.4	7.4	7.4		
May	15.8 12.2 15.0	4.2 9.3 19.5	76.0	19.5	14	13.4	14	6.5	7.6	7.5	7.8	7.6	6.6	7.3	7.3	7.3		
June	22.0 28.5 9.6	7.6 68.2 43.0	178.9	50.4	11	48.5	11	9.2	9.4	7.9	8.1	8.4	8.4	8.6	8.6	8.6		
July	12.4 11.8 10.1	17.5 23.2 10.2	85.2	16.4	1	7.9	1	8.3	8.9	8.5	8.7	8.8	7.9	8.5	8.5	8.5		
August	7.5 3.8 1.3	4.9 3.2 14.8	35.5	13.0	18	10.6	18	8.5	9.0	7.1	6.5	7.9	7.6	7.8	7.8	7.8		
September	14.2 23.6 7.1	16.0 12.8 28.8	102.5	38.7	1	19.9	1	8.5	9.6	7.2	7.4	7.4	7.3	7.9	7.9	7.9		
October	20.0 15.9 17.0	10.5 13.7 7.9	85.0	28.8	28	9.8	28	7.7	8.0	7.2	8.0	6.5	6.6	7.4	7.4	7.4		
November	9.6 11.0 4.4	3.9 10.3 11.4	50.6	14.1	18	8.8	18	6.6	7.4	6.8	6.7	7.0	6.5	6.8	6.8	6.8		
December	9.8 10.5 12.9	12.3 15.6 12.0	73.1	20.1	7	5.1	1	7.3	7.4	7.6	8.4	6.6	6.4	7.3	7.3	7.3		
Annual	175.0 173.2 142.4	115.2 204.8 203.7	1014.3	50.4	VII11	48.5	VII11	7.6	8.2	7.6	7.8	7.6	7.1	7.7	7.7	7.7		

1949.



Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
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MONTHLY MAXIMUM DAILY RANGE (WITH DATE) OF AIR TEMPERATURE (°C)

Max. Date	11.3 29	16.1 2	18.3 31	23.7 18	24.9 10	16.5 8, 3	15.8 17	16.0 10	16.3 14	16.3 8	15.1 22	15.7 27	24.9 V 10
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VARIABILITY OF DAILY MEAN AIR TEMPERATURE (°C)

Mean	1.7	1.6	1.4	1.9	1.7	1.2	1.4	0.9	1.7	1.6	2.3	1.9	1.6
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FREQUENCY OF VARIATION

Rise	> 2°	11	5	14	8	12	13	14	15	7	10	6	10	125
	2° — 4°	7	2	2	5	6	3	2	2	1	4	5	5	44
	4° — 6°	—	2	1	2	—	—	—	—	2	—	2	1	10
	6° — 8°	—	—	—	—	—	—	—	—	—	—	1	—	1
	8° IV	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sum	18	9	17	15	18	16	16	17	10	14	14	16	180
Fall	> 2°	9	15	11	11	9	11	12	12	13	10	10	8	131
	2° — 4°	3	4	2	2	2	3	2	2	7	6	3	5	41
	4° — 6°	1	—	1	2	2	—	1	—	—	1	2	1	11
	6° — 8°	—	—	—	—	—	—	—	—	—	—	1	1	2
	8° IV	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sum	13	19	14	15	13	14	15	14	20	17	16	15	185
	Stationary	—	—	—	—	—	—	—	—	—	—	—	—	—

MONTHLY MAXIMUM (WITH DATE) MINIMUM (WITH DATE)
AND RANGE OF TENSION OF VAPOUR (mm)

Max. Date	7.3 1	7.4 4	6.2 10	10.0 19	14.7 13	16.7 22	24.1 19	23.9 11	23.9 5	13.7 13	10.0 14	8.6 5	24.1 VII 19
Min. Date	2.4 7, 11	2.4 22	2.1 13	2.3 2	4.5 1	5.9 9	9.0 4	14.4 17	8.0 14	4.9 24	2.9 29	1.6 27	1.6 XII 27
Range	4.9	5.0	4.1	7.7	10.2	10.8	15.1	9.5	15.9	8.8	7.1	7.0	22.5

MONTHLY MINIMUM (WITH DATE) OF RELATIVE HUMIDITY (%)

Min. Date	44 29	42 8, 10	30 13	26 2	28 9, 10	43 1	47 18	42 9, 10	37 29	37 30	36 28	40 10	26 IV 2
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NUMBER OF OBSERVATION WITH PRECIPITATION

	IN LAST FOUR HOURS												
22—2	11	12	8	8	4	7	8	5	9	10	7	10	99
2—6	7	8	10	11	7	9	9	5	6	5	7	10	94
6—10	12	9	6	9	5	5	8	5	6	6	5	9	85
10—14	9	7	5	9	4	5	10	3	6	6	5	11	80
14—18	13	8	3	6	4	8	9	4	8	9	6	12	90
18—22	12	6	5	6	2	7	6	7	7	10	6	11	85
Sum	64	50	37	49	26	41	50	29	42	46	36	63	533
<0.1 mm	25	15	27	5	3	11	13	11	11	15	8	15	159

AT EXACT TIME OF OBSERVATION

2	6	7	7	5	4	5	5	2	3	5	2	10	61
6	5	7	6	8	4	3	4	1	4	5	4	7	58
10	13	6	3	6	2	3	5	1	1	4	4	9	57
14	11	5	5	5	2	4	8	2	3	3	5	10	63
18	11	4	—	2	3	3	5	4	2	3	3	10	50
22	12	6	3	5	2	5	3	4	5	9	5	7	66
Sum	58	35	24	31	17	23	30	14	18	29	23	53	355

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

1949.



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

Hour Month	2			6			10			14			18			22			Maximum			Mean for 24th	No of Days with Gale			
																			Vel.	Dir.	Date		m.p.s. 10—15	m.p.s. 15—29	m.p.s. ≥29	Sum
January	2.5	2.2	1.8				2.8	2.2	2.5				17.8			23			2.3		5	1	—	6		
February	1.9	1.7	2.4				3.7	3.5	2.3				16.7			28			2.5		1	2	—	3		
March	2.2	2.2	3.7				5.0	3.5	3.1				18.5			18			3.2		8	2	—	10		
April	2.4	2.2	4.2				5.3	4.2	2.6				13.7			NNW			3.5		7	—	—	7		
May	1.4	1.4	2.7				4.9	4.0	2.0				13.3			WSW			2.8		5	—	—	5		
June	0.8	0.8	1.8				3.4	3.6	2.3				8.8			SSE			2.1		—	—	—	—		
July	1.4	1.1	1.7				3.0	2.6	1.7				10.5			NNW			1.8		1	—	—	1		
August	2.2	1.8	2.7				4.5	4.2	3.4				14.9			ESE			3.2		2	—	—	2		
September	1.7	1.8	3.1				3.5	3.1	1.9				19.4			SE			2.5		2	1	—	3		
October	1.6	1.6	2.6				3.6	2.8	2.0				16.8			SW			2.5		—	1	—	1		
November	2.9	1.9	3.7				3.8	3.1	2.1				14.9			W			3.0		5	—	—	5		
December	3.6	2.8	3.4				4.0	3.4	3.4				14.4			W			3.4		8	—	—	8		
Annual	2.1	1.8	2.8				4.0	3.4	2.4				19.4			SE			IX 1		2.7	44	7	—	51	

