



1911/59/65

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

—→◀—

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

—→◀—

PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY
OF MIZUSAWA.

—
1956

ERRATA

Page	Date	Column	Error	Correction
11	28	Remarks	—○ ² 23 ^h 55—○ ¹ —23 ^h 57—,	—○ ² 23 ^h 55—○ ¹ 23 ^h 57—,
"	29	"	○ ⁰ 005—	○ ⁰ 005—
17	18	"	—≡ ² 4 ^h 40≡ ³ 4 ^h 50—	—≡ ² 4 ^h 40—≡ ³ 4 ^h 50—
23	15	"	□ ⁰ p.	□ ⁰ p.
25	8	"	臼 ⁰ a. 0 ⁰ ,臼 ⁰ a.	臼 ⁰ a. 0 ⁰ ,臼 ⁰ p.
"	16	"	✗11.2,12.3 ^h	✗11.2 ^h ,12.3 ^h
"	30	"	臼 ⁰	臼 ¹
36	No. 51	Earthquakes	L, EW 34 19	34 20
"	No. 51	"	L, NS 34 20	34 14

Introduction

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



The heights of the meteorological instruments are as follows:

Barometer.—63.1 m above mean sea level.

Thermometer.—1.3 m above the ground.

Anemometer.—16.5 m above the ground.

Anemoscope.—16.5 m above the ground.

Raingauge.—0.6 m above the ground.

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

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

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

Constants of two seismographs are as follows.

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

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

Aug, 1956

Dr. T. Ikeda.

Director of the International Latitude Observatory
of Mizusawa

METEOROLOGICAL OBSERVATIONS

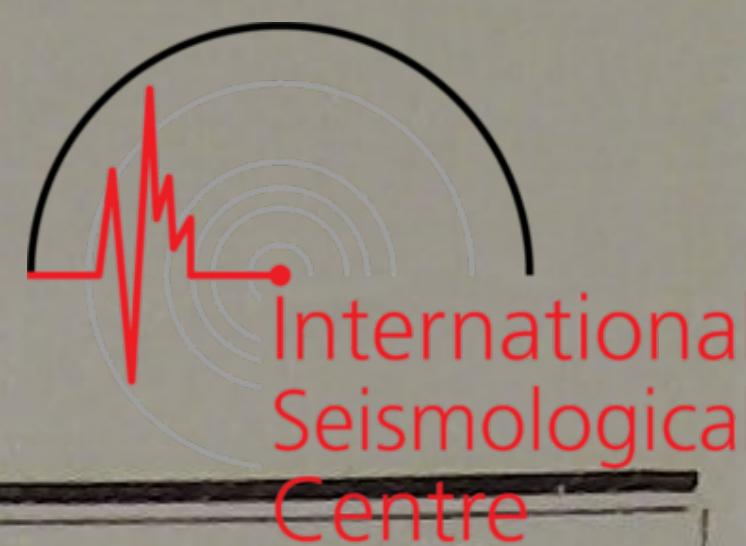
NEW ZEALAND VOLCANO MONITORING

WELLINGTON 1250

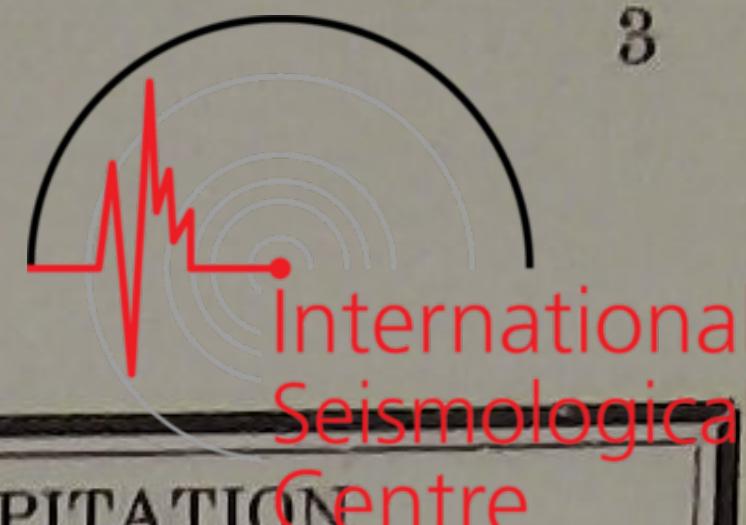
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956</

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

JANUARY, 1948.



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	54.7	53.2	51.7	50.1	50.8	51.1	51.9	-3.4	-1.8	2.8	3.1	-1.5	-3.3	-0.7	4.2	-4.9	-0.3	9.1	3.4	3.9	4.0	3.3	3.3	3.3	3.5	
2	49.5	50.1	51.6	53.4	55.5	56.1	52.7	-1.3	0.9	3.4	2.6	-0.3	-4.4	0.2	3.8	-4.8	-0.5	8.6	4.1	4.7	3.3	3.1	3.0	3.0	3.5	
3	56.4	56.5	58.0	57.8	60.2	61.7	58.4	-5.9	-3.0	-0.7	-1.5	-1.8	-3.6	-2.7	0.2	-7.8	-3.8	8.0	2.9	3.6	2.9	3.2	3.0	2.5	3.0	
4	62.0	62.3	63.6	62.0	62.6	62.7	62.5	-5.2	-4.9	-2.1	3.0	-1.1	0.3	-1.7	5.0	-6.1	-0.5	11.1	2.7	3.1	3.3	3.9	3.5	3.5	3.3	
5	61.7	61.4	61.1	57.8	57.3	55.1	59.1	-3.0	-0.9	4.6	8.4	3.3	-1.3	1.9	8.7	-3.9	2.4	12.6	3.5	3.3	3.5	3.6	4.3	3.5	3.6	
6	50.3	45.1	45.3	45.5	45.5	45.8	46.3	-3.1	-4.1	4.8	1.5	-0.7	-2.8	-0.7	5.0	-5.7	-0.3	10.7	3.3	3.3	4.0	3.6	3.8	3.2	3.5	
7	46.2	47.3	48.2	47.6	49.9	51.4	48.4	-4.2	-5.4	-4.4	-3.0	-3.5	-3.9	-4.1	-2.6	-5.9	-4.2	3.3	2.1	2.8	3.0	3.6	3.3	2.9	3.0	
8	53.8	55.2	57.7	58.2	60.3	60.4	57.6	-4.1	-3.5	-2.1	-1.2	-1.6	-3.1	-2.6	-1.1	-4.5	-2.8	3.4	2.5	2.8	2.7	2.7	2.8	2.3	2.6	
9	60.3	60.3	60.9	59.3	59.2	59.2	59.9	-4.0	-3.5	0.5	0.8	0.2	-5.7	-1.9	2.2	-6.9	-2.3	9.1	2.4	2.6	3.0	3.2	3.2	2.8	2.9	
10	58.7	58.3	57.9	54.0	51.9	49.4	55.0	-5.4	-8.1	-3.2	1.7	-1.1	0.0	-2.7	2.2	-9.8	-3.8	12.0	3.0	2.4	3.0	3.8	3.7	4.2	3.4	
11	49.7	48.6	51.6	50.4	52.4	53.4	51.0	0.1	1.1	1.2	2.8	-1.1	-1.1	0.5	3.4	-1.5	1.0	4.9	4.4	4.4	3.0	2.8	4.0	3.8	3.7	
12	55.4	55.8	57.5	58.0	59.4	59.9	57.7	0.8	0.8	2.8	2.1	-0.7	-1.3	0.8	4.3	-4.3	0.0	8.6	3.3	3.0	3.0	3.5	3.3	3.3	3.3	
13	60.4	60.4	61.0	58.8	59.3	58.5	59.7	-7.2	-5.8	-2.1	0.6	0.3	-0.1	-2.4	1.1	-8.2	-3.5	9.3	2.6	2.9	3.3	3.6	4.3	4.3	3.5	
14	57.4	56.1	53.0	45.4	38.4	40.0	48.4	-0.5	0.5	1.5	7.6	8.2	5.0	3.7	9.8	-0.5	4.4	9.8	4.4	4.7	4.9	7.5	7.9	5.2	5.8	
15	40.7	41.5	41.7	40.1	41.5	42.5	41.3	2.9	0.6	4.9	4.2	2.1	0.9	2.6	6.8	-0.3	3.0	6.6	5.0	4.8	4.3	4.6	4.9	4.7	4.7	
16	42.2	42.8	42.3	41.5	42.9	43.9	42.6	0.4	-0.5	2.1	1.0	-0.6	-1.0	0.2	5.2	-1.6	1.8	6.8	4.4	4.0	4.3	4.4	3.7	4.0	4.1	
17	45.2	47.3	49.6	50.7	53.5	56.7	50.5	-1.1	-1.0	3.3	2.1	0.1	0.0	0.6	3.8	-3.8	0.0	7.6	3.6	3.5	3.9	3.3	3.0	3.2	3.4	
18	58.6	60.7	62.6	62.2	64.5	65.3	62.3	-0.2	-1.4	0.5	2.6	-0.9	-2.8	-0.4	3.2	-3.7	-0.2	6.9	3.3	3.1	3.9	3.3	3.0	3.0	3.3	
19	65.2	65.7	66.6	64.8	65.3	65.5	65.5	-3.3	-6.3	1.2	5.5	-0.7	-3.9	-1.2	6.8	-6.7	0.1	13.5	3.3	2.8	3.7	3.7	3.4	3.3	3.4	
20	64.6	64.9	65.1	63.8	63.8	63.4	64.3	-5.2	-5.3	1.0	5.3	0.7	-2.3	-1.0	6.9	-6.5	0.2	13.4	3.0	3.0	3.4	4.1	4.2	3.7	3.6	
21	62.6	61.0	60.8	60.9	63.4	64.9	62.3	-3.2	-4.2	1.6	7.5	4.0	0.7	1.1	9.6	-4.6	2.5	14.2	3.4	3.2	4.8	5.2	4.0	3.4	4.0	
22	64.9	65.6	65.3	63.0	64.2	65.1	64.7	-2.6	-5.0	0.5	9.4	5.4	4.3	2.0	10.1	-5.3	2.4	15.4	3.5	3.1	3.4	4.8	5.5	5.4	4.3	
23	64.9	66.1	65.6	62.7	62.6	61.6	63.9	0.8	1.1	3.5	4.8	2.7	2.1	2.5	5.1	0.4	2.8	4.7	4.0	3.1	3.4	2.9	4.1	5.1	3.8	
24	59.6	55.5	53.7	50.4	51.7	53.2	54.0	0.1	-0.1	-0.2	-0.2	0.5	0.3	0.1	0.4	-0.3	0.1	0.7	4.5	4.4	4.5	4.3	4.2	3.9	4.3	4.3
25	54.5	55.7	57.5	56.5	56.4	57.7	56.4	-0.3	-1.3	-0.4	0.4	-1.0	-2.6	-0.9	0.9	-3.9	-1.5	4.8	3.5	4.0	3.2	3.2	3.3	3.6	3.5	
26	55.8	55.4	55.1	51.4	50.9	49.8	53.1	-3.5	-3.2	-1.9	1.2	0.3	-2.1	-1.5	2.9	-3.6	-0.3	6.5	3.4	3.5	3.6	3.5	3.6	3.0	3.4	
27	50.8	53.1	57.1	57.8	60.5	61.3	56.8	-0.9	-0.4	0.5	-0.7	-2.5	-3.6	-1.3	0.9	-5.7	-2.4	6.6	2.8	2.6	4.2	2.5	3.2	2.8	3.0	
28	60.1	58.5	58.0	56.2	59.8	60.0	58.8	-5.6	-6.8	-0.9	1.1	-2.9	-4.7	-3.3	1.7	-8.4	-3.3	10.1	2.6	2.5	2.7	4.1	3.0	2.3	2.9	
29	60.2	60.1	60.7	60.4	62.2	62.4	61.0	-5.8	-5.8	-3.7	-4.1	-5.1	-5.4	-5.0	-2.6	-6.1	-4.3	3.5	2.0	2.3	2.6	2.6	2.6	3.0	2.5	
30	63.0	64.3	65.2	62.7	61.8	60.0	62.8	-3.9	-3.6	-1.1	1.5	-0.9	-1.3	-1.5	2.6	-4.7	-1.0	7.3	3.3	3.4	3.5	3.3	3.9	4.0	3.6	
31	58.8	59.8	62.7	63.4	65.5	65.7	62.7	-2.3	-0.1	-0.9	-1.1	-2.4	-3.8	-1.8	1.4	-5.5	-2.0	6.9	3.7	4.1	3.3</td					



JANUARY, 1948.

Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	—	—	—	9 kc,sk	10 sk,s	9 sk,kc	1 k	10 sk	7 sk	7.7	—	—	—	—	—	0.0	0.0
2	—	—	w9	w9	—	—	10 n	10 n	7 sk	8 sk	7 sk	0 sk	7.0	1.9	0.9	0.5	—	—	—	3.3
3	—	—	—	—	—	—	3 sk	10 n,sk	10 n,sk	10 n	1 s	0 —	5.7	0.0	0.1	0.4	0.0	0.0	—	0.5
4	—	—	w8	w8	—	—	10 s,sk	10 sc,sk	10 sk	10 sk	10 sk	9 sk	9.8	—	—	—	—	—	—	—
5	—	—	—	—	—	—	1 sk	2 sk	0 sk	0 sk	3 cs	10 s	2.7	—	—	—	—	—	—	—
6	—	—	ws w9	—	—	—	10 sc,cs	9 sk	9 sk,kc,s	10 n,sk	10 n	10 n	9.7	—	—	—	0.2	0.1	0.3	0.6
7	—	—	—	—	—	—	4 sk	10 n	10 n	10 n	10 n	10 n	9.0	0.3	2.1	1.0	2.4	0.3	0.1	6.2
8	—	—	—	—	—	—	8 n	10 n	10 n	10 sk,s	10 s	3 sk	8.5	0.1	0.5	0.1	0.0	—	—	0.7
9	—	—	—	—	—	—	9 sk	10 sk	10 sc,sk	10 sk	0 cs	8.2	—	—	—	—	—	—	—	—
10	—	—	—	—	—	—	4 cs	2 c,cs	10 cs	10 sc,sk	10 sk	10 s	7.7	—	—	—	—	—	—	—
11	—	—	w9	w9	—	—	10 sk,s	4 sk	5 k,s	4 k,s	8 n	3 s	5.7	0.3	—	—	—	0.0	0.1	0.4
12	—	—	w8	w8	—	—	10 s	7 sk,s	8 sk	9 sk,s	5 sk	10 sk	8.2	—	—	—	—	—	—	—
13	—	—	—	—	—	—	0 —	10 sk	10 sc	10 sc	10 sc	10 s	8.3	—	—	—	—	—	—	—
14	—	—	—	—	—	—	10 s	10 s	10 n	10 n	10 n	10 n	10.0	—	0.1	4.5	6.3	15.4	12.1	38.4
15	—	—	—	—	—	—	10 sk,s	1 sk	6 cs,k,c	10 n,sk,k	10 n	10 n	7.8	0.2	0.2	—	0.0	1.2	2.5	4.1
16	—	—	—	—	—	—	2 s	10 n	5 sk	10 n	8 sk,s	10 n	7.5	0.6	0.1	0.4	0.1	1.1	1.9	4.2
17	—	—	w9	—	—	—	9 sk	8 sk	8 k,c,sk	8 cs,sk,s	1 k,s	4 s	6.3	0.0	—	—	—	—	—	0.0
18	—	—	w8	w9	—	—	10 n	4 s,k	10 sk,s	6 sk	1 sk	3 sk	5.7	0.0	0.0	0.1	0.0	—	—	0.1
19	—	—	—	—	—	—	2 sk	1 kc	0 sk	0 sk	0 cs	0 c	0.5	—	—	—	—	—	—	—
20	—	—	w5	w5	—	—	0 —	9 sk	5 kc,sk	8 kc,sk	0 —	0 —	3.7	—	—	—	—	—	—	—
21	—	—	—	w8	—	—	0 —	8 sk,≡	2 k	10 sk,k	0 —	0 —	3.3	—	—	—	—	—	—	—
22	—	—	—	—	w8	w9	0 —	0 —	0 k	9 sk	10 sk	3.2	—	—	—	—	—	—	—	—
23	—	—	—	—	—	—	3 sk	10 sc	10 sk,sc	10 sc	10 sc	10 n	8.8	—	—	—	—	—	0.4	0.4
24	—	—	—	—	—	—	10 n	10 n	10 n	10 n	10 sc	10.0	1.2	0.8	1.5	6.4	0.3	0.0	10.2	
25	—	—	—	—	—	—	w5	10 sk	10 n,sk	9 s,sk	10 sc,sk	10 sc	9.8	—	0.3	0.3	—	—	—	0.6
26	—	—	—	—	—	—	10 n	10 n	10 sc	10 cs,sc	10 cs	3 c	8.8	0.1	1.9	1.8	0.1	—	—	3.9
27	—	w8	—	—	w8	—	10 sc	8 sk	10 n	10 n	10 s	10 s	9.7	—	—	0.4	0.3	0.1	—	0.8
28	—	w5	—	—	—	—	0 c	9 cs,kc,c	10 sc,s	10 s,sk	9 n	10 sk	8.0	—	—	—	0.1	0.6	0.0	0.7
29	w9	—	—	—	—	—	5 sk	10 s	10 n	10 n	10 n	10 n	9.2	—	—	0.2	0.0	0.1	0.2	0.5
30	—	—	w9	—	—	—	10 n	10 n	10 n,sk	10 sk	10 sk	9 sk	9.8	0.6	0.5	0.4	0.0	—	—	1.5
31	—	—	—	—	—	—	10 s	10 sk,s	10 n	10 n	9 s	8 n	9.5	—	0.0	0.0	0.0	—	0.0	0.0

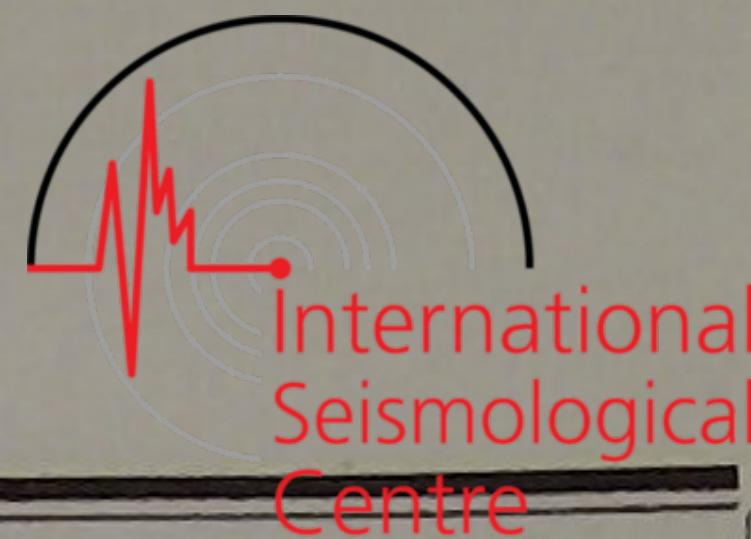
Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	5.91	(1.8)	1.2	口 ¹ , 0 ² a, p. * ⁰ 20 ^h 40—20 ^h 50. * ²⁰ 20 ^h 40.—■—
2	2.63	(1.9)	1.3	口 ¹ , a, p. * ⁰ 0 ^h 20—7 ^h 55. * ⁰ 0 ^h 20.—■—
3	2.28	1.7	1.0	口 ¹ a, p. * ⁰ 1 ^h 30—1 ^h 54. * ¹ 1 ^h 40. * ⁰ 5 ^h 10—15 ^h 10, * ⁵ 30, 11 ^h 00.—■—
4	2.30	1.6	1.1	口 ¹ a. 口 ⁰ p.—■—
5	8.03	2.5	1.5	口 ¹ , 0 ¹ a. 0 ¹ , 口 ⁰ p.—■—
6	0.36	(1.1)	1.2	口 ¹ a, p. ● ⁰ 11 ^h 18—11 ^h 26. * ⁰ 11 ^h 57—* ⁰ 21 ^h 17—, * ²⁰ 20 ^h 40.—■—, ↗11.5 ^h , 14.3 ^h
7	1.09	(0.8)	0.9	口 ¹ a, p. —* ⁰ —0 ^h 10. ↑ ⁰ 1 ^h 00—3 ^h 20. * ⁰ 2 ^h 20—* ⁰ 3 ^h 20—* ⁰ 5 ^h 56—* ⁰ 7 ^h 20—* ⁰ 7 ^h 38—* ¹ 7 ^h 45—* ⁰ 17 ^h 20—* ⁰ 20 ^h 50—,*
8	1.25	1.6	1.3	口 ¹ a, p. —* ⁰ —13 ^h 16.—■— * ⁰ ↑ ¹ 7 ^h 15—19 ^h 10. ↗2.5 ^h —2.8 ^h , 4.7 ^h —4.8 ^h , 7.5 ^h —7.7 ^h , 8.7 ^h —10.7 ^h , 13.5 ^h —18.3 ^h ,
9	0.20	1.4	1.0	口 ¹ , 0 ⁰ a, p.—■— *[18.7 ^h —18.8 ^h .—■—
10	2.34	(1.5)	0.7	口 ¹ , 0 ² a, * ⁰ , 口 ⁰ p. ● ⁰ 22 ^h 45—, —■—
11	5.86	(2.5)	1.7	口 ⁰ a, p. —● ⁰ —0 ^h 20, * ⁰ 16 ^h 17—19 ^h 50. * ¹⁶ 20.—■—, ↗15.0 ^h , 15.5 ^h —16.3 ^h , 16.8 ^h —17.3 ^h , 18.8 ^h —19.2 ^h , 19.8 ^h —21.8 ^h
12	2.69	1.9	1.4	口 ⁰ a, p.—■—
13	—	(0.8)	0.4	口 ¹ , □ ¹ a, 口 ⁰ p.—■—
14	—	(2.7)	0.6	口 ⁰ a, ● ⁰ 5 ^h 10...6 ^h 45—● ¹ 14 ^h 12—● ⁰ 17 ^h 20—● ¹ 19 ^h 37—● ⁰ 19 ^h 52—23 ^h 00.—■—, ↗17.2 ^h , 19.5 ^h
15	5.94	(1.3)	0.8	口 ⁰ , 0 ⁰ a. ● ⁰ 2 ^h 54—3 ^h 20, 13 ^h 58—18 ^h 08, * ⁰ 19 ^h 20—, * ²³ 30.—■—.
16	3.80	(1.1)	0.7	口 ⁰ , 0 ⁰ a, 口 ⁰ p, —* ⁰ —1 ^h 00, 5 ^h 10—9 ^h 53. * ⁵ 10. * ⁰ 13 ^h 50—* ¹ 13 ^h 58—* ⁰ 14 ^h 27—* ¹ 15 ^h 19—* ⁰ 15 ^h 30—16 ^h 22, * ¹⁴ 19. **
17	5.52	(2.2)	1.4	口 ⁰ a, p. * ⁰ 7 ^h 51—8 ^h 07, 23 ^h 30—, * ²³ 30—, —■— **[* ⁰ 19 ^h 20—22 ^h 27. * ¹⁹ 30.—■—
18	3.30	1.6	1.0	口 ⁰ , 0 ⁰ a. 0 ⁰ , 口 ¹ , □ ⁰ p. —* ⁰ —3 ^h 20, 8 ^h 53...11 ^h 40.—■—
19	8.75	2.2	1.0	口 ¹ , □ ¹ , 0 ⁰ a. 0 ² , 口 ¹ , □ ⁰ p.—■—
20	6.07	1.8	1.0	口 ¹ , □ ¹ a, 口 ⁰ , □ ⁰ p.—■—
21	3.87	1.7	1.2	口 ¹ , □ ¹ , ↗1 ^h , 0 ⁰ a. 口 ⁰ , □ ⁰ p. ≡ ² 4 ^h 00—≡ ³ 6 ^h 37—≡ ² 7 ^h 30—7 ^h 48.—■—
22	8.43	2.0	0.9	口 ¹ , □ ¹ , 0 ⁰ a, —■—
23	0.60	(0.7)	0.6	口 ⁰ , 0 ⁰ a, 0 ⁰ p. ≡ ¹ 19 ^h 10—, —■—
24	—	(1.6)	1.2	口 ⁰ p. —≡ ¹ —≡ ⁰ 3 ^h 00—* ⁰ 8 ^h 02—* ¹ 8 ^h 10—* ⁰ 9 ^h 08—* ¹ 11 ^h 30—* ⁰ 13 ^h 30—18 ^h 34. * ⁸ 30.—■—
25	—	(0.9)	0.8	口 ⁰ a. 0 ⁰ , 口 ⁰ p. * ⁰ 5 ^h 30—8 ^h 29. * ⁵ 47.—■—
26	4.47	(1.9)	1.2	口 ¹ a, p. * ⁰ 1 ^h 20—11 ^h 13. * ¹ 20.—■—
27	2.25	(1.7)	1.0	口 ⁰ a, 口 ¹ p. * ⁰ 8 ^h 40—16 ^h 50. * ⁸ 40.—■—
28	1.76	(1.6)	1.5	口 ¹ a, p. * ⁰ 12 ^h 52...* ⁰ △ ⁰ 15 ^h 03—* ⁰ 15 ^h 05—15 ^h 27, 16 ^h 44...20 ^h 39. * ¹⁵ 08.—■—
29	1.80	(1.2)	1.0	口 ¹ a, p. * ⁰ 6 ^h 30—, * ¹¹ 20.—■—
30	0.91	1.7	1.1	口 ¹ a, 口 ⁰ p. —* ⁰ —11 ^h 07.—■—
31	0.72	1.7	1.1	口 ¹ a, p. * ⁰ 3 ^h 05—3 ^h 47, * ⁰ 6 ^h 40—15 ^h 10. * ⁷ 30. * ⁰ 20 ^h 10. * ²⁰ 10.—■—
Mean	3.00	1.8	1.1	

× 1. High clouds moving slowly.
2. " " " fast.
3. " " " very fast.

4. Middle clouds moving slowly.
5. " " " fast.
6. " " " " very fa

7. Low clouds moving slowly.
8. " " " fast.
9. " " " very fast.

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.



FEBRUARY, 1948.

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	65.1	64.8	64.7	61.9	60.5	57.8	62.5	-6.4	-8.2	-2.5	1.9	-3.2	-1.2	-3.3	2.3	-9.0	-3.3	11.3	2.7	2.3	2.6	3.0	2.6	3.8	2.8
2	52.6	48.1	46.2	44.5	46.1	48.1	47.6	-0.2	-0.1	1.2	3.1	2.5	0.5	1.2	5.6	-1.9	1.9	7.5	4.4	4.4	4.9	4.3	3.7	4.2	4.3
3	49.6	52.5	55.6	55.1	56.4	57.0	54.4	-3.0	-3.2	-3.6	-2.8	-3.8	-3.2	-3.3	-1.2	-4.3	-2.7	3.1	2.6	2.3	2.4	2.4	2.5	2.3	2.4
4	57.2	57.3	58.7	58.2	60.2	60.3	58.7	-4.5	-4.1	-1.5	-3.0	-4.4	-4.8	-3.7	-0.3	-5.6	-2.9	5.3	2.9	2.7	2.4	2.9	2.8	3.0	2.8
5	60.2	59.9	60.9	60.1	61.0	61.0	60.5	-4.3	-4.4	-2.8	-3.0	-4.8	-5.0	-4.0	-2.0	-5.6	-3.8	3.6	3.0	3.1	3.2	2.7	2.6	2.2	2.8
6	60.5	60.1	61.3	59.4	59.6	59.7	60.1	-5.8	-6.0	-3.3	-2.8	-2.7	-3.1	-3.9	-1.7	-6.4	-4.0	4.7	2.4	2.5	2.6	3.1	2.8	2.8	2.7
7	59.2	59.8	60.7	59.0	59.1	59.0	59.5	-3.3	-3.7	-1.6	0.1	-1.4	-2.1	-2.0	0.9	-4.3	-1.7	5.2	2.7	2.6	2.6	2.5	2.2	2.8	2.6
8	57.5	57.5	57.8	56.5	57.3	57.3	57.3	-2.3	-2.5	-1.8	-1.5	-2.4	-3.7	-2.4	-0.5	-4.1	-2.3	3.6	3.5	3.7	3.6	3.6	3.3	3.3	3.5
9	56.8	57.4	57.8	56.7	57.8	58.2	57.5	-2.8	-2.6	-1.4	-0.8	-2.0	-1.6	-1.9	-0.7	-3.1	-1.9	2.4	2.9	2.8	3.2	3.1	2.7	3.0	3.0
10	58.3	58.6	59.3	59.3	59.4	59.2	59.0	-1.7	-1.0	1.1	2.5	0.4	-0.7	0.1	3.6	-2.0	0.8	5.6	2.3	2.5	3.0	3.2	3.6	4.1	3.1
11	58.3	58.2	58.0	55.3	56.0	56.6	57.1	-2.5	-6.0	0.8	4.7	2.6	0.7	0.1	5.6	-6.7	-0.5	12.3	3.3	2.8	3.3	3.7	3.4	3.4	3.3
12	56.9	58.8	60.2	59.3	60.6	59.9	59.3	-0.2	-0.2	3.4	4.7	0.4	-2.0	1.0	5.0	-2.3	1.4	7.3	2.8	3.0	3.8	3.6	3.2	3.6	3.3
13	59.3	59.4	58.9	57.5	58.1	57.8	58.5	-1.2	-1.3	2.7	5.9	3.1	2.5	2.0	7.1	-1.6	2.8	8.7	3.8	4.0	4.2	4.0	4.9	4.9	4.3
14	57.5	58.1	58.2	56.5	57.0	58.5	57.6	0.3	-0.9	3.0	5.0	3.0	1.5	2.0	5.4	-1.1	2.2	6.5	4.3	4.1	4.3	5.3	5.2	3.6	4.5
15	59.5	61.1	62.4	61.6	63.1	61.3	61.5	0.2	-0.3	1.3	2.7	-0.7	-2.8	0.1	3.2	-2.9	0.2	6.1	3.0	3.2	3.3	2.9	2.7	3.0	3.0
16	59.6	58.6	55.8	51.8	52.9	53.5	55.4	-3.7	-4.0	-3.0	-1.5	-4.0	-3.2	-3.2	-1.3	-6.9	-4.1	5.6	3.3	2.9	3.1	3.9	3.3	3.3	3.3
17	52.8	54.3	54.4	53.8	56.3	56.2	54.6	-2.9	-2.6	0.8	2.3	-1.5	-4.8	-1.4	4.2	-5.2	-0.5	9.4	3.5	3.6	3.9	4.2	3.4	3.1	3.6
18	56.4	58.3	59.6	59.1	61.1	61.9	59.4	-2.9	-4.4	-1.7	-2.5	-4.2	-3.5	-3.2	0.2	-5.7	-2.7	5.9	3.1	2.9	2.4	3.2	2.7	2.4	2.8
19	62.3	61.9	61.8	60.7	61.2	61.9	61.6	-4.2	-4.2	0.2	1.5	-0.2	-0.4	-1.2	2.8	-5.2	-1.2	8.0	2.5	2.4	2.6	2.7	3.0	3.1	2.7
20	61.7	61.9	62.9	61.9	62.7	62.9	62.3	-0.9	-2.2	1.7	3.0	-0.5	-3.7	-0.4	3.9	-5.0	-0.5	8.9	3.1	3.3	3.7	3.4	3.2	2.8	3.3
21	61.0	59.2	58.0	55.0	54.8	54.4	57.1	-5.8	-4.0	1.0	3.1	3.8	2.0	0.0	4.2	-6.5	-1.1	10.7	2.8	3.2	3.8	4.4	4.7	4.5	3.9
22	52.4	51.9	52.3	51.6	53.1	53.2	52.4	1.5	0.2	1.3	2.9	-0.5	-2.6	0.5	3.4	-4.6	-0.6	8.0	3.7	3.2	3.3	3.2	2.8	2.8	3.2
23	50.8	50.7	52.2	51.8	53.6	54.9	52.3	-4.9	-3.9	-1.7	-1.6	-5.1	-6.4	-3.9	-0.3	-6.6	-3.4	6.3	2.8	3.2	2.9	2.4	2.0	2.3	2.6
24	54.2	54.0	54.4	53.6	54.0	54.2	54.1	-5.9	-4.0	-0.5	0.5	-1.9	-2.4	-2.4	2.6	-6.2	-1.8	8.8	2.2	2.1	2.6	3.0	3.3	3.3	2.8
25	54.7	55.6	56.2	54.9	55.7	56.3	55.6	-3.2	-2.5	0.5	1.5	0.7	0.9	-0.3	3.4	-4.5	-0.5	7.9	3.4	2.8	2.7	3.3	3.5	3.1	3.1
26	54.9	53.7	48.5	47.8	50.3	54.5	51.6	1.3	0.4	5.2	2.9	-1.3	0.3	1.5	6.0	-1.6	2.2	7.6	3.0	4.3	4.6	3.5	3.9	3.2	3.8
27	58.4	60.7	61.8	62.8	63.8	63.3	61.8	-0.8	-0.2	2.2	3.5	-0.2	-2.5	0.3	4.0	-3.6	0.2	7.6	3.2	3.2	3.0	3.5	3.0	3.4	3.2
28	62.5	62.7	62.4	59.9	59.1	58.9	60.9	-5.1	-7.1	-1.9	6.1	3.4	-1.1	-0.9	8.7	-7.3	0.7	16.0	2.9	2.6	3.4	4.2	4.7	3.7	3.6
29	56.9	55.7	54.6	52.1	53.1	53.6	54.3	-1.0	-1.1	0.9	6.7	2.5	0.6	1.4	7.9	-1.5	3.2	9.4	3.3	3.3	3.9	4.4	4.1	3.3	3.7
Mean	57.5	57.6	57.8	56.5	57.4	57.6	57.4	-2.6	-2.9	0.0	1.6	-0.8	-1.8	-1.1	2.										



FEBRUARY, 1948.

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

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	6.40	(1.8)	1.1	✉ ¹ a. 0 ² , ✉ ¹ p. — ☐ —
2	3.15	(2.4)	1.6	✉ ⁰ a, p. ● ⁰ 1 ^h 13—7 ^h 42, * ⁰ 21 ^h 40—, ✝21 ^h 40—, — ☐ —, ↗240 ^h
3	0.13	(1.6)	1.1	✉ ¹ a, p. — * ⁰ —1 ^h 15, 7 ^h 33—11 ^h 40...., — ☐ —, ↗0.3 ^h , 1.8 ^h —2.8 ^h
4	1.13	(1.0)	0.7	✉ ¹ a, p... * ⁰ ...1 ^h 00—8 ^h 30, ✝1 ^h 20, * ⁰ 11 ^h 43—, ✝11 ^h 43. — ☐ —
5	—	(1.2)	0.5	✉ ¹ a, p. — * ⁰ —18 ^h 28. — ☐ —
6	1.10	(1.2)	1.1	✉ ¹ a, p. * ⁰ 6 ^h 52—, ✝7 ^h 00. — ☐ —, ☉315 ^h 15 ^m 08 ^s
7	4.56	(2.0)	0.9	✉ ¹ a. ✉ ⁰ p. — * ⁰ —8 ^h 10, 23 ^h 00..., — ☐ —
8	0.36	(1.0)	1.0	✉ ⁰ a. ✉ ¹ p... * ⁰ ...5 ^h 20—, ✝5 ^h 30. — ☐ —
9	—	(1.4)	1.3	✉ ¹ a. ✉ ⁰ p. — * ⁰ —3 ^h 00, 7 ^h 15—18 ^h 44. ✝7 ^h 15, 15 ^h 36. — ☐ —
10	5.80	1.6	0.9	✉ ⁰ a, p. * ⁰ 9 ^h 10—23 ^h 20. ✝17 ^h 00, — ☐ —
11	3.82	2.4	1.8	✉ ¹ , 0 ² a. 0 ² , ✉ ⁰ p. — ☐ —
12	6.85	(1.9)	1.1	✉ ⁰ , 0 ² a. 0 ¹ , ✉ ¹ , ✉ ¹ p. — ☐ —
13	2.33	(1.2)	0.6	✉ ¹ a. * ⁰ 4 ^h 05—5 ^h 35. ✝4 ^h 05. ● ⁰ 15 ^h 14—16 ^h 22, ☉19 ^h 27—20 ^h 36. — ☐ —
14	0.25	(2.1)	1.7	✉ ⁰ , ✉ ⁰ a. ● ⁰ 12 ^h 00—13 ^h 15...13 ^h 40. — ☐ —
15	8.68	(3.2)	1.5	✉ ¹ a. 0 ⁰ , ✉ ¹ p. * ⁰ 9 ^h 37—9 ^h 48. — ☐ —
16	—	(0.5)	0.7	✉ ¹ , 0 ⁰ a, ✉ ¹ p. * ⁰ 9 ^h 30—15 ^h 50. ✝9 ^h 50. — ☐ —
17	2.06	(1.1)	1.0	✉ ¹ a, p. * ⁰ 2 ^h 50...6 ^h 15—7 ^h 43, 14 ^h 33—* ⁰ 14 ^h 51—* ⁰ 15 ^h 24—15 ^h 57. ✝15 ^h 14. * ⁰ 18 ^h 15—18 ^h 27, 23 ^h 50—, — ☐ —
18	6.20	(2.3)	1.4	✉ ¹ a, p. ✝0 ^h 05. — * ⁰ —3 ^h 00, 6 ^h 17—7 ^h 44, 7 ^h 19—8 ^h 50, 10 ^h 45...10 ^h 55, 12 ^h 40..12 ^h 50. 13 ^h 00—14 ^h 16, 14 ^h 35—15 ^h 12. *
19	7.82	2.6	1.7	✉ ¹ , 0 ² a. 0 ² , ✉ ⁰ p. — ☐ —
20	7.61	2.6	1.2	✉ ⁰ , 0 ⁰ a. 0 ¹ , ✉ ¹ , ✉ ¹ p. — ☐ —
21	—	(1.4)	0.9	✉ ¹ , ✉ ¹ , 0 ⁰ a. — ☐ —
22	8.13	(2.5)	1.3	✉ ⁰ , 0 ⁰ a. 0 ⁰ , ✉ ¹ , ✉ ⁰ p. * ⁰ 14 ^h 33—14 ^h 54. — ☐ —
23	2.17	2.1	1.0	✉ ¹ , ✉ ⁰ , 0 ⁰ a. ✉ ¹ p. * ⁰ 4 ^h 30—8 ^h 37...16 ^h 20. ✝4 ^h 30—11 ^h 45. — ☐ —11 ^h 45.
24	6.26	2.4	1.3	✉ ¹ , 0 ⁰ a, ✉ ¹ p. * ⁰ 6 ^h 30...8 ^h 36. ↗1.3 ^h
25	6.84	(2.2)	1.0	✉ ¹ , 0 ⁰ a, ✉ ⁰ p. * ⁰ 0 ^h 40—5 ^h 30. ✝1 ^h 30—8 ^h 00. * ⁰ 15 ^h 30—16 ^h 47. ↗22.7 ^h —23.2 ^h
26	2.31	(1.6)	1.2	✉ ⁰ a, p. * ⁰ 5 ^h 47—5 ^h 53, 6 ^h 32...7 ^h 53—● ⁰ 8 ^h 20—● ⁰ 10 ^h 40—● ⁰ 12 ^h 20—* ⁰ 12 ^h 50—18 ^h 50..., ☐, ✝15 ^h 10—**
27	8.77	2.8	1.9	✉ ¹ a. 0 ² , ✉ ¹ , ✉ ⁰ p... * ⁰ ...7 ^h 10. — ☐ —10 ^h 38, ↗9.5 ^h —9.7 ^h
28	9.50	2.3	0.9	✉ ¹ , ✉ ¹ , ↗ ⁰ , 0 ² a. 0 ² , ✉ ⁰ , ✉ ⁰ p.
29	1.06	(2.8)	1.6	✉ ¹ a, 0 ¹ p. * ⁰ 20 ^h 45..., ✝23 ^h 00
Mean	3.91	2.4	1.2	

MARCH, 1948.