NUMBER OF OBSERVATIONS OF THE WIND FROM

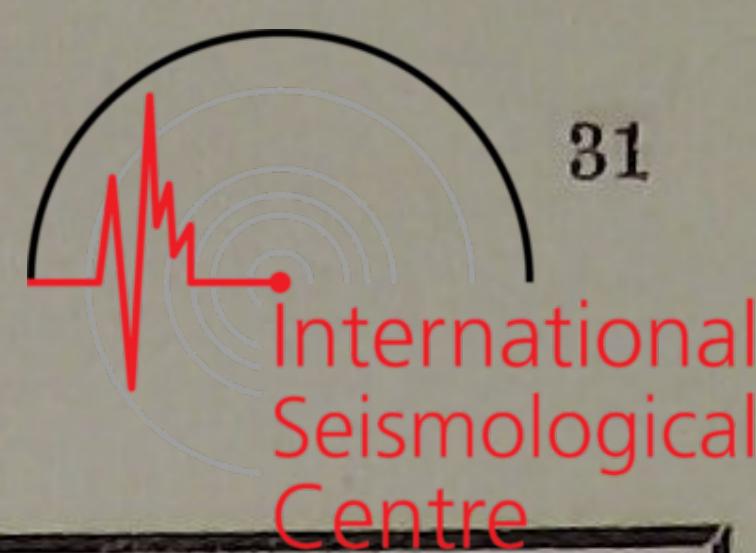
Dir. Month	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Calm
January	17	3	11	4	7	1	5	11	9	2	6	4	15	10	19	21	41
February	7	1	4	2	1	1	2	9	6	4	3	4	11	17	17	31	48
March	6	1	4	4	2	2	5	9	2	2	2	11	12	33	22	38	31
April	5	6	2	1	4	8	11	17	8	1	4	3	13	21	24	25	27
May	5	3	5	4	3	6	16	33	11	5	2	7	9	10	14	12	41
June	4	2	1	1	2	4	23	47	19	3	1	3	2	3	8	11	46
July	3	6	5	1	2	4	25	31	16	2	3	2	—	1	7	18	60
August	6	1	1	3	2	11	29	48	21	—	2	3	6	7	11	11	24
September	12	8	4	4	3	7	10	32	9	5	5	3	7	19	16	13	23
October	9	5	9	4	6	2	8	23	11	5	8	6	4	21	18	21	26
November	15	8	6	5	3	6	9	7	3	1	2	5	18	13	30	29	20
December	12	13	17	3	5	—	9	8	5	3	4	3	16	18	24	24	22
Annual	101	57	69	36	40	52	152	275	120	33	42	54	113	173	210	254	409

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

Dir. Month	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
January	2.8	1.5	2.2	1.1	1.0	0.8	2.2	3.4	1.9	2.3	2.3	3.4	5.5	3.3	3.3	2.8
February	2.4	1.7	3.6	2.8	0.7	2.3	2.3	3.1	2.4	2.5	2.1	4.7	7.1	4.6	2.8	3.2
March	3.7	2.2	2.4	1.0	1.1	1.5	3.3	3.2	1.9	2.0	2.2	6.2	5.6	5.3	3.1	3.3
April	1.7	1.5	1.5	1.7	1.3	5.2	3.0	4.5	3.2	0.7	3.4	1.5	4.2	5.9	4.8	4.3
May	1.0	1.7	1.6	2.3	1.4	3.1	3.4	4.2	3.2	1.7	4.0	7.1	4.8	3.2	3.4	3.2
June	1.6	1.0	1.3	1.0	1.9	3.4	3.2	3.1	3.2	1.4	1.7	4.6	1.3	2.3	2.0	2.1
July	2.4	1.4	0.9	1.3	0.9	2.7	2.9	3.1	2.3	2.2	1.6	2.3	—	1.0	2.9	3.0
August	1.5	4.4	1.5	1.3	4.7	5.5	3.9	4.3	3.5	—	2.0	1.0	1.3	1.3	3.2	3.7
September	1.7	1.5	2.0	1.2	1.4	8.3	4.2	4.3	2.4	1.8	2.2	2.1	2.5	1.7	2.1	2.4
October	1.9	2.7	1.7	1.6	1.7	3.6	2.4	3.2	2.6	1.8	5.4	2.1	4.1	2.5	2.7	2.9
November	2.3	2.8	2.2	1.4	1.3	1.5	3.0	5.8	3.0	1.7	1.6	3.5	3.3	4.7	3.4	3.7
December	5.2	3.1	2.9	1.9	1.9	—	2.4	4.4	2.2	2.0	1.9	4.7	4.2	6.3	4.0	3.9
Annual	2.6	2.2	2.2	1.5	1.6	4.3	3.2	3.8	2.8	1.9	2.9	4.2	4.4	4.2		

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

1949.



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

Hours Month \	2	6	10	14	18	22	General
January	N 43° W 1.6	N 71° W 1.0	S 67° W 0.2	N 74° W 1.7	N 34° W 0.9	N 37° W 0.9	N 55° W 1.0
February	N 52° W 1.3	N 39° W 0.7	N 48° W 1.2	N 60° W 2.5	N 81° W 1.7	N 67° W 1.5	N 61° W 1.5
March	N 59° W 1.4	N 45° W 1.4	N 60° W 2.2	N 77° W 3.8	N 58° W 2.3	N 57° W 2.0	N 62° W 2.2
April	N 39° W 0.7	N 41° W 1.2	N 63° W 1.9	N 76° W 1.9	N 75° W 1.3	N 48° W 1.0	N 64° W 1.3
May	S 72° W 0.4	N 77° E 0.8	S 28° W 0.5	S 24° W 2.2	S 11° W 1.4	S 3° W 0.7	S 18° W 0.8
June	S 48° E 0.1	N 43° W 0.1	S 5° E 1.0	S 13° E 2.8	S 31° E 2.7	S 26° E 1.5	S 21° E 1.3
July	S 23° E 0.4	N 55° E 0.2	S 45° E 0.4	S 22° E 1.2	S 25° E 1.0	S 29° E 1.0	S 30° E 0.7
August	S 32° E 1.2	S 5° E 0.8	S 22° E 0.9	S 35° E 2.5	S 25° E 3.3	S 42° E 2.2	S 31° E 1.7
September	N 56° E 0.2	S 64° E 0.7	S 40° E 1.1	S 2° W 1.1	S 7° E 1.2	S 18° E 0.6	S 25° E 0.7
October	N 80° W 0.5	N 22° W 0.7	N 40° W 1.0	S 55° W 1.0	S 33° W 0.9	S 35° W 0.3	S 88° W 0.5
November	N 38° W 1.6	N 31° W 0.8	N 34° W 1.7	N 67° W 1.9	N 57° W 1.8	N 12° W 1.0	N 44° W 1.4
December	N 28° W 1.9	N 5° W 1.3	N 32° W 2.3	N 52° W 2.1	N 44° W 1.3	N 54° W 2.0	N 38° W 1.8
Annual	N 48° W 0.6	N 32° W 0.4	N 61° W 0.6	S 67° W 1.1	S 45° W 0.6	S 88° W 0.3	N 86° W 0.5

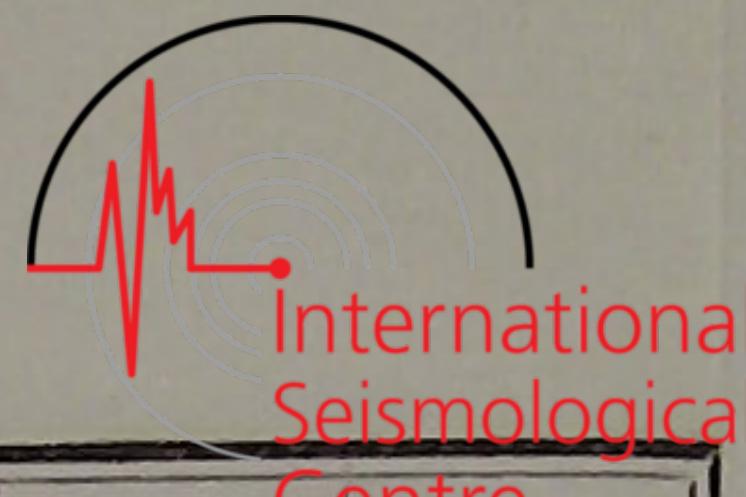
NUMBER OF DAYS WITH PRECIPITATION (Separated by Amount)

Month \ Amount	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual.
<0.1 mm	3	1	3	1	1	—	1	2	1	1	—	3	17
0.1— 1	9	3	11	3	3	2	4	7	6	10	8	5	71
1— 3	9	6	4	7	1	1	5	3	4	5	4	9	58
3— 5	—	3	1	2	—	2	2	2	—	3	1	1	17
5— 10	3	3	1	3	4	1	2	1	4	2	—	4	28
10— 15	2	—	—	2	2	2	3	1	2	—	3	—	17
15— 20	—	1	—	1	1	2	1	—	—	1	—	—	7
20— 25	—	1	—	—	—	1	—	—	—	—	—	1	3
25— 30	—	—	—	—	—	1	—	—	—	1	—	—	2
30— 35	—	—	—	—	—	—	—	—	—	—	—	—	—
35— 40	1	—	—	—	—	—	—	—	1	—	—	—	2
40— 45	—	—	—	1	—	—	—	—	—	—	—	—	1
45— 50	—	—	—	—	—	—	—	—	—	—	—	—	—
50— 60	—	—	—	—	—	1	—	—	—	—	—	—	1
60— 70	—	—	—	—	—	—	—	—	—	—	—	—	—
70— 80	—	—	—	—	—	—	—	—	—	—	—	—	—
80— 90	—	—	—	—	—	—	—	—	—	—	—	—	—
90—100	—	—	—	—	—	—	—	—	—	—	—	—	—
100≥	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	27	18	20	20	12	13	18	16	18	23	16	23	224