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	53.6	54.6	54.4	52.8	54.3	55.2	54.2	-1.2	-2.3	-0.5	3.6	1.0	-0.2	0.1	4.2	-3.2	0.5	7.4	2.8	2.5	2.9	3.3	3.9	3.8	3.2
2	54.7	55.2	55.6	54.7	56.0	56.7	55.5	-0.7	-1.7	1.1	0.9	-1.8	-2.0	-0.7	3.4	-2.7	0.4	6.1	4.2	3.7	3.3	3.6	3.3	2.8	3.5
3	56.6	56.7	57.1	56.1	56.5	56.7	56.6	-2.6	-4.2	0.0	0.5	-0.9	-1.7	-1.5	1.0	-4.3	-1.6	5.3	2.5	2.7	2.8	2.7	3.3	3.6	2.9
4	56.6	56.8	57.4	54.1	53.5	52.4	55.1	-2.6	-4.0	0.8	3.3	2.4	0.8	0.1	4.2	-3.9	0.2	8.1	3.3	2.9	3.1	3.3	3.6	4.1	3.4
5	50.9	51.4	54.9	56.5	58.3	59.3	55.2	0.1	-1.5	4.8	7.1	2.9	1.2	2.4	7.4	-1.6	2.9	9.0	4.0	4.0	4.7	4.0	3.5	3.4	3.9
6	58.9	58.3	57.5	54.5	53.1	49.6	55.3	0.0	-0.3	4.1	7.7	4.9	2.5	3.2	8.2	-0.3	4.0	8.5	3.9	3.7	3.9	3.8	3.9	4.5	4.0
7	45.0	43.8	42.5	42.4	44.4	47.4	44.3	1.9	0.7	6.0	2.9	-0.1	0.0	1.9	7.7	-0.2	3.8	7.9	4.6	4.7	3.8	4.7	4.3	3.6	4.3
8	47.9	49.6	52.4	52.4	54.2	55.1	51.9	-0.7	-0.6	0.5	2.3	0.3	-0.8	0.2	3.2	-1.7	0.8	4.9	3.5	3.7	4.2	3.8	3.6	3.1	3.7
9	55.5	56.5	57.8	57.4	59.1	58.7	57.5	-1.7	-1.7	0.7	3.3	0.1	0.2	0.2	4.4	-1.9	1.3	6.3	3.0	3.2	3.9	3.5	2.9	3.0	3.3
10	58.0	59.1	59.6	58.6	60.0	61.0	59.4	-0.1	-0.5	3.7	5.7	1.4	-2.4	1.3	5.9	-3.7	1.1	9.6	3.2	3.0	3.4	3.3	3.1	3.0	3.2
11	61.6	62.2	62.6	61.3	62.4	64.5	62.4	-4.9	-6.6	3.5	7.8	3.1	-0.8	0.4	8.5	-6.8	0.9	15.3	3.1	2.7	3.3	3.3	3.7	3.4	3.3
12	64.4	64.7	64.4	62.3	61.5	59.5	62.8	-1.9	-0.3	4.1	6.0	3.1	3.8	2.5	6.2	-3.1	1.6	9.3	3.6	3.9	4.2	4.5	5.6	5.9	4.6
13	55.6	54.2	52.4	50.7	52.4	53.2	53.1	4.7	3.5	5.7	10.9	7.6	4.3	6.1	10.9	3.4	7.2	7.5	6.4	5.8	6.8	8.2	6.6	5.1	6.5
14	53.0	53.8	55.0	54.8	56.8	59.0	55.4	3.6	2.7	5.8	7.5	4.6	2.2	4.4	8.8	1.1	5.0	7.7	4.5	4.3	4.7	4.8	4.6	3.9	4.5
15	60.3	62.4	63.7	62.3	63.2	64.1	62.7	2.0	-0.7	2.2	5.5	1.0	-1.7	1.4	6.8	-2.2	2.3	9.0	3.6	2.9	3.0	3.3	3.5	3.5	3.3
16	64.1	64.8	64.5	61.8	62.1	62.2	63.3	-3.4	-4.8	3.1	9.0	4.7	-0.7	1.3	9.6	-5.5	2.1	15.1	3.3	3.0	3.7	4.0	4.5	3.8	3.7
17	61.8	62.6	63.2	61.9	63.1	64.5	62.9	-3.2	-3.8	5.1	10.1	5.0	1.5	2.5	11.1	-4.7	3.2	15.8	3.5	3.4	3.7	2.9	4.6	4.4	3.8
18	64.4	65.3	65.5	63.9	66.1	67.6	65.5	0.9	-2.2	7.2	9.4	4.5	0.5	3.4	10.9	-2.2	4.4	13.1	4.5	3.8	4.4	4.3	4.2	4.0	4.2
19	67.9	69.2	69.1	66.6	68.2	69.0	68.3	-2.4	-5.1	5.3	9.8	3.9	1.3	2.1	10.3	-5.3	2.5	15.6	3.5	3.0	3.5	3.6	4.0	3.5	3.5
20	66.4	64.7	63.6	60.5	59.1	58.0	62.1	1.7	2.1	3.9	6.1	6.3	6.7	4.5	7.2	0.7	4.0	6.5	4.4	5.1	6.0	6.8	7.0	7.2	6.1
21	56.9	57.3	58.0	58.3	59.9	61.2	58.6	6.8	7.1	6.6	5.6	4.6	3.6	5.7	8.3	2.6	5.5	5.7	7.2	6.7	6.2	6.1	5.1	5.3	6.1
22	61.4	62.7	62.5	60.8	61.1	61.9	61.7	2.6	-0.3	6.3	11.1	8.2	5.2	5.5	13.2	-0.3	6.5	13.5	4.6	4.3	4.6	5.0	5.8	5.1	4.9
23	61.1	60.9	60.2	58.0	57.5	57.8	59.3	2.6	1.8	4.5	5.6	4.7	2.7	3.7	6.5	1.7	4.1	4.8	4.9	4.3	3.8	4.5	5.0	4.7	4.5
24	57.3	58.8	60.4	60.9	62.0	63.2	60.4	1.9	2.4	4.1	2.5	-1.8	-2.5	1.1	4.2	-2.8	0.7	7.0	4.8	3.7	3.7	2.7	2.4	2.4	3.3
25	62.9	63.4	64.0	62.2	62.2	62.5	62.9	-2.8	-3.0	0.2	1.4	-1.1	-2.8	-1.3	2.7	-3.1	-0.2	5.8	2.2	2.3	2.4	2.8	2.5	3.2	2.6
26	61.5	61.0	60.6	59.7	61.2	61.6	60.9	-3.8	-3.0	2.1	3.5	0.5	-0.7	-0.2	4.6	-4.5	0.1	9.1	3.2	3.3	3.0	3.0	3.1	4.0	3.3
27	61.8	62.6	62.4	60.6	61.0	60.1	61.4	-1.4	-1.5	5.0	9.1	5.1	3.8	3.4	10.5	-1.8	4.4	12.3	4.0	4.0	4.9	4.3	4.2	3.9	4.2
28	57.6	57.9	58.3	58.0	59.1	60.4	58.6	3.5	2.4	6.7	8.4	5.9	3.1	5.0	9.5	2.1	5.8	7.4	4.6	5.0	5.7	4.6	4.2	4.9	4.8
29	60.1	61.5	62.0	61.2	62.1	63.4	61.7	2.5	2.1	7.7	9.5	5.2	1.9	4.8	10.2	0.0	5.1	10.2	4.4	4.3	3.9	4.0	3.6	3.5	4.0
30	63.3	64.5	64.4	63.6	64.5	65.3	64.3	-1.5	-2.0	8.5	11.6	6.5	0.8	4.0	11.7	-2.5	4.6	14.2	3.5	3.3	3.7	4.2	4.6	4.0	3.9
31	64.5	64.7	64.6	62.7	62.9	63.2	63.8	-2.4	-3.4	10.4	14.0	11.4	5.6	5.9	14.6	-4.1	5.3	18.7	3.5						



MARCH, 1948.

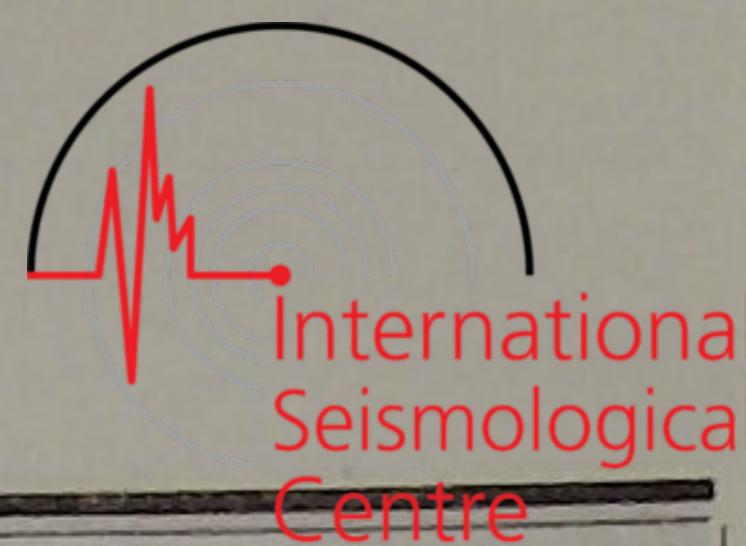
Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	w9	—	w8	—	—	10 n,sk	10 sk,s	8 c,k,cs	6 k,s,cs	8 sk	10 n	8.7	0.3	0.0	—	—	—	0.0	0.3
2	—	—	w8	w9	—	—	10 n	10 n	5 sk,kc	9 sk,k	1 sk	3 sk	6.3	0.3	1.3	0.1	—	0.0	—	1.7
3	—	—	—	—	—	—	4 sk	1 sk	4 s,k	10 sk,s,k	10 sc	10 n	6.5	—	—	—	—	—	0.0	0.0
4	—	—	w8	w8	—	—	9 cs,sc	4 sk	10 sk,cs	10 sk	10 sk	10 sk	8.8	0.0	—	—	—	—	—	0.0
5	—	—	—	w8	w8	—	10 s	9 sk,s	4 sk,k,c	3 k	9 sk	2 k	6.2	—	0.1	—	—	—	—	0.1
6	—	w8	—	—	—	—	9 s,sk	10 sk,sc	10 sc,sk	10 sc	10 sc	10 sk	9.8	0.0	—	—	—	—	—	0.0
7	—	w8	w9	—	—	—	10 s	10 sk,se,s	10 sk,s,cs	10 n	10 n	10 n	10.0	—	0.5	—	0.4	0.6	0.6	2.1
8	—	—	w9	w9	—	—	5 n	2 s,k	10 n	10 n,sk	10 sk,s	8 sk	7.5	0.1	0.0	0.1	0.3	0.1	—	0.6
9	—	w9	—	w8	—	—	10 s	10 n,sk	10 n	8 sk	2 sk	9 sk	8.2	—	0.0	0.0	—	—	—	0.0
10	—	w5	w8	—	—	—	0 sk	10 kc,sk	6 sk,cs,k	0 k	1 sk	0 —	2.8	—	—	—	—	—	—	—
11	—	—	—	—	—	—	0 —	0 —	0 k	0 k	0 —	0 —	0.0	—	—	—	—	—	—	—
12	—	—	—	s9	—	—	10 sc	10 sk	10 sk	10 sk	10 n	10 n	10.0	—	—	—	—	1.7	5.6	7.3
13	—	—	—	w7	—	—	10 s	10 n	10 n	10 s,sk,kc	10 sk	10 sk	10.0	4.4	1.9	0.7	1.3	—	—	8.3
14	—	—	w8	NW8	w8	—	10 sk	10 sc,sk	10 sk,k	10 sk	9 sk	1 sk	8.3	—	—	—	—	—	—	—
15	—	—	—	—	—	—	3 sk	10 sk,cs	7 cs,c,k	1 k,cs	2 sk,k	0 —	3.8	—	—	—	—	—	—	—
16	—	—	—	w8	—	—	0 —	3 sk	1 k	0 k	8 sk	0 —	2.0	—	—	—	—	—	—	—
17	—	—	—	—	—	—	0 —	0 —	0 —	2 k	2 sk	8 sk	2.0	—	—	—	—	—	—	—
18	—	—	—	s7	s7	—	9 sk	5 sk,cs	1 kc,k	10 sk	10 sk	1 sk	6.0	—	—	—	—	—	—	—
19	—	—	—	—	s5	—	0 —	1 sk	0 k	0 —	1 c	8 kc	1.7	—	—	—	—	—	—	—
20	—	—	—	—	—	—	10 s	10 n	10 n	10 n	10 n	10 n	10.0	—	0.0	2.4	7.0	9.1	2.5	21.0
21	—	—	—	—	—	—	10 s,sk	10 sk	10 n,sk	10 n	10 s,sk	10 sc,sk	10.0	0.2	—	0.0	2.5	2.1	—	4.8
22	—	w2	—	—	—	—	10 kc	3 ck,cs	10 es,k	10 es,k	10 sk	10 sc,sk	8.8	—	—	—	—	—	—	—
23	—	—	—	—	—	w8	10 es	10 sc	10 sc,cs	10 sc,sk	10 sc	10 sk	10.0	—	—	—	—	—	—	—
24	w8	w8	w8	w8	w8	w8	10 sk	9 sk,s	8 sk	2 sk,k	4 sk	10 sk	7.2	—	—	0.0	—	—	—	0.0
25	—	w8	w8	w8	w7	w8	10 sc	10 sk	8 sk	3 k	3 sk	8 sk	7.0	—	—	—	—	—	—	—
26	—	—	w7	—	—	—	10 sk	10 n	10 sk	3 sk,k,s	2 sk	10 n,sk	7.5	—	0.0	0.0	—	—	0.0	0.0
27	—	—	—	—	—	—	10 n	9 sk	10 sk,k	10 c,sk,k	10 es,ck	10 sc	9.8	0.5	0.1	0.0	—	—	—	0.6
28	—	w8	w8	w8	w9	w7	10 n	10 sk,s	7 sk,cs	10 sk	9 sk	9 sk	9.2	—	3.5	0.2	—	—	—	3.7
29	—	—	—	—	—	—	3 sk	1 sk	0 k	4 k	0 sk,k	0 —	1.3	—	—	—	—	—	—	—
30	—	—	—	—	—	—	0 —	0 k	0 k	0 k	0 k	0 —	0.0	—	—	—	—	—	—	—
31	—	—	—	—	—	—	0 —	0 —	7 c	8 cs,c	9 ck,cs,c	1 es	4.2	—	—	—	—	—	—	—
							6.8	6.7	6.6	6.4	6.5	6.4	6.6	5.8	7.4	3.5	11.5	13.6	8.7	50.5

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	7.43	(2.0)	1.0	✉ ⁰ a,p...✉ ⁰ ...4 ^h 00,20 ^h 30—,✉,✉21 ^h 00—
2	6.61	2.5	1.6	✉ ⁰ a,p.—✉ ⁰ —6 ^h 43,—✉10 ^h 30.✉ ⁰ 14 ^h 37...16 ^h 52.
3	5.88	2.4	1.3	✉ ¹ , 0 ² a. 0 ⁰ , ✉ ⁰ p.* ⁰ 21 ^h 45—22 ^h 50.
4	6.32	(1.8)	0.8	✉ ¹ , ✉ ¹ , 0 ² a. 0 ² p.
5	6.72	2.8	1.3	✉ ⁰ , 0 ⁰ a,p.* ⁰ 2 ^h 08—2 ^h 34.✉,✉2 ^h 13—7 ^h 45.
6	2.40	(2.4)	1.0	✉ ⁰ , 0 ⁰ a.
7	3.38	(1.8)	0.9	✉ ⁰ p.● ⁰ 3 ^h 36—4 ^h 08,11 ^h 50—✉ ⁰ ● ⁰ 12 ^h 03—* ⁰ 13 ^h 05—,✉,✉15 ^h 10...✉10.7 ^h —11.3 ^h ,14.0 ^h —21.2 ^h
8	3.10	(1.8)	1.6	✉ ⁰ a,p.—* ⁰ —5 ^h 00.—✉—7 ^h 40.✉ ⁰ 8 ^h 20—12 ^h 36...,✉1.7 ^h —3.2 ^h ,5.0 ^h ,5.8 ^h —7.2 ^h ,7.5 ^h —9.2 ^h
9	7.02	3.3	1.7	✉ ⁰ a,p....* ⁰ ...5 ^h 48—6 ^h 26,8 ^h 32—13 ^h 10.
10	9.23	3.3	1.6	✉ ¹ , 0 ² a. 0 ² , ✉ ⁰ p.
11	10.92	3.4	1.2	✉ ¹ , ✉ ¹ , 0 ² a. 0 ² , ✉ ¹ , ✉ ⁰ p.
12	—	(2.0)	0.8	✉ ⁰ , 0 ⁰ a. 0 ⁰ p.● ⁰ 15 ^h 50—
13	1.16	(1.4)	0.9	—● ⁰ —1 ^h 20,2 ^h 29—3 ^h 42,5 ^h 17—12 ^h 45.
14	3.44	3.0	1.5	0 ⁰ a. 0 ⁰ , ✉ ⁰ p.✉13.0 ^h
15	7.05	3.1	1.2	✉ ⁰ , 0 ² a. 0 ² , ✉ ⁰ , ✉ ⁰ p.
16	9.87	3.3	1.5	✉ ¹ , ✉ ¹ , 0 ² a. 0 ² , ✉ ⁰ p.
17	10.90	3.8	1.4	✉ ¹ , ✉ ¹ , 0 ² a. 0 ² p.
18	6.65	2.8	1.5	✉ ⁰ , ✉ ⁰ , 0 ² a. 0 ² p.
19	10.84	(3.0)	1.3	✉ ¹ , ✉ ¹ , 0 ¹ a, 0 ² p.
20	—	(1.3)	0.5	✉ ⁰ 2 ^h 20—● ⁰ 6 ^h 16—● ⁰ 14 ^h 07—● ⁰ 16 ^h 00—20 ^h 03...23 ^h 00.
21	—	(0.2)	0.6	0 ⁰ a.● ⁰ 9 ^h 45—16 ^h 55
22	9.90	3.2	1.1	✉ ⁰ , ✉ ⁰ , 0 ² a. 0 ² p.
23	1.04	1.9	0.9	0 ² a,p.● ¹ 18 ^h 14 ^m 53 ^s
24	6.55	3.7	2.2	0 ² a. 0 ² , ✉ ⁰ p.* ⁰ 7 ^h 35—8 ^h 40.
25	10.06	3.2	1.6	✉ ¹ , 0 ² a. 0 ⁰ , ✉ ⁰ p.
26	7.06	(2.3)	1.4	✉ ¹ , ✉ ¹ , 0 ¹ a. 0 ⁰ , ✉ ⁰ p.* ⁰ 4 ^h 30—8 ^h 20,✉5 ^h 00—7 ^h 10,* ⁰ 21 ^h 18—,✉,✉21 ^h 43—
27	6.21	(3.4)	1.4	✉ ⁰ a.—* ⁰ —5 ^h 43,6 ^h 58—7 ^h 25.—✉—7 ^h 38.
28	4.41	3.2	1.3	● ⁰ 2 ^h 07—● ¹ 2 ^h 30—4 ^h 20.● ⁰ 9 ^h 19—9 ^h 47,✉16.3 ^h
29	11.60	3.7	1.5	✉ ⁰ , 0 ¹ a. 0 ² , ✉ ⁰ p.
30	11.33	4.9	1.7	✉ ¹ , ✉ ¹ , 0 ² a. 0 ² , ✉ ⁰ p.
31	10.88	4.6	1.7	✉ ¹ , ✉ ¹ , 0 ² a. 0 ² p.

x See Page 3.

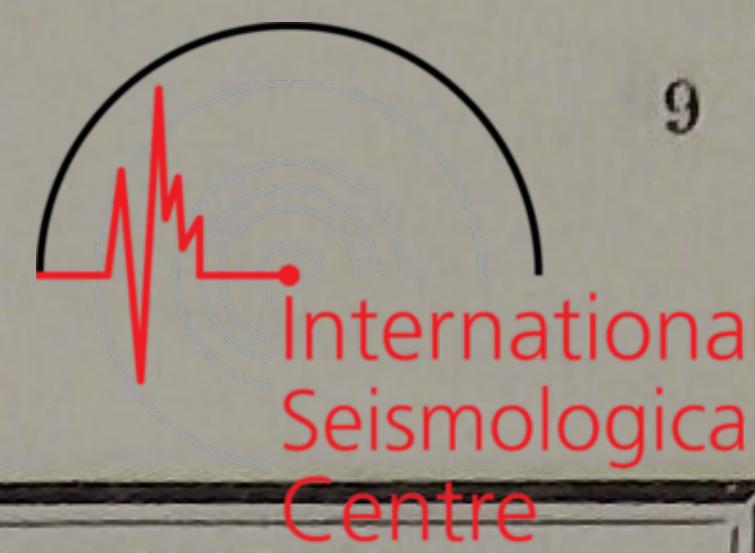
METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

APRIL, 1948.



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	62.6	63.6	63.1	61.0	60.4	61.0	62.0	-1.2	-2.5	13.0	19.2	13.3	3.9	7.6	20.1	-3.3	8.4	23.4	3.7	3.4	3.8	3.8	5.0	4.6	4.1
2	61.0	61.0	60.6	57.9	57.9	58.7	59.5	-0.2	-1.5	14.1	21.4	15.4	6.3	9.3	22.0	-2.3	9.9	24.3	4.1	3.8	5.5	4.7	5.2	6.0	4.9
3	57.9	57.6	56.9	53.9	52.4	50.9	54.9	5.5	4.0	9.8	18.3	14.9	13.7	11.0	18.9	3.3	11.1	15.6	6.0	5.5	6.8	8.4	8.8	10.8	7.7
4	49.0	47.8	47.8	47.0	48.4	50.5	48.4	13.0	11.6	15.9	14.7	12.0	10.5	13.0	15.8	9.1	12.5	6.7	10.8	9.9	9.5	8.7	8.3	7.8	9.2
5	51.5	54.5	57.2	56.6	58.0	59.4	56.2	9.6	8.1	12.6	14.8	10.4	4.6	10.0	15.2	2.8	9.0	12.4	8.6	7.8	5.3	5.9	4.1	5.0	6.1
6	59.6	59.4	58.4	57.7	58.8	60.8	59.1	2.9	0.9	15.6	17.5	11.2	5.1	8.9	18.7	0.5	9.6	18.2	4.0	4.7	4.7	5.0	4.9	5.7	4.8
7	61.4	62.3	62.8	60.6	61.5	62.6	61.9	1.6	0.9	12.8	17.2	11.8	5.5	8.3	17.6	-0.1	8.8	17.7	4.9	4.7	6.0	5.6	4.9	5.3	5.2
8	62.1	62.5	62.5	60.1	59.7	60.7	61.3	2.5	1.5	13.0	20.6	18.0	9.4	10.8	22.1	0.8	11.5	21.3	5.0	4.9	6.9	8.8	9.8	7.8	7.2
9	59.7	60.3	59.9	58.5	57.7	57.9	59.0	6.0	4.3	20.0	23.1	18.0	11.2	13.8	23.8	3.7	13.8	20.1	6.7	6.0	8.0	8.4	9.5	8.3	7.8
10	55.6	55.2	53.1	52.9	54.4	56.8	54.7	7.0	6.5	22.0	17.9	12.4	9.5	12.6	22.7	5.2	14.0	17.5	7.0	7.0	9.5	9.7	8.0	5.7	7.8
11	58.3	60.6	62.2	61.6	62.9	65.0	61.8	6.5	6.3	9.6	11.7	8.2	1.9	7.4	12.5	-0.3	6.1	12.8	4.5	4.6	4.5	3.3	3.4	4.3	4.1
12	65.0	65.7	65.1	63.0	63.1	64.7	64.4	-1.3	-1.2	12.1	14.8	11.0	4.9	6.7	15.5	-2.5	6.5	18.0	3.9	4.0	4.6	3.7	5.2	5.3	4.5
13	64.1	63.9	63.1	61.1	60.4	60.1	62.1	2.6	3.7	15.2	14.0	11.8	10.3	9.6	15.5	2.5	9.0	13.0	5.0	5.3	6.3	7.5	8.3	8.8	6.9
14	59.1	59.0	59.5	59.2	60.8	62.7	60.1	10.4	10.2	15.0	16.0	10.4	6.7	11.5	16.8	6.4	11.6	10.4	9.0	8.9	7.1	4.5	5.1	5.7	6.7
15	63.4	64.5	63.5	61.8	61.8	61.6	62.8	5.9	3.9	11.5	12.4	9.2	7.9	8.5	14.4	2.5	8.5	11.9	5.6	5.5	5.6	6.1	6.6	7.1	6.1
16	60.4	60.8	60.6	58.9	59.4	60.7	60.1	6.7	5.9	9.6	11.6	8.6	3.9	7.7	12.3	0.6	6.5	11.7	6.7	6.6	6.1	6.6	5.9	4.9	6.1
17	59.7	60.3	58.9	57.3	57.6	58.7	58.8	-0.8	-0.2	11.4	13.8	7.3	5.9	6.2	13.9	-1.9	6.0	15.8	4.1	4.3	5.0	5.6	5.3	5.6	5.0
18	58.1	58.1	58.3	57.5	57.8	59.4	58.2	2.7	4.5	12.0	16.6	13.1	9.7	9.8	17.0	2.5	9.8	14.5	5.1	6.0	6.0	5.7	6.2	7.0	6.0
19	59.3	60.2	60.8	59.8	61.8	63.4	60.9	6.7	5.6	13.5	17.6	9.2	8.2	10.1	18.4	3.6	11.0	14.8	6.8	6.2	5.3	6.5	6.3	5.8	6.2
20	62.6	62.1	61.8	59.4	58.6	58.6	60.5	8.2	8.6	12.4	15.6	12.4	11.8	11.5	15.6	8.1	11.9	7.5	6.5	7.4	7.7	8.5	9.3	9.6	8.2
21	57.0	56.5	56.7	55.0	53.4	51.6	55.0	10.4	10.4	12.6	15.0	14.2	13.1	12.6	15.2	9.9	12.6	5.3	8.9	9.0	10.1	11.0	11.1	10.9	10.2
22	49.0	48.5	47.8	45.6	46.6	48.7	47.7	11.0	11.4	12.4	14.2	13.2	8.8	11.8	14.7	5.0	9.9	9.7	9.5	9.5	8.8	8.3	7.9	6.6	8.4
23	49.2	49.3	48.3	44.1	43.6	40.4	45.8	3.5	3.7	11.9	14.4	8.8	7.6	8.3	15.0	2.0	8.5	13.0	5.5	5.8	7.8	8.9	7.9	7.3	7.2
24	37.8	37.8	39.9	42.8	46.4	50.3	42.5	8.2	7.1	10.7	11.0	7.0	5.6	8.3	12.5	5.0	8.8	7.5	5.5	6.7	5.8	5.7	5.0	4.8	5.6
25	51.7	53.7	56.2	56.9	58.1	60.4	56.2	5.3	5.7	10.4	13.9	11.2	4.2	8.5	14.2	2.3	8.3	11.9	4.8	4.9	5.3	5.2	5.3	5.6	5.2
26	60.7	61.0	59.7	57.3	57.1	56.4	58.7	0.5	1.2	13.6	15.7	12.8	11.6	9.2	17.3	0.1	8.7	17.2	4.6	4.9	6.5	7.3	7.6	7.5	6.4
27	53.5	51.6	50.2	47.1	45.6	45.9	49.0	11.2	12.0	13.6	14.0	14.0	13.4	13.0	14.4	10.4	12.4	4.0	8.3	9.7	10.8	11.6	11.6	9.6	10.3
28	48.0	49.5	52.0	52.7	55.1	56.9	52.4	8.6	7.5	11.6	12.6	8.6	3.3	8.7	13.4	1.8	7.6	11.6	6.1	4.4	4.9	4.6	4.3	4.2	4.8
29	57.7	60.0	59.6	58.2	58.8	59.9	59.0	0.0	0.9	13.6	17.1	13.6	8.8	9.0	17.3	-1.0	8.2	18.3	4.4	4.7	5.1	6.7	8.2	7.6	6.1
30	60.3	61.4																							

APRIL, 1948.