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	0.4	0.1	0.7	2.4	1.3	0.8	1.0	3.0	2.7	3.6	3.7	4.5	6.9	10.9	13.3	13.6	13.3
February	2.1	1.8	4.5	6.7	3.7	2.6	3.6	3.7	3.9	4.3	4.8	4.9	6.5	10.4	12.2	13.0	13.1
March	1.3	1.0	7.2	9.1	4.2	2.1	4.1	3.9	4.0	4.2	4.6	4.7	6.0	9.5	11.4	12.5	12.8
April	5.8	5.9	14.0	14.7	9.6	6.8	9.5	8.9	8.9	8.5	8.4	7.7	7.5	9.1	10.8	12.0	12.5
May	12.4	13.8	23.4	23.5	17.4	14.4	17.5	16.2	16.1	15.1	14.5	13.2	11.3	9.8	10.7	11.5	12.3
June	16.2	17.3	26.5	27.1	19.8	17.0	20.7	19.6	19.6	19.0	18.5	17.0	15.3	11.6	11.2	11.5	12.0
July	21.1	21.7	27.9	28.4	24.3	22.0	24.2	23.5	23.4	22.4	21.8	17.6	18.0	13.3	12.3	11.7	12.0
August	23.3	23.6	33.9	35.7	27.0	24.4	28.0	26.5	26.4	25.5	24.8	23.6	20.8	14.9	13.3	12.1	12.1
September	18.7	18.6	26.2	26.6	21.5	19.4	21.8	21.9	22.1	22.1	21.8	21.8	20.9	16.4	14.4	12.8	12.3
October	12.2	11.6	18.9	18.6	14.5	12.8	14.8	15.0	15.3	16.0	16.5	16.9	17.8	16.4	15.1	13.4	12.7
November	4.4	3.9	10.0	11.1	6.2	4.9	6.8	7.2	7.5	8.6	9.6	10.4	13.1	15.3	15.1	13.9	13.1
December	1.3	1.0	3.6	5.3	2.1	1.4	2.4	2.9	3.1	4.1	5.1	5.9	8.6	13.3	14.3	13.9	13.3
Annual	9.9	10.0	16.4	17.4	12.6	10.7	12.9	12.7	12.7	12.8	12.9	12.4	12.7	12.6	12.9	12.7	12.6

1949.



Month	NUMBER OF OBSERVATIONS OF CLOUDS FROM																		Direction	Intensity %			
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Not Observed						
Upper Cloud	Jan.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	185	W	100			
	Feb.	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	165	W	100			
	Mar.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	184	S 67° W	93			
	Apr.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—			
	May	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—			
	Jun.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	179	S 45° W	100			
	Jul.	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	185	W	100			
	Aug.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—			
	Sep.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—			
	Oct.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—			
	Nov.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—			
	Dec.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—			
	Annual	—	—	—	—	—	—	—	—	—	—	—	2	—	6	—	—	2182	S 79° W	98			
Cloud Intermediate	Jan.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	183	S 63° W	75			
	Feb.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	165	S 63° W	75			
	Mar.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	184	W	100			
	Apr.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	179	W	100			
	May	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	186	—	—			
	Jun.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	180	—	—			
	Jul.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	185	W	100			
	Aug.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	185	—	—			
	Sep.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	178	W	100			
	Oct.	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	185	W	100			
	Nov.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	175	S 45° W	77			
	Dec.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	185	S 45° W	100			
	Annual	1	—	—	—	—	—	—	—	—	—	—	4	—	2	—	13	—	—	2170	S 69° W	77	
Lower Cloud	Jan.	—	—	—	—	—	—	—	—	—	—	—	2	—	1	—	—	43	—	—	138	S 85° W	90
	Feb.	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	33	—	—	133	N 73° W	91
	Mar.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	79	—	—	107	W	100
	Apr.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	52	—	—	127	S 89° W	98
	May	—	—	—	—	—	—	—	—	—	—	—	1	4	—	—	—	34	—	—	147	S 82° W	87
	Jun.	4	—	—	—	—	—	—	—	—	—	—	3	—	5	—	—	9	—	—	159	S 81° W	29
	Jul.	—	—	—	—	—	—	—	—	—	—	—	5	—	5	—	—	13	—	—	168	S 69° W	77
	Aug.	2	—	—	1	—	—	—	—	—	—	—	19	—	7	—	—	9	—	1	147	S 7° W	44
	Sep.	1	—	—	—	—	—	—	—	—	—	—	14	—	2	—	—	19	—	—	146	S 56° W	68
	Oct.	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	22	—	—	162	S 85° W	92
	Nov.	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	28	—	—	151	N 88° W	97
	Dec.	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	12	—	—	173	S 85° W	93
	Annual	9	—	1	—	11	—	2	1	52	—	2	—	353	—	1	—	—	1758	S 82° W	80		

Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
MONTHLY TOTAL DURATION OF SUNSHINE (in hours)												
91.94	121.27	184.22	174.94	227.85	147.73	115.01	213.59	136.46	121.65	122.99	100.14	1757.79
PERCENTAGE TO POSSIBLE DURATION												
30	40	50	44	52	33	25	51	37	35	41	34	40
AMOUNT OF EVAPORATION (mm)												
OPEN AIR												
2.0	2.3	3.0	4.0	5.7	5.1	4.6	6.2	3.6	2.8	2.4	1.9	3.6
IN THE SHELTER												
1.0	1.0	1.5	1.6	2.1	1.3	1.2	1.7	1.0	0.9	1.0	1.0	1.3

1949.



NUMBER OF DAYS WITH

Month	○*	*	△	▲	☒	≡	Clear	Cloudy	Sunless	↙	↖	Min Temp. <0°	Mean Temp. <0°	Max Temp. <0°	Min Temp. ≥25°	Mean Temp. ≥25°	Max Temp. ≥25°	Max Temp. ≥30°
January	24	20	1	—	—	1	—	20	6	6	—	20	10	—	—	—	—	—
February	17	9	4	—	—	5	2	16	5	3	13	21	7	—	—	—	—	—
March	17	16	2	—	—	—	1	15	1	10	11	29	13	1	—	—	—	—
April	19	4	—	—	—	1	—	15	4	7	6	7	—	—	—	—	—	—
May	11	—	—	—	1	1	1	12	2	5	1	—	—	—	—	8	—	—
June	13	—	—	—	1	—	—	23	5	—	—	—	—	—	—	8	16	4
July	17	—	—	—	1	2	1	25	6	1	—	—	—	—	—	8	16	4
August	14	—	—	—	2	5	—	18	—	—	—	—	—	—	—	15	31	16
September	17	—	—	—	—	6	—	19	5	3	—	—	—	—	—	—	11	—
October	22	—	—	—	—	7	1	14	4	1	1	—	—	—	—	—	—	—
November	16	2	—	—	—	1	3	11	4	5	11	17	3	—	—	—	—	—
December	20	13	1	—	—	3	—	12	6	8	5	25	11	5	—	—	—	—
Annual	207	64	8	—	5	32	9	200	48	49	48	119	44	6	—	23	66	20

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 \equiv^o are not included.

GENERAL REMARKS.

	First Day (last year) 1948	Last Day (this year) 1949	First Day (this year) 1949
Min. Air Temp. below 0°:	Nov. 2	Apr. 21	Nov. 3
Mean Air Temp. below 0°:	Nov. 28	Mar. 24	Nov. 17
Max. Air Temp. below 0°:	Mar. 1	Mar. 1	Dec. 8
Max. Air Temp. above 25°:		Sep. 26	May 10
Mean Air Temp. above 25°:		Aug. 31	Jul. 17
Max. Air Temp. above 30°:		Aug. 29	Jul. 17
Hoar Frost:	Oct. 24	May 1	Oct. 24
Snow:	Nov. 9	Apr. 16	Oct. 24
Snow on Ground:	Nov. 27	Apr. 16	Nov. 17
Max. Continuance of Days with Min Temp. below 0° is 23 Days:		from Mar. 12 to Apr. 3	
Max. Continuance of Days with Mean Temp. below 0° is 8 Days:		from Jan. 5 to Jan. 12	
Max. Continuance of Days with Max. Temp. above 30° is 11 Days:		from Aug. 6 to Aug. 16	
Max. Continuance of Days with Precipitation is 14 Days:		from Oct. 25 to Nov. 7	
Max. Continuance of Days without Precipitation is 9 Days:		from May 27 to Jun. 4 from Aug. 9 to Aug. 17	

Continuance of more than 5 Days with Precipitation are:

10 Days: from Jan. 1 to Jan. 10	9 Days: from Sep. 16 to Sep. 24
7 " from Feb. 15 to Feb. 21	12 " from Oct. 9 to Oct. 20
9 " from Feb. 25 to Mar. 5	14 " from Oct. 25 to Nov. 7
6 " from Apr. 3 to Apr. 8	7 " from Nov. 12 to Nov. 18
5 " from Jun. 19 to Jun. 23	6 " from Dec. 4 to Dec. 9
5 " from Jul. 11 to Jul. 15	6 " from Dec. 14 to Dec. 19
5 " from Aug. 18 to Aug. 22	6 " from Dec. 25 to Dec. 30

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

1949.