DIRECTION AND SPEED OF CLOUDS ×

AMOUNT (0-10) AND FORMS OF CLOUDS

PRECIPITATION mm

Day

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

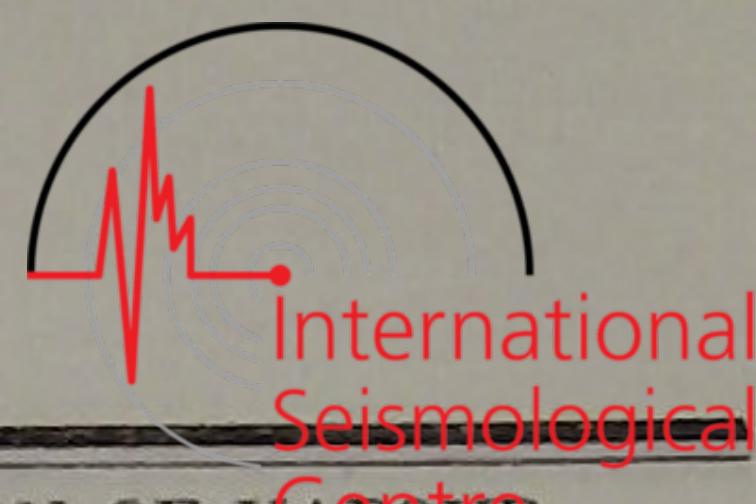
4.8 7.4 6.9 6.5 6.8 4.9 6.2 26.2 14.9 6.5 5.1 13.6 9.4 75.7

Day

Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
	Open Air	in the Shelter	
1	11.20	5.7	2.1 □ ¹ , □ ¹ , 0 ² a. 0 ² p.
2	11.13	4.9	2.2 □ ¹ , □ ¹ , 0 ⁰ a. 0 ² a. 0 ² , 0 ⁰ p.
3	2.07	(5.6)	1.7 0 ⁰ p. ● ⁰ 19 ^h 52—● ⁰ 22 ^h 30—
4	1.23	(3.1)	—● ¹ —5 ^h 00. ● ⁰ 5 ^h 52—6 ^h 14, 12 ^h 58—● ¹ 13 ^h 18—● ⁰ 13 ^h 33— 13 ^h 38.
5	10.55	5.0	2.3 △ ⁰ , 0 ² a. 0 ² p.
6	10.92	4.8	2.1 □ ⁰ , □ ¹ , 0 ² a. 0 ¹ , 0 ⁰ , 0 ⁰ p.
7	10.73	5.4	2.2 □ ¹ , □ ¹ , 0 ⁰ a. 0 ² a. 0 ⁰ , 0 ⁰ p.
8	9.30	3.8	1.7 □ ⁰ , 0 ⁰ a. 0 ⁰ , 0 ⁰ , 0 ⁰ p. ○ ¹ 22 ^h 25 ^m 59 ^s .
9	9.87	5.5	2.1 △ ⁰ , 0 ⁰ a, p. ≡ ² 5 ^h 30—7 ^h 40.
10	4.01	3.4	2.0 △ ¹ , 0 ⁰ a. ○ ¹ 3 ^h .
11	10.75	5.0	1.9 0 ² a, p.
12	11.88	5.7	2.1 □ ¹ , □ ¹ , 0 ² a. 0 ² , 0 ⁰ p.
13	2.46	(2.8)	1.4 0 ⁰ a. ○ ⁰ 17 ^h 06...21 ^h 40.
14	8.75	5.4	2.5 0 ⁰ , 0 ⁰ a. 0 ² p. ○ ⁰ 6 ^h 17—6 ^h 19.
15	3.28	(3.0)	1.4 △ ⁰ , ○ ⁰ , 0 ⁰ a. 0 ⁰ p. ○ ⁰ 21 ^h 46—.
16	0.24	2.6	0.8 0 ⁰ a. 0 ⁰ , 0 ⁰ , △ ⁰ p.—○ ⁰ —5 ^h 13.
17	11.50	4.7	1.7 □ ¹ , □ ¹ , 0 ⁰ a. 0 ⁰ , 0 ⁰ , 0 ⁰ p.
18	8.46	(4.7)	1.8 △ ⁰ , 0 ⁰ a. 0 ⁰ , 0 ⁰ , 0 ⁰ p. ○ ⁰ 22 ^h 08—23 ^h 40.
19	9.35	4.5	1.8 △ ⁰ , 0 ¹ a. 0 ² p.
20	0.23	(1.6)	0.7 0 ⁰ a, p. ○ ⁰ 15 ^h 02...
21	—	(0.5)	0.5 ...○ ⁰ ...4 ^h 10. ≡ ³ 5 ^h 20—○ ⁰ 7 ^h 52—13 ^h 15, 13 ^h 36—
22	0.51	(1.6)	0.9 0 ⁰ a, p.—○ ⁰ —4<sup

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

MAY, 1948.



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	61.1	62.2	62.3	60.1	60.7	61.3	61.3	11.2	10.9	14.8	23.1	17.0	14.0	15.2	24.3	10.1	17.2	14.2	9.5	9.0	10.4	9.3	10.9	11.0	10.0
2	60.0	60.9	60.3	59.6	59.1	58.9	59.8	13.4	13.0	15.5	16.6	16.8	15.5	15.1	18.2	12.9	15.6	5.3	11.0	10.8	11.8	12.6	12.1	12.1	11.7
3	57.5	56.7	55.0	52.6	51.2	50.4	53.9	14.7	14.4	15.2	16.2	14.0	13.9	14.7	17.1	13.7	15.4	3.4	12.3	11.9	11.6	11.2	11.3	11.5	11.6
4	49.4	50.8	50.4	51.6	53.3	54.4	51.7	14.2	14.0	20.7	17.4	14.2	10.1	15.1	21.0	9.0	15.0	12.0	11.9	11.7	9.1	7.5	6.2	6.7	8.9
5	55.1	57.2	58.0	57.1	56.8	58.3	57.1	10.8	12.0	16.6	21.6	16.6	8.2	14.3	21.7	6.0	13.9	15.7	7.0	7.2	7.9	8.4	6.7	6.9	7.4
6	58.2	59.5	58.2	55.9	56.0	57.3	57.5	4.1	5.8	19.7	25.8	19.3	12.4	14.5	26.7	2.5	14.6	24.2	5.9	6.4	7.4	7.7	8.6	8.9	7.5
7	56.3	57.0	56.2	54.6	54.4	55.3	55.6	7.1	8.9	23.1	29.0	21.7	14.6	17.4	29.5	6.4	18.0	23.1	7.2	7.2	6.6	9.0	9.4	11.1	8.4
8	55.8	55.8	54.6	53.3	53.0	52.6	54.2	8.6	9.0	22.3	23.3	18.5	16.3	16.3	24.8	6.4	15.6	18.4	7.8	7.9	11.2	10.1	11.6	13.4	10.3
9	50.5	53.6	55.1	56.8	57.4	59.3	55.5	17.1	14.9	18.0	16.6	14.2	11.0	15.3	18.3	9.6	14.0	8.7	14.1	8.6	8.6	7.4	6.4	6.9	8.7
10	59.9	61.0	60.4	58.8	56.9	56.8	59.0	8.0	6.9	16.8	18.7	14.8	11.1	12.7	19.0	6.2	12.6	12.8	7.0	6.9	8.4	8.7	7.5	8.0	7.8
11	53.9	51.1	49.5	47.4	48.4	51.1	50.2	10.0	10.1	12.4	17.4	18.9	14.3	13.9	19.7	9.5	14.6	10.2	7.9	7.5	7.6	9.1	11.7	7.3	8.5
12	51.2	52.5	52.5	52.2	53.0	53.5	52.5	12.2	12.4	16.6	17.4	13.4	11.0	13.8	18.5	9.8	14.2	8.7	5.2	6.3	6.5	5.8	7.9	7.4	6.5
13	54.1	55.2	55.2	54.6	56.0	57.9	55.5	8.8	11.0	17.6	20.5	17.0	8.6	13.9	21.9	6.5	14.2	15.4	7.6	6.4	6.9	5.7	6.3	7.3	6.7
14	58.9	60.7	60.7	59.4	60.2	61.2	60.2	5.3	6.7	18.2	22.5	18.4	11.9	13.8	23.3	3.5	13.4	19.8	6.5	6.9	7.2	8.2	8.2	9.1	7.7
15	61.6	62.7	62.2	60.4	61.1	63.0	61.8	5.6	7.9	21.1	27.0	19.9	11.3	15.5	27.4	4.0	15.7	23.4	6.4	6.7	8.5	6.5	8.7	8.6	7.6
16	62.8	63.8	63.7	62.2	62.1	63.0	62.9	6.9	7.6	20.6	22.5	17.4	11.8	14.5	22.8	4.5	13.7	18.3	6.8	6.9	11.0	8.7	7.4	6.6	7.9
17	61.3	61.3	59.9	57.8	56.6	56.2	58.9	6.9	11.2	17.8	18.6	17.2	16.0	14.6	20.1	6.9	13.5	13.2	6.5	7.1	10.3	12.0	12.9	11.9	10.1
18	53.6	52.5	50.2	48.3	47.6	47.8	50.0	15.4	15.4	19.9	23.6	20.7	17.7	18.8	24.8	14.7	19.8	10.1	12.2	12.8	13.8	15.6	14.3	14.5	13.9
19	46.4	47.7	47.4	48.0	49.7	50.0	48.2	15.1	15.2	19.9	17.7	14.4	11.8	15.7	21.0	10.0	15.5	11.0	12.3	11.4	8.3	8.2	6.0	5.6	8.6
20	50.2	52.4	54.0	53.6	54.8	56.5	53.6	11.0	12.6	20.0	22.1	19.3	9.6	15.8	22.8	7.5	15.2	15.3	5.6	6.2	6.0	7.0	5.7	7.1	6.3
21	56.9	57.7	57.5	55.9	56.1	57.9	57.0	5.5	9.2	21.8	25.7	21.5	11.5	15.9	26.3	5.4	11.9	20.9	6.2	6.9	7.9	7.6	7.1	8.2	7.3
22	57.5	57.5	56.5	54.7	54.8	55.9	56.2	6.7	9.0	20.7	24.1	18.6	16.1	15.9	24.6	5.5	15.1	19.1	7.1	7.4	9.8	9.3	12.5	11.4	9.6
23	54.7	55.6	55.6	54.9	56.0	56.7	55.6	14.0	14.2	17.7	17.6	15.3	14.7	15.6	19.5	13.5	16.5	6.0	11.0	10.7	10.8	9.9	12.0	11.8	11.0
24	55.9	56.0	55.1	53.4	53.3	52.5	54.4	14.6	15.4	18.1	20.5	17.7	16.6	17.2	21.1	14.1	17.6	7.0	11.7	12.0	12.4	11.7	12.5	12.7	12.2
25	49.8	49.6	47.9	48.9	50.8	51.7	49.8	15.8	14.2	20.1	16.6	13.4	12.1	15.4	21.3	11.9	16.6	9.4	12.7	11.4	9.2	7.7	7.7	7.0	9.3
26	52.2	52.8	53.2	52.6	53.6	55.2	53.3	11.4	13.2	17.6	19.6	17.2	10.3	14.9	20.1	7.8	14.0	12.3	7.4	7.4	6.8	6.2	7.3	6.9	7.0
27	55.0	56.2	54.8	53.4	53.9	53.9	54.5	5.5	7.8	19.5	22.7	18.1	15.6	14.9	23.2	4.1	13.7	19.1	6.5	6.7	8.4	10.2	10.2	12.9	9.2
28	53.2	53.3	52.7	50.5	51.0	50.6	51.9	13.5	14.2	16.2	16.5	14.6	14.0	14.8	19.8	12.8	16.3	7.0	11.4	11.7	12.9	13.0	12.2	11.7	12.2
29	50.4	51.6	51.7	53.1	54.6	56.0	52.9	13.2	13.1	17.0	1														



MAY, 1948.