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	747.3	3.9	5.4	89	9.5	2.1	67.4
	6—10	755.1	-1.6	3.3	81	8.4	1.5	10.6
	11—15	759.5	0.3	3.9	83	8.7	1.7	4.4
	16—20	755.8	0.1	3.6	78	8.9	2.9	2.8
	21—25	758.5	2.3	2.8	71	6.8	3.2	1.6
	26—30	754.8	3.3	4.3	75	7.5	2.5	4.6
February	31—4	758.0	5.4	5.5	82	7.2	1.4	6.5
	5—9	750.8	1.7	4.0	76	8.2	2.7	3.0
	10—14	750.8	2.0	4.8	81	6.3	2.3	40.9
	15—19	751.0	0.5	3.8	81	9.3	3.2	10.3
	20—24	760.0	0.0	3.3	72	5.1	3.0	10.0
	25—1	749.8	1.5	4.4	85	7.7	3.0	18.5
March	2—6	754.6	-0.9	3.3	76	7.2	3.0	6.9
	7—11	753.7	2.3	3.8	71	7.8	2.8	1.2
	12—16	758.3	0.7	2.9	61	7.2	4.5	0.6
	17—21	752.2	0.7	3.4	70	9.1	4.1	5.4
	22—26	758.8	0.1	3.4	75	6.5	2.0	0.9
	27—31	761.1	2.1	3.3	65	6.1	2.4	0.5
April	1—5	759.3	4.5	4.5	72	6.9	3.7	45.5
	6—10	753.8	8.9	4.8	80	8.4	3.7	28.9
	11—15	753.0	6.2	4.8	70	8.2	3.2	8.8
	16—20	757.1	8.9	5.9	70	5.6	2.8	7.9
	21—25	753.4	8.3	6.2	75	7.8	3.5	8.5
	26—30	753.6	8.7	5.8	71	7.6	4.0	31.8
May	1—5	755.1	10.7	6.5	70	8.9	2.8	13.5
	6—10	750.1	14.6	8.0	67	6.2	2.4	9.3
	11—15	751.7	16.6	10.3	74	8.6	3.3	36.7
	16—20	758.0	15.1	9.8	77	7.1	2.8	15.5
	21—25	752.5	16.6	10.4	76	8.4	2.9	0.6
	26—30	756.0	15.8	9.0	71	4.6	2.5	0.4
June	31—4	755.3	15.0	9.2	74	5.5	2.9	—
	5—9	754.0	14.1	9.5	80	9.3	2.2	3.0
	10—14	752.0	16.9	11.6	82	8.9	1.6	53.7
	15—19	754.4	18.4	13.6	87	9.9	2.0	27.2
	20—24	753.1	17.0	12.8	89	9.3	1.6	79.9
	25—29	757.2	17.0	11.2	78	7.8	2.4	—
July	30—4	751.6	17.3	12.8	87	8.3	2.0	33.3
	5—9	749.5	19.1	13.5	83	8.8	2.9	14.0
	10—14	754.7	21.6	16.9	88	9.1	1.4	20.3
	15—19	754.7	24.9	19.1	83	5.6	0.9	8.6
	20—24	753.7	25.2	20.0	85	9.4	1.0	9.9
	25—29	755.1	22.8	18.0	87	9.6	2.7	12.9
August	30—3	755.8	21.2	16.0	86	8.9	3.0	1.8
	4—8	755.1	24.9	18.2	80	6.7	2.6	0.1
	9—13	753.8	25.7	18.5	78	5.6	1.5	—
	14—18	752.8	24.4	17.9	80	7.9	3.4	13.0
	19—23	750.5	24.8	19.6	85	8.7	2.8	6.0
	24—28	753.3	23.5	18.4	86	9.2	3.6	10.7
September	29—2	753.5	24.8	20.0	87	9.1	6.5	45.0
	3—7	755.9	21.1	15.7	84	4.3	2.0	0.0
	8—12	754.0	19.3	13.8	83	8.8	1.7	8.2
	13—17	758.0	16.8	12.1	86	7.3	2.7	6.5
	18—22	756.9	18.5	14.0	89	9.9	2.1	29.9
	23—27	753.1	18.9	13.4	83	8.7	3.1	15.7
October	28—2	757.1	14.1	9.5	82	7.3	1.9	4.8
	3—7	759.7	12.7	9.0	83	7.6	1.9	1.8
	8—12	758.4	13.8	10.3	87	7.1	2.2	13.1
	13—17	758.4	14.9	10.6	84	8.2	1.9	10.4
	18—22	759.0	12.9	9.2	83	7.7	2.5	19.7
	23—27	757.5	9.9	7.0	79	5.3	2.6	1.1
November	28—1	752.9	9.1	6.8	79	8.4	4.1	36.9
	2—6	757.1	6.7	5.9	81	7.7	2.7	13.9
	7—11	760.9	5.6	4.8	73	6.0	3.6	4.8
	12—16	756.9	5.6	5.6	81	6.4	3.6	15.3
	17—21	763.5	2.0	4.3	81	8.0	2.7	15.1
	22—26	761.2	4.9	5.3	81	7.5	3.3	1.1
December	27—1	767.2	2.1	4.4	82	5.9	1.4	9.4
	2—6	758.2	5.2	5.7	86	8.4	2.2	3.7
	7—11	758.0	0.1	3.7	80	7.7	3.6	27.9
	12—16	752.3	2.3	4.0	75	5.8	3.8	5.7
	17—21	759.5	0.9	3.7	76	6.0	3.3	3.2
	22—26	757.7	-1.3	3.1	74	6.6	4.7	5.0
	27—31	754.9	-5.3	2.7	86	8.5	3.1	18.2
Mean		755.5	10.5	8.7	79	7.7	2.7	13.9

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.
Felt	{
	1. slight
	2. moderate
	3. rather strong
	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, 1949.



No.	Date 1949	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				
1	Jan.	2	h 17	m 53	s 37	e —	m 53	s 37	m 56	s 47	m 56	s 48	m —	s —	m —	s —	— μ 96	— μ 98	m 10	s 16	0
2		2	23	20	49	—	—	—	21	11	e 21	18	—	—	—	—	— 40	+ 33	7	47	0
3		4	2	55	50	—	—	56	03	—	—	—	—	—	—	—	—	—	1	02	0
4		5	1	20	25	—	—	20	38	—	—	—	—	—	—	—	— 106	- 143	1	56	0
5		5	15	18	33	18	31	18	48	18	49	—	—	—	—	—	—	—	5	09	0
6		5	21	49	07	—	—	49	27	—	—	—	—	—	—	—	+ 6	—	2	14	0
7		6	22	12	39	—	—	e 44	11	—	—	—	—	—	—	—	—	—	7	32	0
8		7	22	12	39	e 12	39	12	58	e 12	58	—	—	—	—	—	- 203	+ 193	7	32	0
9		8	5	00	52	e 00	54	01	13	01	14	—	—	—	—	—	- 37	+ 35	7	26	0
10		8	17	—	—	—	—	19	03	—	—	—	—	—	—	—	—	—	—	—	0
11	Feb.	8	17	15	37	—	—	33	27	—	—	—	—	—	—	—	—	—	2	23	0
12		8	19	15	37	—	—	15	52	—	—	—	—	—	—	—	± 69	+ 103	4	51	1
13		9	17	45	20	e 45	20	45	34	e 45	33	—	—	—	—	—	+ 6	—	4	58	0
14		10	14	09	49	e 09	52	10	44	e 10	44	—	—	—	—	—	- 5	—	3	35	0
15		10	e 17	54	32	—	—	54	59	—	—	—	—	—	—	—	—	—	—	—	0
16	Mar.	18	e 13	36	26	e 05	20	36	49	e 08	59	—	—	—	—	—	- 5	+ 48	4	08	0
17		20	e 0	05	18	e 05	20	08	59	e 08	58	—	—	—	—	—	- 22	- 28	23	29	0
18		20	22	26	37	26	36	27	59	27	58	—	—	—	—	—	- 20	- 28	12	21	0
19		25	14	47	11	47	11	47	26	47	27	—	—	—	—	—	—	—	3	16	0
20		30	22	—	—	—	—	06	09	—	—	—	—	—	—	—	—	—	—	—	0
21	Feb.	2	3	23	55	e 23	57	e 30	22	30	22	—	—	—	—	—	—	—	25	19	0
22		3	0	25	14	—	—	25	29	—	—	—	—	—	—	—	5	3	12	0	
23		3	2	48	00	—	—	48	39	—	—	—	—	—	—	—	7	18	06	0	
24		9	16	32	30	—	—	32	43	e 32	45	—	—	—	—	—	+ 6	—	2	06	0
25		11	7	18	09	—	—	18	40	—	—	—	—	—	—	—	+ 5	—	4	53	0
26	Mar.	14	3	37	01	—	—	—	—	46	00	—	—	—	—	—	—	—	6	—	0
27		15	0	01	05	—	—	01	30	01	32	—	—	—	—	—	+ 9	- 15	6	03	0
28		15	14	30	20	—	—	30	45	30	46	—	—	—	—	—	+ 10	—	3	28	0
29		16	17	03	55	—	—	04	14	—	—	—	—	—	—	—	- 6	—	3	04	0
30		19	0	—	—	—	—	53	24	—	—	—	—	—	—	—	+ 6	—	—	—	0
31	Feb.	19	9	05	55	—	—	06	20	e 06	19	—	—	—	—	—	+ 6	—	3	26	0
32		20	14	49	42	—	—	50	28	e 50	29	—	—	—	—	—	+ 9	- 15	4	19	0
33		23	3	34	34	—	—	34	50	—	—	—	—	—	—	—	- 5	—	2	42	0
34		23	20	40	27	—	—	40	44	—	—	—	—	—	—	—	- 5	—	1	16	0
35		24	1	16	11	e 16	12	e 22	10	? 22	12	—	—	—	—	—	- 6	+ 40	43	38	0
36	Mar.	26	e 13	02	42	02	42	03	20	03	20	—	—	—	—	—	- 156	- 200	19	15	0
37		26	23	09	40	—	—	10	13	—	—	—	—	—	—	—	3	—	4	29	0
38		27	3	—	—	—	—	14	02	—	—	—	—	—	—	—	+ 5	—	—	—	0
39		27	6	38	17	—	—	38	51	38	51	—	—	—	—	—	- 40	- 63	6	19	0
40		28	5	26	21	—	—	26	31	—	—	—	—	—	—	—	8	—	2	11	0
41	Mar.	28	6	52	07	—	—	54	10	? 54	17	—	—	—	—	—	+ 26	- 20	6	29	0
42		4	10	26	38	—	—	34	29	—	—	—	—	—	—	—	3	—	20	54	0
43		4	19	28	37	28	37	35	58	35	58	—	—	—	—	—	+ 48	+ 290	53	37	0
44		5	7	—	—	—	—	16	57	—	—	—	—	—	—	—	- 8	—	—	—	0
45		6	2	45	49	e 45	49	46	21	e 46	22	—	—	—	—	—	+ 11	—	4	39	0
46	Mar.	6	14	23	10	e 23	12	23	34	23	36	—	—	—	—	—	+ 12	—	4	21	0
47		8	20	02	41	—	—	02	48	—	—	—	—	—	—	—	- 6	—	1	43	0
48																					



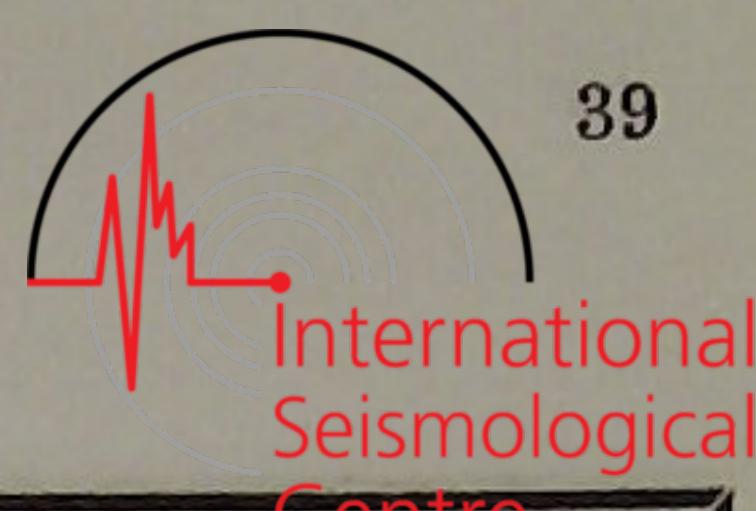
EARTHQUAKES, 1949.

No.	Date 1949	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			
56	Mar. 21	h 2	m 09	s 43	—	—	m 10	s 21	e 10	m 23	—	—	—	+ 7	μ	—	m 4	s 52	0	
57		11	58	28	—	—	59	37	—	—	—	—	—	—	—	—	4	25	0	
58		16	33	12	—	—	33	33	—	—	—	—	—	± 27	± 55	—	1	40	0	
59		19	47	47	47	46	47	57	47	57	—	—	—	—	—	—	3	31	0	
60		20	16	55	—	—	17	17	—	—	—	—	—	—	—	—	2	24	0	
61	Apr. 27	15	41	21	e	41	23	47	27	? 47	21	54	09	54	05	— 10	+ 135	52	00	0
62		20	—	—	—	—	—	49	41	—	—	—	—	+ 3	—	—	—	—	0	
63		12	—	—	—	—	—	33	27	—	—	—	—	—	—	—	—	—	0	
64		18	29	03	29	03	e	30	26	30	26	—	—	—	—	—	+ 55	8	40	0
65		21	—	—	—	—	e	15	22	—	—	—	—	—	—	—	—	—	0	
66	11	2	48	08	—	—	e	49	51	—	—	—	—	+ 6	—	—	5	07	0	
67		20	—	—	—	—	e	31	17	—	—	—	—	—	—	—	5	25	0	
68		5	06	30	06	30	e	07	25	e	07	27	—	—	—	—	5	00	0	
69		18	43	01	—	—	43	35	43	34	—	—	—	—	—	—	1	20	0	
70		1	34	22	—	—	34	34	—	—	—	—	—	—	—	—	—	—	0	
71	20	0	22	21	22	21	24	40	24	40	—	—	—	+ 17	— 15	9	11	0		
72	20	2	03	05	03	05	03	49	03	48	—	—	—	+ 43	— 35	10	04	0		
73	20	12	48	59	? 49	00	e	53	26	? 53	22	—	—	—	—	—	9	57	0	
74	21	0	—	—	e	33	12	—	—	—	—	—	—	+ 18	— 23	—	—	—	0	
75	22	8	49	56	49	57	e	50	17	50	17	—	—	—	—	4	07	0		
76	24	13	33	22	e	33	29	e	42	29	? 42	23	—	—	—	—	20	47	0	
77	24	22	53	52	e	—	—	54	15	e	54	17	—	—	—	—	3	46	0	
78	25	23	14	39	e	14	43	15	27	e	15	28	—	—	—	—	5	54	0	
79	29	5	43	20	—	—	44	22	44	25	—	—	—	—	—	—	6	01	0	
80	29	15	52	10	—	—	52	38	—	—	—	—	—	+ 4	—	—	2	57	0	
81	May. 30	10	30	26	30	30	35	52	35	53	e	44	16	e	44	12	-108	35	47	0
82		1	07	42	07	42	07	54	07	53	—	—	—	- 80	— 123	—	5	34	1	
83		7	32	35	—	—	32	42	32	42	—	—	—	+ 10	- 10	2	32	0		
84		14	59	48	59	47	61	59	62	00	—	—	—	- 27	+ 35	8	39	0		
85		11	55	23	55	22	56	03	e	56	04	—	—	- 24	- 15	7	25	0		
86	5	e	8	17	22	—	—	17	45	—	—	—	—	+ 3	—	—	3	08	0	
87	6	17	31	46	—	—	32	05	—	—	—	—	—	- 69	—	—	7	28	1	
88	6	18	26	55	—	—	27	07	—	—	—	—	—	—	—	—	1	41	0	
89	8	16	00	36	—	—	01	42	01	44	—	—	—	+ 26	- 13	6	13	0		
90	8	17	—	—	—	—	05	49	—	—	—	—	—	—	—	—	—	—	0	
91	9	e	1	02	10	—	—	02	24	—	—	—	—	—	—	—	1	25	0	
92	9	? 22	45	49	—	—	—	—	—	—	—	—	—	—	—	—	41	21	0	
93	11	5	—	—	—	—	42	10	—	—	—	—	—	—	—	—	—	—	0	
94	12	10	02	54	02	53	03	22	03	24	—	—	—	+ 25	+ 35	6	15	0		
95	12	20	19	04	—	—	19	37	—	—	—	—	—	—	—	—	3	15	0	
96	14	e	0	25	49	—	—	26	53	—	—	—	—	+ 5	—	—	2	56	0	
97	14	12	—	—	—	—	58	41	—	—	—	—	—	- 10	—	—	—	—	0	
98	17	9	—	—	—	—	28	41	28	39	—	—	—	+ 5	—	—	7	24	0	
99	17	11	33	03	e	33	09	35	17	e	35	20	—	—	—	—	—	—	0	
100	19	22	—	—	—	—	34	21	—	—	—	—	—	—	—	—	—	—	0	
101	21	e	4	42	10	i	—	42	54	—	—	—	—	—	—	—	3	32	0	
102	22	i	6	40	42	i	40	42	41	04	i	41	06	—	—	—	26	22	3	
103	22	19	23	41	e	23	41	24	04	e	24	06	—	—	—	—	3	52	0	
104	22	23	37	04	37	04	37	14	37	15	—	—	—	+ 9	- 90	- 150	6	41	1	
105	24	1	28	22	—	—	29	36	e	29	36	—	—	+ 6	—</					

EARTHQUAKES, 1949.