Day	DIRECTION AND SPEED OF CLOUDS X						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	w7	w7	—	10 s	10 s	2 sk,k	10 sk,cs	10 cs,sk	10 s	8.7	—	—	—	—	—	—	—
2	—	—	—	—	—	—	10 s	10 n	10 n,sc	10 n	10 sc	10 sc	10.0	—	0.6	0.5	0.4	0.1	—	1.6
3	—	—	—	s9	—	—	10 s	10 n	10 n	10 n	10 n	10 n	10.0	0.3	0.0	4.7	5.6	7.7	16.6	34.9
4	—	NW9	—	w2	w1,w8	—	10 s	10 sc,s	9 ck,cs,k	8 ck,k	7 c,k	1 k	7.5	0.7	—	—	—	—	—	0.7
5	—	—	—	w1	—	—	2 k	10 c,k	6 sc,cs	6 cs	0—	0—	4.0	—	—	—	—	—	—	—
6	—	—	—	—	—	—	0—	0—	1 cs,c	0 c	3 c,cs	0—	0.7	—	—	—	—	—	—	—
7	—	—	—	—	—	—	10 sc	0 c	2 c	0—	0—	0—	2.0	—	—	—	—	—	—	—
8	—	—	—	—	—	—	4 s	10 cs,≡	10 c,cs	8 c,k	10 c,sk	10 n	8.7	—	—	—	—	—	2.3	2.3
9	—	WSW7	—	w8	—	—	10 n	10 sk,sc	10 cs	10 sc,cs,sk	10 sc	9 sc,cs	9.8	1.8	1.2	—	—	—	—	3.0
10	—	—	—	—	—	—	10 sc	10 sc	10 cs,k	10 cs,ck,c	10 sc,ke,ck	10 sc	10.0	—	—	—	—	—	—	—
11	—	—	—	w7	w9	—	10 s	10 sc	10 sc	10 sk,sc	10 sk	9 sk	9.8	—	—	0.8	—	—	—	0.8
12	—	—	—	—	—	—	6 sk	10 ck,cs	10 sc,cs,k	10 sc	10 n,sc,sk	10 sc,s	9.3	—	—	—	0.0	0.0	0.0	0.0
13	—	sw3	w8	—	w8	—	10 sc	10 sc,ck,c	10 cs,sk	9 cs,k	9 sk,ck	0—	8.0	—	—	—	—	—	—	—
14	—	—	—	—	w2	—	0—	0 c,k	0 k	4 cs,c	10 c,cs	10 c,cs	4.0	—	—	—	—	—	—	—
15	—	—	—	—	—	—	0—	0—	0—	0 k	1 ck	0—	0.2	—	—	—	—	—	—	—
16	—	—	—	—	—	—	0—	3 cs,≡	10 c,k	10 c,k	10 ck,ke,c	10 sc	7.2	—	—	—	—	—	—	—
17	—	SE8	S7	—	s8	—	4 cs	10 sk	10 sk	10 sk,s	10 sk,s	10 s	9.0	—	—	—	0.0	0.0	—	0.0
18	—	—	—	—	—	—	10 n	10 s	10 s,sk	3 k,c	10 n,sk	9 sk	8.7	0.2	0.9	—	0.4	0.0	9.2	10.7
19	—	SW7	w7	w8	—	—	10 sk	10 sc,sk	10 cs,sk	10 sk,cs	1 sk	2 k	7.2	—	—	—	—	—	—	—
20	—	-w1,w8	—	—	—	—	1 sk	2 ke,k	10 c,cs,k	10 cs,c,k	10 ck,c	7 ck	6.7	—	—	—	—	—	—	—
21	—	—	—	—	—	—	2 ck	0 ck	0 ck,k	1 k,ck	0 ke	0—	0.5	—	—	—	—	—	—	—
22	—	—	—	—	—	—	10 cs	10 cs	10 c	10 cs,k	10 sc	10 n,sc	10.0	—	—	—	—	—	0.2	0.2
23	—	—	S7	—	s7	—	10 sc	10 sc,sk	10 sk,s	10 sk,s	10 sk,s	10 sk,s	10.0	0.6	—	0.0	—	16.1	—	16.7
24	—	—	—	—	s9	—	10 sk,s	10 n,sk	10 sk,s	10 sc,sk	10 s,sk	10 s	10.0	2.0	0.0	0.0	0.0	—	—	2.0
25	—	—	W7	w8	w9	w8	10 s	10 n	5 sk	9 sk	9 sk	7 sk	8.3	—	2.3	2.2	—	—	—	4.5
26	—	—	—	—	—	—	8 sk	0 k	0 k	0 k	0—	0—	1.3	—	—	—	—	—	—	—
27	—	—	—	—	w5,s9	—	0 c	0—	4 cs,kc	6 kc,sk	10 kc,sk	10 n	5.0	—	—	—	—	—	16.5	16.5
28	—	—	—	—	—	—	2 sk	10 s	10 n	10 n	10 n	10 s	8.7	8.5	—	1.3	2.1	111.5	0.2	123.6
29	—	S7	w7	w8	w9	—	10 s	9 sk,s	4 sk	8 sk	10 sk	10 sk	8.5	4.1	1.0	—	—	0.3	—	5.4
30	—	W9	W8	W7	W7	—	10 sk	10 sk	8 sk,k	6 k,sk	6 sk,k	8 sk	8.0	—	—	—	—	—	—	—
31	—	W7	W7	W7	W7	—	10 sk,s	6 sk,k,ck	8 sk	7 sk,k	1 sk	10 sk	7.0	0.4	0.1	—	—	—	—	0.5
							6.7	7.1	7.1	7.3	7.3	6.8	7.1	18.6	6.1	9.5	8.5	135.7	45.0	223.4

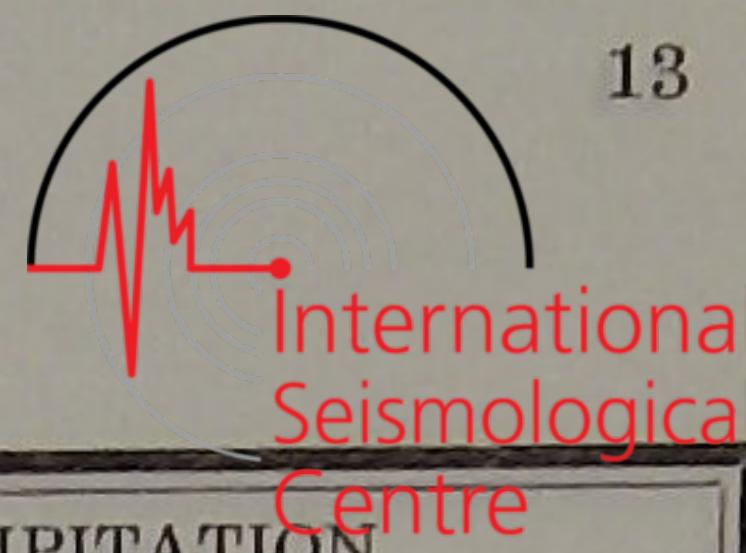
Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	6.14	(4.1)	1.8	$\infty^0 a, p.$
2	—	(1.2)	0.6	$\infty^0 p. \odot^0 2^h 34 - \odot^1 2^h 36 - \odot^0 2^h 38 - 7^h 20, 8^h 51 - 15^h 20, 23^h 00 -$
3	—	(4.8)	0.8	$\odot^0 0^h 30, 5^h 40 - \odot^1 9^h 32 - \odot^0 10^h 25 - \odot^1 10^h 59 - \odot^0 11^h 07 - 11^h 36. \odot^1 13^h 23 - \odot^0 13^h 32 - \odot^1 16^h 40 - \odot^0 21^h 47 - 22^h 54^*$
4	8.63	5.7	2.7	$0^0 a. 0^1 p. \nabla 10.5^h - 10.7^h, 12.2^h - 12.8^h, 13.3^h - 13.5^h, 14.8^h.$
5	9.52	6.0	2.5	$0^2 a. 0^2, \Delta^0 p.$
6	12.69	6.6	2.3	$\Delta^1, 0^2, \infty^0 a, 0^2, \infty^0, \Delta^0 p.$
7	12.23	7.2	2.8	$\Delta^1, 0^2, \infty^0 a. 0^2, \infty^0, \Delta^0 p.$
8	12.10	(7.7)	3.1	$\Delta^1, 0^1, \infty^0 a. 0^2, \infty^0 p. \equiv 14^h 20 - \equiv 6^h 27 - 7^h 40. \odot^0 20^h 45 - , \nabla 13.0^h.$
9	5.30	3.6	1.9	$0^0, \infty^0 a. \infty^0 0^2 p. - \odot^0 - 5^h 10.$
10	8.55	(4.1)	2.0	$0^2, \infty^0 a. 0^0, \infty^0 p.$
11	1.17	3.7	1.9	$0^0, \infty^0 a. \odot^0 6^h 48 - 9^h 57.$
12	—	2.5	1.3	$0^2 a. p. \odot^0 17^h 58 - 18^h 20. \odot^3 9^h 57^h 30^s, \odot^1 10^h 22^m 03^s.$
13	6.63	5.3	2.1	$0^2 a. 0^2, \Delta^0 p.$
14	12.50	6.4	2.1	$\Delta^1, 0^1, \infty^0 a. 0^0, \infty^0 p.$
15	12.28	7.6	3.1	$\Delta^1, 0^2, \infty^0 a. 0^2, \infty^0 p.$
16	10.28	5.3	2.4	$\Delta^1, 0^0, \infty^0 a. 0^1, \infty^0 p.$
17	1.81	(2.9)	1.0	$0^0, \infty^0 a. 0^0 p, \odot^0 14^h 23 - 14^h 34.$
18	3.95	(4.1)	1.4	$0^0 p. \odot^0 1^h 20 - 5^h 16, 12^h 08 - 12^h 13, 12^h 24 - 12^h 33, 17^h 13 - \odot^2 18^h 20 - 19^h 10.$
19	4.32	5.5	2.8	$0^0 a. 0^2 p.$
20	12.48	6.3	2.3	$0^2 a, p.$
21	11.05	7.1	2.9	$\Delta^0, 0^2 a. 0^2 p.$
22	9.90	(4.9)	2.3	$\Delta^1, 0^0, \infty^0 a. \infty^0 p, \odot^0 21^h 30 - 22^h 05, 23^h 30 -$
23	—	(3.1)	0.9	$- \odot^0 - 1^h 05, 7^h 58 - 8^h 02. \top^0 W 13^h 47. \odot^0 14^h 05 - , \top^1 Z 14^h 07 - \odot^1 14^h 38 - \odot^0 16^h 14 - 17^h 38. \odot^0 22^h 06 - \odot^1 22^h 23**$
24	2.07	(3.6)	1.2	$\odot^0 5^h 59 - 6^h 12, 11^h 23...11^h 45.$
25	4.79	5.8	2.6	$0^1 a. 0^0 p. \top^0 N 4^h 20 - , \odot^0 4^h 24 - , \top^0 - 4^h 40. - \odot^0 - 8^h 04.$
26	13.14	6.5	2.4	$0^2 a. 0^2, \Delta^0 p.$
27	11.65	(5.8)	2.0	$*** - \nabla^1 E 22^h 27 - , - \odot^2 22^h 29 - \odot^0 22^h 33 - , - \nabla^1 S E 22^h 34 - , - \odot^0 - 22^h 48. - \nabla^0 S E 22^h 55 - 23^h 20.$
28	—	(0.0)	0.5	$0^2, \Delta^1 a. 0^2, \infty^0 p. \odot^0 21^h 38 - , \top^0 W 21^h 45 - \nabla^0 W 21^h 56 - , - \odot^3 21^h 57 - , - \nabla^1 Z 22^h 05 - \nabla^2 Z 22^h 08 - , - \odot^1 22^h 20 - , ***$
29	6.90	(4.3)	1.8	$\odot^0 7^h 10 - , \top^0 N W 7^h 45. - \odot^1 7^h 51 - \odot^0 7^h 59 - 8^h 25, 9^h 55 - 10^h 15...10^h 40 - , \top^0 N W 10^h 25. - \odot^0 - 11^h 40, 12^h 20 - 12^h 30. ***$
30	8.04	(5.0)	1.6	$0^0 p. \odot^0 0^0 05 - 1^h 40, 2^h 12 - 3^h 18, 15^h 49 - 16^h 34. \nabla 12.0^h, 12.5^h - 12.7^h, 13.3^h.$
31	9.84	5.0	1.8	$0^1 a. 0^2 p....\odot^0 ... 3^h 30.$

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

JUNE, 1948.



Day	AIR PRESSURE (700mm+)* mm							AIR TEMPERATURE °C								TENSION OF VAFOUR 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	57.2	57.7	57.0	55.8	55.0	54.8	56.3	9.1	10.2	16.0	14.9	14.2	13.0	12.9	16.9	8.7	12.8	8.2	7.7	8.2	9.2	9.3	8.9	9.3	8.8
2	52.5	51.2	50.2	47.6	45.2	44.8	48.6	13.2	13.4	17.9	16.0	16.6	15.4	15.4	18.3	12.9	15.6	5.4	9.0	10.0	10.6	11.9	11.5	12.2	10.9
3	43.3	43.2	42.2	41.0	43.4	44.7	43.0	13.7	13.5	15.7	17.4	14.4	12.6	14.6	18.1	12.2	15.2	5.9	11.2	11.2	11.7	10.8	9.8	9.4	10.7
4	44.1	45.0	45.7	45.6	46.9	47.6	45.8	11.5	12.5	16.2	17.2	14.6	13.0	14.2	18.5	10.9	14.7	7.6	9.2	9.5	10.0	10.2	9.3	8.4	9.4
5	47.9	49.8	51.1	50.9	58.1	54.9	52.1	11.5	11.2	13.8	17.3	14.7	12.1	13.4	17.8	10.9	14.4	6.9	7.9	7.7	8.0	8.8	8.0	8.2	8.1
6	55.1	56.6	58.0	57.7	58.2	60.3	57.7	10.3	11.1	14.8	17.9	16.2	13.4	14.0	19.6	9.7	14.7	9.9	8.0	8.2	8.1	8.9	8.9	9.3	8.6
7	60.0	61.0	60.8	58.7	58.8	59.2	59.8	11.4	11.8	18.9	22.2	18.9	16.2	16.6	22.4	10.2	16.3	12.2	9.6	8.9	9.5	11.7	12.3	12.4	10.7
8	57.9	58.0	57.5	56.6	56.2	57.3	57.3	15.1	15.9	24.9	27.7	24.7	18.7	21.2	29.2	14.4	21.8	14.8	11.7	12.0	10.6	12.0	11.7	11.0	11.5
9	56.9	57.2	56.9	55.9	55.5	56.2	56.4	14.9	16.3	26.8	24.7	23.3	18.3	20.7	28.0	12.8	20.4	15.2	11.5	11.5	12.8	13.0	14.2	14.2	12.9
10	55.8	55.8	55.5	55.1	55.2	55.7	55.5	15.7	17.7	24.5	24.1	21.2	19.4	20.4	25.0	13.6	19.3	11.4	12.6	13.3	14.1	13.7	15.3	16.0	14.2
11	55.2	55.0	55.1	54.1	54.0	55.4	54.8	18.9	19.0	23.7	27.1	26.3	18.9	22.3	28.2	17.1	22.7	11.1	15.8	15.6	13.5	11.4	12.0	14.2	13.8
12	54.5	53.9	53.8	52.1	51.4	51.6	52.9	17.3	18.1	24.1	25.9	24.1	20.9	21.7	26.0	16.4	21.2	9.6	13.5	13.7	15.8	15.9	17.8	17.4	15.7
13	50.1	50.6	50.0	48.0	46.6	45.1	48.4	19.9	20.0	21.5	23.4	22.4	21.1	21.4	23.6	19.8	21.7	3.8	16.9	17.0	17.1	17.4	17.5	18.0	17.3
14	42.7	41.2	40.5	40.9	42.0	43.6	41.8	21.1	20.9	23.3	21.5	19.5	17.9	20.7	23.8	17.4	20.6	6.4	18.2	17.2	18.1	16.1	14.5	13.2	16.2
15	44.0	46.1	47.8	48.6	49.8	51.5	48.0	16.8	17.9	21.7	22.5	23.0	17.4	19.9	23.7	15.5	19.6	8.2	14.1	13.7	12.9	13.0	13.3	13.9	13.5
16	51.5	52.3	51.7	50.1	49.6	50.5	51.0	15.0	16.2	20.0	21.0	20.5	18.4	18.5	22.8	14.0	18.4	8.8	12.2	12.5	14.1	15.4	13.4	13.6	13.5
17	49.4	50.4	50.3	49.2	49.4	51.7	50.1	17.4	17.9	21.5	22.9	20.9	17.4	19.7	23.8	17.2	20.5	6.6	13.7	13.8	13.7	14.5	14.1	12.7	13.8
18	51.0	51.9	52.9	51.8	52.9	54.7	52.5	17.1	17.5	20.7	23.3	21.3	18.3	19.7	23.8	16.8	20.3	7.0	13.0	13.7	13.6	14.4	14.8	14.6	14.0
19	54.3	54.9	55.5	53.7	52.8	53.0	54.0	17.5	17.9	18.8	21.9	19.9	17.8	19.0	22.6	17.3	20.0	5.3	14.3	14.4	13.7	13.9	13.8	13.4	13.9
20	52.5	52.9	52.5	52.3	51.6	53.1	52.5	17.4	17.7	20.7	21.1	20.1	17.5	19.1	21.5	16.7	19.1	4.8	13.5	14.2	13.9	14.3	14.0	13.0	13.8
21	52.6	53.7	53.9	52.3	52.7	53.4	53.1	16.4	17.2	20.0	23.3	20.6	18.0	19.3	24.4	16.1	20.3	8.3	13.0	13.2	13.8	14.9	14.7	13.6	13.9
22	51.9	52.0	52.1	51.2	52.6	53.3	52.2	17.4	18.6	22.3	25.8	22.1	16.4	20.4	26.3	14.9	20.6	11.4	14.1	14.3	11.7	11.9	12.0	11.8	12.6
23	52.4	53.9	53.1	52.9	53.1	54.6	53.3	13.9	17.6	23.6	26.3	23.7	19.7	20.8	27.0	12.9	20.0	14.1	11.4	12.3	12.3	12.6	10.2	10.6	11.6
24	54.3	55.1	54.0	53.6	54.8	56.3	54.7	15.8	16.4	24.0	29.6	21.9	18.1	21.0	30.2	14.3	22.3	15.9	11.3	11.9	12.2	12.9	13.0	12.9	12.4
25	56.3	56.3	56.0	55.0	55.2	56.4	55.9	15.8	16.9	21.8	22.2	19.6	18.5	19.1	24.3	14.7	19.5	9.6	12.4	12.8	12.8	14.3	13.9	13.7	13.3
26	55.1	55.8	55.7	54.7	54.8	55.5	55.3	17.8	17.7	21.5	24.3	21.5	19.9	20.5	25.6	17.4	21.5	8.2	13.9	14.5	14.9	14.0	14.7	15.4	14.6
27	54.2	54.8	55.2	53.4	54.1	54.9	54.4	19.2	19.7	23.0	26.2	22.7	19.5	21.7	27.4	18.9	23.2	8.5	15.8	15.7	16.4	15.3	14.7	15.7	15.6
28	54.4	54.3	54.2	53.2	52.6	53.3	53.7	18.9	19.6	24.1	23.7	21.5	18.4	21.0	25.8	17.9	21.9	7.9	15.1	14.9	14.0	14.5	13.5	14.0	14.3
29	52.0	51.6	50.6	48.9	48.7	48.9	50.1	17.8	17.0	19.1	20.9	21.3	18.7	19.1	22.5	16.7	1								