No.	Date 1949	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			
111	Jun. 4	h 16	m 22	s 43		m —	s —	m 49	s 58	m —	s —	m —	s —	μ	—	—	—	m 2	s 27	0
112		11	22	43		—	—	22	52	—	—	—	—	± 8	—	—	—	—	—	0
113		17	—	—		—	—	36	18	—	—	—	—	—	—	—	—	—	—	0
114		e 20	57	57		—	—	59	02	e 59	02	—	—	+ 6	—	—	—	6	17	0
115		13	25	11		—	—	25	44	e 25	45	—	—	- 17	—	20	—	6	28	0
116	9	17	—	—		—	—	e 11	15	—	—	—	—	+ 4	—	—	—	—	—	0
117	10	6	54	10		—	—	54	44	—	—	—	—	- 5	—	—	—	3	51	0
118	13	15	46	16		—	—	46	35	—	—	—	—	- 4	—	—	—	3	01	0
119	16	8	29	52		—	—	30	19	—	—	—	—	+ 6	—	—	—	5	15	0
120	17	e 23	16	28		—	—	e 17	34	—	—	—	—	+ 6	—	—	—	4	23	0
121	18	i 12	27	52		—	—	28	11	28	14	—	—	+ 26	—	25	—	5	38	0
122	20	3	02	54		—	—	03	12	—	—	—	—	+ 8	—	—	—	1	38	0
123	22	13	59	34		—	—	e 59	56	—	—	—	—	—	—	—	—	2	24	0
124	24	3	48	51		—	—	50	14	—	—	—	—	+ 5	—	—	—	5	53	0
125	26	9	39	46		—	—	39	58	e 39	56	—	—	- 15	—	—	—	3	12	0
126	Jul. 2	17	49	13	e 49	19	55	41	e 55	40	—	—	—	—	—	—	—	15	56	0
127		18	17	29	—	—	18	04	e 18	07	—	—	—	—	- 5	—	—	3	23	0
128		19	29	03	—	—	29	21	29	24	—	—	—	—	- 21	—	—	3	53	0
129		17	46	32	—	—	47	05	e 47	07	—	—	—	—	- 3	—	—	3	47	0
130		13	—	—	—	40	39	—	—	—	—	—	—	—	—	—	—	—	—	0
131	3	5	02	24	02	24	06	35	06	33	—	—	+ 113	—	- 238	—	54	57	0	
132	4	2	04	26	—	—	04	38	—	—	—	—	+ 8	—	—	—	1	30	0	
133	4	e 19	09	56	—	—	10	17	—	—	—	—	± 4	—	—	—	2	11	0	
134	5	3	—	—	—	—	56	24	—	—	—	—	—	—	—	—	—	—	0	
135	6	e 18	50	50	—	—	51	03	—	—	—	—	—	—	—	—	2	00	0	
136	8	5	28	48	—	—	29	56	—	—	—	—	+ 7	—	—	—	4	06	0	
137	9	8	07	28	—	—	07	43	—	—	—	—	- 5	—	—	—	2	24	0	
138	10	13	03	02	03	03	10	26	10	26	—	—	e 20	50	+ 433	—	70	21	0	
139	11	0	58	32	58	32	66	00	e 66	01	—	—	e 79	34	—	—	34	31	0	
140	11	1	33	20	33	22	40	48	e 40	52	—	—	e 54	26	—	—	40	43	0	
141	12	1	12	56	12	55	14	39	14	34	—	—	- 54	—	+ 38	—	10	57	0	
142	14	1	—	—	28	11	—	—	—	—	—	—	—	—	—	—	—	—	0	
143	14	19	—	—	17	17	—	—	—	—	—	—	—	—	—	—	—	—	0	
144	14	e 20	47	42	—	—	48	15	—	—	—	—	—	—	—	—	—	2	41	0
145	14	e 22	49	40	—	—	50	03	—	—	—	—	—	—	—	—	—	2	56	0
146	15	e 8	23	19	23	20	24	58	24	59	—	—	+ 86	—	- 110	—	11	05	0	
147	17	e 7	08	23	—	—	08	44	—	—	—	—	+ 4	—	—	—	3	10	0	
148	18	18	53	49	53	49	54	17	54	20	—	—	+ 114	+ 165	—	—	9	19	0	
149	19	2	17	52	—	—	18	14	—	—	—	—	+ 5	—	—	—	3	08	0	
150	19	13	27	32	—	—	28	02	e 28	05	—	—	+ 10	—	—	—	3	46	0	
151	23	e 6	05	57	—	—	06	14	—	—	—	—	—	—	—	—	2	02	0	
152	23	19	37	01	e 37	07	45	23	45	24	—	—	—	—	—	—	20	19	0	
153	27	0	35	05	—	—	35	36	—	—	—	—	+ 5	—	—	—	1	28	0	
154	27	4	49	33	—	—	50	03	—	—	—	—	- 6	—	—	—	4	46	0	
155	28	16	32	13	—	—	32	26	—	—	—	—	—	—	—	—	1	39	0	
156	28	e 18	26	57	—	—	27	09	—	—	—	—	—	—	—	—	1	39	0	
157	28	19	13	55	—	—	14	10	—	—	—	—	+ 6	—	—	—	3	09	0	
158	29	e 17	11	38	—	—	11	48	—	—	—	—	—	—	—	—	2	09	0	
159	30	2	32	55	—	—	33	45	—	—	—	—	+ 10	—	—	—	5	25	0	
160	30	15	32	10</																

EARTHQUAKES, 1949.



No.	Date 1949	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				
166	Aug. 8	h 2	m 48	s 27	e 48	m 32	m 48	s 50	m 48	s 52	m —	m —	m —	— 10	μ	m 3	s 36	0			
167	8	4	11	25	—	—	11	36	—	—	—	—	—	— 4	—	1	32	0			
168	12	e 2	27	16	—	—	27	47	—	—	—	—	—	+ 4	—	5	34	0			
169	14	1	24	17	e 24	17	24	44	e 24	47	—	—	—	— 16	25	6	47	0			
170	14	3	32	24	e 32	22	38	18	38	17	—	—	—	—	—	34	54	0			
171	18	3	35	26	35	27	36	18	36	21	?	—	—	+ 421	+ 525	11	03	1			
172	18	4	—	—	—	—	—	—	?	25	53	? 23	05	—	—	—	—	0			
173	18	19	00	25	00	26	02	01	02	03	—	—	—	— 24	— 23	6	05	0			
174	20	4	13	35	—	—	14	08	—	—	—	—	—	— 6	—	4	51	0			
175	20	14	19	02	e 19	05	19	14	19	15	—	—	—	— 17	— 25	2	52	0			
176	21	23	24	24	—	—	24	34	—	—	e 25	30	—	— 5	—	1	40	0			
177	22	13	10	59	11	05	18	57	19	03	—	—	—	— 446	—	201	52	0			
178	22	20	—	—	—	—	46	54	—	—	—	—	—	—	—	—	—	0			
179	23	4	50	41	—	—	50	52	—	—	—	—	—	+ 7	—	1	33	0			
180	23	14	03	20	03	20	03	43	e 03	44	—	—	—	— 19	—	4	42	0			
181	24	6	42	56	e 42	58	43	18	43	19	—	—	—	— 25	— 40	4	51	0			
182	24	8	20	28	e 20	31	20	53	20	52	—	—	—	+ 10	— 13	3	04	0			
183	25	20	44	10	—	—	45	02	—	—	—	—	—	+ 6	—	6	52	0			
184	26	8	34	16	e 34	20	40	54	40	52	—	—	—	—	—	16	04	0			
185	27	6	22	17	—	—	22	54	22	55	—	—	—	— 4	—	4	40	0			
186	27	23	38	08	—	—	38	25	—	—	—	—	—	— 5	—	1	57	0			
187	28	4	—	—	—	—	55	17	—	—	—	—	—	—	—	—	—	0			
188	29	3	49	42	—	—	49	59	—	—	—	—	—	—	—	1	18	0			
189	30	13	12	39	—	—	13	00	e 13	03	—	—	—	— 41	+ 8	4	04	0			
190	31	9	30	53	—	—	31	37	e 31	39	—	—	—	+ 6	—	3	46	0			
191	Sep. 1	12	03	22	—	—	03	52	—	—	—	—	—	+ 5	—	3	06	0			
192	7	13	16	11	—	—	16	27	16	26	—	—	—	+ 11	—	2	33	0			
193	7	13	—	—	—	—	36	35	—	—	—	—	—	— 3	—	—	—	0			
194	8	e 12	37	04	—	—	37	24	—	—	—	—	—	+ 4	—	2	45	0			
195	9	e 17	52	56	—	—	53	17	e 53	18	—	—	—	— 5	—	2	09	0			
196	10	e 6	06	11	—	—	07	03	—	—	—	—	—	—	—	3	13	0			
197	10	e 11	05	40	—	—	05	53	—	—	—	—	—	—	—	1	08	0			
198	10	13	—	—	—	—	42	05	—	—	—	—	—	—	—	—	—	0			
199	11	e 14	42	01	—	—	e 43	45	? 43	49	—	—	—	—	—	5	09	0			
200	12	6	45	11	45	13	e 45	45	45	48	—	—	—	— 75	— 103	7	40	0			
201	14	e 15	16	38	—	—	18	05	—	—	—	—	—	—	—	4	46	0			
202	14	22	03	26	—	—	03	47	—	—	—	—	—	—	—	1	34	0			
203	15	4	57	59	58	01	64	00	e 64	07	—	—	69	53	— 34	— 60	30	57	0		
204	15	e 15	03	23	—	—	04	37	—	—	—	—	—	—	—	6	20	0			
205	16	15	—	—	—	—	54	36	—	—	—	—	—	—	—	—	—	—	0		
206	16	16	44	42	—	—	45	00	45	01	—	—	—	+ 7	—	3	55	0			
207	16	23	50	55	50	55	51	08	51	08	—	—	—	+ 175	— 200	8	55	1			
208	18	21	27	50	—	—	28	17	—	—	—	—	—	—	—	2	06	0			
209	19	e 5	21	04	—	—	21	20	—	—	—	—	—	+ 5	—	2	08	0			
210	20	i 11	27	25	27	28	28	13	28	12	—	—	—	— 87	+ 115	14	23	0			
211	23	0	39	01	39	02	39	28	39	30	—	—	—	+ 220	+ 300	10	08	1			
212	23	17	13	47	—	—	15	02	—	—	—	—	—	+ 50	—	6	25	0			
213	26	e 13	34	27	e 34	40	—	—	—	—	—	—	—	+ 5	—	2	26	0			
214	28	e 0	39	19	? 39	32	e 46	07	e 46												

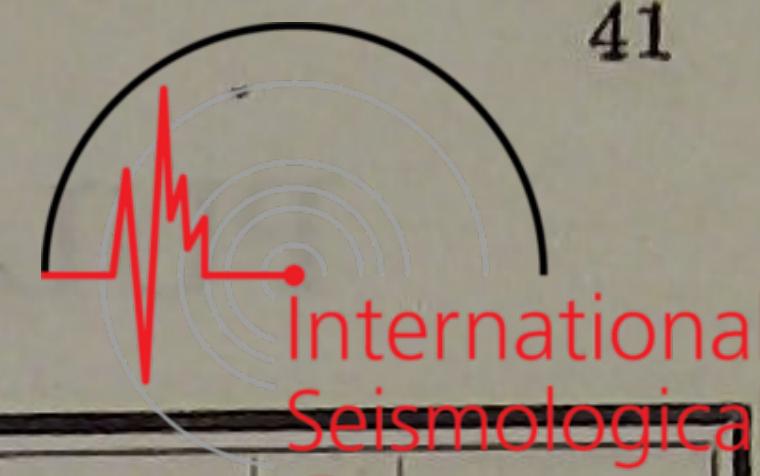
SEISMOLOGICAL OBSERVATIONS AT MIZUSAWA.

EARTHQUAKES, 1949.



No.	Date 1949	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		
221	Oct. 6	h 6	m 57	s 21	e 57	s 22	m 57	s 59	m 57	s 59	m —	s —	m —	s —	+ 23	μ 40	m 4	s 56	0
222		5	—	—	e 10	—	—	—	—	—	—	—	—	—	—	—	—	—	0
223		e 5	39	31	? 39	56	? 43	54	? 43	59	—	—	—	—	—	—	22	05	0
224		10	51	58	—	—	52	24	52	24	—	—	—	—	+ 8	—	2	10	0
225		15	53	28	—	—	53	45	53	44	—	—	—	—	- 6	—	1	58	0
226	11	i 18	06	34	i 06	35	i 07	22	07	23	—	—	—	—	+ 151	- 235	8	55	0
227	14	13	28	43	—	—	29	05	—	—	—	—	—	—	+ 5	—	2	40	0
228	20	6	09	08	09	04	e 15	03	e 15	06	18	56	18	58	—	—	74	37	0
229	20	e 21	53	15	e 53	15	e 59	47	e 59	51	—	—	—	—	—	—	39	21	0
230	21	1	25	12	—	—	25	31	e 25	30	—	—	—	—	+ 10	—	2	54	0
231	21	15	14	19	—	—	? 18	32	—	—	—	—	—	—	—	—	7	52	0
232	22	e 3	30	26	—	—	30	56	—	—	—	—	—	—	+ 4	—	3	24	0
233	22	6	42	45	? 42	45	? 49	24	? 49	38	—	—	—	—	—	—	31	41	0
234	24	13	29	42	—	—	29	45	—	—	—	—	—	—	± 23	—	0	34	0
235	25	i 22	08	26	i 08	25	i 08	53	i 08	53	—	—	—	—	+ 60	- 103	8	19	0
236	26	13	59	18	—	—	e 41	04	—	—	—	—	—	—	—	—	2	52	0
237	27	e 22	59	18	—	—	e 59	53	—	—	—	—	—	—	—	—	1	51	0
238	29	e 19	15	22	—	—	15	47	—	—	—	—	—	—	+ 4	—	—	—	0
239	31	5	—	—	? 16	24	—	—	—	—	—	—	—	—	—	—	2	33	0
240	31	e 12	33	56	—	—	e 34	28	—	—	—	—	—	—	—	—	—	—	0
241	Nov. 1	3	04	24	e 04	24	? 11	02	? 11	02	—	—	—	—	—	—	11	06	0
242		6	—	—	e 51	53	—	—	—	—	—	—	—	—	—	—	1	30	0
243		2	e 14	01	47	—	—	01	57	—	—	—	—	—	+ 46	+ 40	11	11	0
244		3	10	15	38	15	38	17	50	17	52	—	—	—	—	—	—	—	0
245		3	10	—	—	e 27	51	e 27	43	—	—	—	—	+ 4	—	—	—	—	0
246	4	22	21	38	—	—	22	12	e 22	10	—	—	—	—	+ 5	—	4	15	0
247	6	00	12	09	—	—	12	22	e 12	25	—	—	—	—	+ 8	—	1	10	0
248	7	e 15	09	37	e 09	38	? 17	28	? 17	28	—	—	? 24	15	—	—	48	51	0
249	12	0	49	36	? 49	37	? 53	45	? 53	53	—	—	—	—	—	—	6	54	0
250	12	16	07	22	—	—	07	52	—	—	—	—	—	—	+ 6	—	2	50	0
251	13	9	48	58	e 48	57	49	11	49	09	—	—	—	—	± 57	+ 83	5	40	0
252	13	21	58	58	—	—	59	34	—	—	—	—	—	—	—	—	2	36	0
253	14	22	32	05	—	—	32	33	32	34	—	—	—	—	+ 17	+ 25	3	59	0
254	15	1	14	28	—	—	14	46	14	46	—	—	—	—	+ 7	+ 10	2	49	0
255	15	23	10	34	e 10	37	10	.36	e 10	39	—	—	—	—	± 58	—	3	36	1
256	16	15	29	53	—	—	30	03	—	—	—	—	—	—	- 10	- 18	2	04	0
257	18	e 7	31	01	—	—	32	19	32	19	—	—	—	—	- 10	- 18	4	38	0
258	20	e 2	01	07	—	—	01	24	—	—	—	—	—	—	—	—	2	11	0
259	21	19	—	—	—	—	55	10	—	—	—	—	—	—	—	—	—	—	0
260	22	10	03	32	03	32	e 13	08	e 13	04	—	—	e 24	22	—	—	44	42	0
261	25	e 5	35	09	—	—	e 35	31	e 36	07	e 36	08	—	—	- 119	+ 100	2	48	0
262	26	2	35	46	35	46	62	55	62	56	—	—	—	—	—	—	8	45	0
263	27	17	53	38	e 53	35	01	47	—	—	—	—	—	—	—	—	51	03	0
264	28	e 20	01	22	—	—	e 33	58	—	—	—	—	—	—	—	—	2	20	0
265	29	e 1	33	02	—	—	—	—	—	—	—	—	—	—	—	—	3	52	0
266	Dec. 30	e 1	57	32	—	—	58	03	—	—	—	—	—	—	+ 5	—	3	56	0
267		2	8	09	23	e 09	24	10	08	10	10	—	—	—	- 10	+ 15	8	35	0
268		4	e 1	15	34	—	—	15	47	—	—	—	—	—	-	—	2	23	0
269		5	5	—	—	—	38	13	—	—	—	—	—	—	-	—	—	—	0
270		5	i 23	52	18	i													

EARTHQUAKES, 1949.



No.	Date 1949	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	Dec. 17	e 1 h 04 33	m — —	m 04 46	s — —	m 27 34	s — —	m 41 49	s — —	μ	—	μ	—	m 2 11	s 64 31	0			
277	17	e 16 14 11	? 14 15	— —	— —	? 41 32	— —	51 32	— —	—	—	—	—	141	08	0			
278	18	0 28 03	? 28 09	— —	— —	20 23	— —	— —	— —	—	—	—	—	2	08	0			
279	19	21 19 59	— —	— —	— —	21 33	— —	— —	— —	—	—	—	—	5	23	0			
280	22	4 51 58	e 51 58	? 54	33	— —	— —	— —	— —	—	—	—	—	—	—	—	—		
281	22	6	27 15	— —	— —	42 30	— —	— —	— —	—	—	—	—	—	—	—	—	0	
282	25	e 19 27	15	— —	— —	27 45	— —	— —	— —	—	—	—	—	+ 10	— 10	3	30	0	
283	26	6 44 17	— —	— —	— —	44 55	44 55	— —	— —	—	—	—	—	- 978	?	?	43	0	
284	26	i 8 18 17	i 18 17	i 18	17	i 18 56	i 18 56	— —	— —	—	—	—	—	+ 1950	5	12	1		
285	26	8	— —	25	43	— —	26 21	— —	— —	—	—	—	—	—	—	—	—		
286	26	9 44 37	— —	— —	— —	45 08	— —	— —	— —	—	—	—	—	+ 6	—	3	16	0	
287	26	10 52 00	— —	— —	— —	52 31	— —	— —	— —	—	—	—	—	- 10	—	5	53	0	
288	26	11 00 54	— —	— —	— —	01 16	— —	— —	— —	—	—	—	—	+ 3	—	2	55	0	
289	26	13 52 51	— —	— —	— —	53 03	— —	— —	— —	—	—	—	—	- 3	—	2	01	0	
290	26	14 14 05	— —	— —	— —	14 35	— —	— —	— —	—	—	—	—	—	—	2	29	0	
291	26	? 15 42 51	— —	— —	— —	? 50 10	— —	— —	— —	—	—	—	—	—	—	35	56	0	
292	26	17	— —	— —	— —	28 32	— —	— —	— —	—	—	—	—	—	—	—	—	0	
293	26	19 16 36	— —	— —	— —	17 08	— —	— —	— —	—	—	—	—	+ 11	—	4	40	0	
294	27	8 41 43	— —	— —	— —	42 04	— —	— —	— —	—	—	—	—	+ 6	—	3	05	0	
295	27	11 43 57	— —	— —	— —	44 29	44 29	— —	— —	—	—	—	—	+ 14	+ 20	5	03	0	
296	27	12 13 14	— —	— —	— —	13 43	e 13 47	— —	— —	—	—	—	—	+ 5	—	3	18	0	
297	27	17 56 55	56 55	57 33	57 34	— —	— —	— —	— —	—	—	—	—	+ 276	+ 405	12	17	0	
298	27	18 10 42	— —	— —	— —	11 15	11 14	— —	— —	—	—	—	—	+ 11	+ 18	4	38	0	
299	27	19 18 48	18 48	19 21	19 21	— —	— —	— —	— —	—	—	—	—	- 25	- 48	8	02	0	
300	28	1 42 47	— —	— —	— —	43 16	— —	— —	— —	—	—	—	—	+ 24	—	6	54	0	
301	28	8	— —	— —	— —	e 34 32	— —	— —	— —	—	—	—	—	- 5	—	—	—	0	
302	29	12 09 43	e 09 46	15 42	15 42	— —	— —	— —	— —	e 21 46	— —	—	—	+ 508	80	15	0		
303	30	11 45 05	— —	— —	— —	45 25	— —	— —	— —	—	—	—	—	- 12	—	3	11	0	
304	30	17 57 43	— —	— —	— —	58 39	— —	— —	— —	—	—	—	—	+ 26	—	6	14	0	
305	31	16 17 08	— —	— —	— —	17 52	— —	— —	— —	—	—	—	—	- 6	—	4	34	0	
306	31	18 47 05	— —	— —	— —	47 47	e 47 48	— —	— —	— —	—	+ 11	+ 20	5	23	0			

PULSATORY OSCILLATIONS, 1949. (EW Component)

No.	Beginning			Ending			Maximum						Double Amplitude μ	
	Date			Date			Date			Date				
	Month	Day	Hour	Month	Day	Hour	Day	Hour	—	Day	Hour	—		
1	Jan.	1	5	Jan.	3	9	1	14		3	2		11	
2		3	10		7	13	3	23		5	2		15	
3		13	7		20	11	19	3		19	15		5	
4		22	16		23	23	23	1		23	18		8	
5		26	1		28	17	27	12		28	9		7	
6	Feb.	4	3	Feb.	9	19	5	5		7	9		19	
7		12	21		17	19	13	3		13	13		9	
8		19	23		21	23	21	3		21	14		8	
9		27	17	Mar.	2	9	28	13	(Mar.)	1	21		11	
10	Mar.	2	10		4	12	3	0		3	22		16	
11		5	18		7	10	5	23		6	7		7	
12		10	15		11	15	10	23		11	8		11	
13		18	16		20	21	19	10		19	20		12	
14	Apr.	1	5	Apr.	3	8	1	21		2	13		7	
15		3	10		5	5	4	6		4	21		33	
16		5	6		9	23	5	7		5	15		7	
17		11	5		14	18	11	17		12	18		6	
18		22	7		22	23	22	9		22	17		11	
19		27	17		28	19	28	1		28	10		5	
20	May	1	23	May	3	6	2	10		2	19		8	
21		7	9		9	1	7	11		7	17		4	
22		14	21	Jun.	15	6	14	22		15	4		5	
23	Jun.	20	6	Jun.	21	16	20	11		20	20		6	
24		21	22		23	23	22	19		23	16		11	
25	Jul.	6	21	Jul.	8	19	7	0		7	8		10	
26		29	23	Aug.	30	23	30	3		30	11		9	
27	Aug.	17	6	Aug.	18	23	18	4		18	16		6	
28		31	7	Sep.	1	20	1	3		1	9		16	
29	Sep.	22	9		24	19	22	10		22	22		10	
30	Oct.	6	7	Oct.	7	20	6	21		7	10		5	
31		10	9		13	12	11	5		11	17		9	
32		16	3		18	4	16	17		16	23		6	
33		19	3		21	10	19	17		20	4		6	
34		28	9		29	23	28	10		28	22		12	
35		30	2		31	20	30	8		31	7		13	
36	Nov.	1	6	Nov.	3	20	2	10		2	21		6	
37		5	5		8	12	5	9		6	10		9	
38		14	1		15	3	14	8		15	2		14	
39		15	9		16	18	15	10		15	18		4	
40		17	1		19	12	17	8		17	23		12	
41		23	5	Dec.	25	17	23	8		23	19		7	
42	Dec.	4	1		8	18	5	22		6	19		8	
43		9	1		10	13	9	9		9	20		5	
44		11	3		13	18	12	8		12	18		4	
45		14	19		16	21	15	5		15	20		10	
46		24	6		26	22	24	22		25	7		7	
47		27	9		30	20	27	22		28	16		6	