JUNE, 1948.

Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	s7	s8	—	7 sk, kc	10 sk	10 sk	10 sk	10 s, sk	10 s	9.5	—	—	—	—	—	—	—	
2	—	s8	s8	s9	ESE9	—	10 s	10 s, sk	10 sk, cs	10 sk, sk	10 sk, s	10.0	—	—	—	0.1	0.2	0.9	1.2	
3	—	—	w8	w8	—	10 n	10 n	10 n	10 sk, s	10 sk, s	10 n, sk	10.0	31.3	13.1	4.5	1.4	0.2	—	50.5	
4	—	—	w8	w7	w7	—	10 sk	8sk, ck, n	10 sk, kc	10 sk	10 sk	9.7	0.2	0.0	—	—	—	—	0.2	
5	—	w8	—	—	—	—	10 sk	10 sc, sk	10 sk	9sk, k, ck	9 sk, kc	9.7	—	—	—	—	—	—	—	
6	—	—	—	E7	—	—	4 cs	7 sc, kc, k	10 sk	9sk, ck, k	10sc, kc, sk	10 sc	8.3	—	—	—	—	—	—	—
7	—	—	—	—	—	—	6 sk	1 kc	7 c, k	10 c, cs, k	10 c, k	10 sc	7.3	0.4	—	—	—	—	0.4	
8	—	—	—	—	—	—	10 sc	10 c, s	8 cs	10 es	10 c, cs	0 —	8.0	—	—	—	—	—	—	
9	—	—	—	—	—	—	0 —	10 cs	10cs, kc, sk	10cs, kc, sk	10cs, kc, sk	10cs, sk	8.3	—	—	—	—	—	—	
10	—	—	—	w8	—	—	10 cs, sk	8 cs, sk	10 sk	10 sk	10 sk, s	9.7	—	—	—	—	—	—	0.3	
11	—	—	—	—	—	—	10 n	10 sc, s	10 c, k	9 c	10 c, ck	3 c	8.7	2.6	0.8	—	—	—	3.4	
12	—	—	—	—	—	—	10 sc	10sc, kc, sk	10 sc, kc	10 sc, ke	10 sc	10 n	10.0	—	—	0.1	—	1.4	1.5	
13	—	s9	—	—	—	—	10 s	10 s	10 n, s	10 s	10 s, sc	10 n	10.0	0.1	—	0.2	0.1	—	1.0	
14	—	—	—	—	—	—	10 s, sc	10 s	10 s	10 sc, sk	10 n	10 s	10.0	0.1	0.0	0.2	1.5	0.9	3.9	
15	—	WNW9	W7	W7	—	—	10 sk	10cs, sk, kc	9 sk, k, c	10 k, c	10 c, cs, k	0 c	8.2	0.1	—	—	—	—	0.1	
16	—	—	s7	—	s7	—	10 cs	10 c, cs, k	10 sc, sk	10 sk, s	10 sk, sc	10 sc, sk	10.0	—	—	—	—	0.0	—	
17	—	—	—	—	—	—	10 s	10 sc, s	10 sc, sk	10 sc, cs, k	6 c, k, kn	10 sc	9.3	—	—	—	—	—	—	
18	—	—	—	s7	s7	—	10 s	10 s, sk	10 sk, s	10sk, cs, kn	8 cs, sk, k	10 s	9.7	—	—	—	—	—	—	
19	—	—	—	—	—	—	10 s	10 s	10 s	10 sk, k	10 sc, sk	10 sc	10.0	0.1	0.2	—	—	—	0.3	
20	—	—	—	—	—	—	10 sc	10 sc	10 sc, k, s	10 sk	10 cs, sk	10 s	10.0	—	—	—	0.0	—	0.0	
21	—	—	—	—	—	—	10 s	10 s, sk	10 s	10 c, k, cs	10 sc, sk, s	10 s	10.0	—	—	—	—	—	—	
22	—	—	—	—	—	—	10 sk, c	10 s, k	4 sk, c, k	9 k, cs, sk	5 cs, sk	0 c	6.3	—	—	—	—	—	—	
23	—	—	—	—	—	—	1 sk	1 sk	0 k	1 ck, cs, k	0 cs, ck	0 ck	0.5	—	—	—	—	—	—	
24	—	—	—	—	—	—	2 ck	3 ck, cs	8 cs	10 cs	9 cs, kc	10 sc, sk	7.0	—	—	—	—	—	—	
25	—	—	—	—	s8	—	1 kc	10 sk, s	10 sk, k	10 s, sk	10 s	10 s	8.5	—	—	—	—	—	—	
26	—	—	—	—	s7	—	10 s	10 n	10 s	10 sk	10 cs, sk	10 s	10.0	—	0.0	0.0	—	—	0.0	
27	—	—	—	—	—	—	10 s	10 s	10 s, sc, sk	10 c, k	10 c, kc	10 c	10.0	—	—	—	—	—	—	
28	—	—	—	s7	—	—	10 s	10 s, sk	10 cs, sk	10sc, sk, cs	10kc, sk, cs	10 s	10.0	—	—	—	—	—	—	
29	—	—	—	—	—	—	10 s	10 n	10 n	10 n	10 sc, s, sk	10 s	10.0	—	18.0	23.3	3.1	0.1	44.5	
30	—	s7	s7	—	—	10 s	10 s	10 s	10 s, sk	10 s	10 s	10.0	—	—	—	—	—	—	—	
							8.4	8.9	9.2	9.6	9.2	8.4	9.0	34.9	32.1	28.2	6.3	1.4	4.8	107.7

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	1.53	2.9	1.5	0 ⁰ a. 0 ¹ p.
2	—	(5.5)	1.0	0 ⁰ 13 ^h 00...0 ² 22 ^h 14—, 21.0 ^h .
3	0.97	(2.1)	0.8	0 ⁰ p.—0 ¹ 11 ^h 30—0 ⁰ 6 ^h 57—8 ^h 40, 10 ^h 07...0 ¹ 12 ^h 24—0 ⁰ 12 ^h 29—12 ^h 41, 17 ^h 02—17 ^h 20, 22 ^h 04...
4	1.13	3.0	1.4	0 ⁰ , ~ ⁰ a. 0 ¹ p....0 ⁰ ...2 ^h 20.
5	5.33	4.5	1.5	0 ¹ a, p.
6	6.24	(5.0)	1.5	Δ ⁰ , 0 ¹ a. 0 ¹ p.
7	12.15	6.2	1.9	0 ² a. 0 ¹ , ~ ⁰ , Δ ⁰ p. 0 ⁰ 0 ^h 06—0 ^h 30.
8	11.99	7.4	2.9	Δ ⁰ , 0 ² a. 0 ² p.
9	8.43	4.8	2.0	Δ ⁰ , ~ ⁰ a. 0 ⁰ , ~ ⁰ , Δ ⁰ p.
10	4.10	(4.4)	1.5	Δ ⁰ , ~ ⁰ a. 0 ⁰ 18 ^h 19—18 ^h 37, 22 ^h 32—.
11	11.20	6.6	2.4	0 ² a. 0 ² , Δ ⁰ p.—0 ⁰ —3 ^h 10.
12	1.37	(2.6)	1.1	Δ ⁰ , ~ ⁰ a. ~ ⁰ p. 0 ⁰ 11 ^h 52—12 ^h 13, 20 ^h 40—0 ¹ 21 ^h 17—0 ⁰ 21 ^h 38—22 ^h 19.
13	—	(1.7)	0.7	0 ⁰ 7 ^h 55...
14	—	(2.1)	1.0	0 ⁰ p....0 ⁰ ...4 ^h 10, 6 ^h 53...16 ^h 50—21 ^h 46, 22 ^h 28—22 ^h 47.
15	9.40	4.2	1.4	0 ¹ , Δ ¹ p.
16	2.32	2.2	1.1	Δ ¹ , 0 ¹ a. 0 ⁰ 14 ^h 02...14 ^h 09.
17	5.28	4.3	1.5	0 ⁰ a, p.
18	2.44	(3.8)	1.3	T ⁰ W12 ^h 53—14 ^h 36.
19	1.38	2.8	0.9	0 ¹ p. 0 ⁰ 1 ^h 10—1 ^h 46, 3 ^h 00—4 ^h 09.
20	—	2.6	1.0	0 ⁰ 12 ^h 45—12 ^h 53.
21	5.33	6.0	1.4	--
22	8.49	6.4	2.2	0 ¹ a. 0 ² , Δ ⁰ p.
23	13.53	7.9	3.1	Δ ¹ , 0 ¹ a. 0 ² p.
24	11.35	7.2	2.3	Δ ⁰ , 0 ² a. 0 ² p.
25	3.10	3.7	1.3	--
26	2.76	4.5	1.5	≡:0 ⁴ 30—7 ^h 10.
27	5.32	5.9	1.7	~ ⁰ , Δ ⁰ p.
28	5.13	(3.7)	1.4	~ ⁰ a, p.
29	0.12	(2.2)	0.7	0 ⁰ 3 ^h 03—0 ¹ 3 ^h 58—0 ⁰ 9 ^h 33—0 ¹ 10 ^h 42—0 ⁰ 13 ^h 20...14 ^h 20.
30	0.90	(3.2)	1.0	--
Mean	4.71	4.8	1.5	

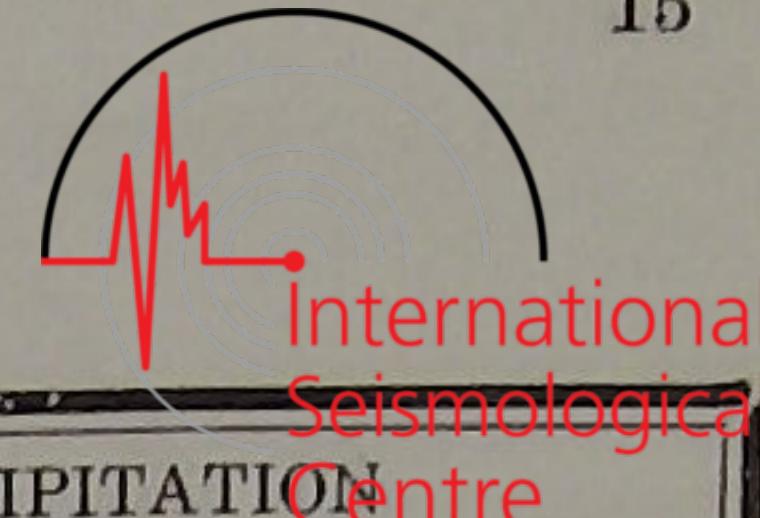
METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

JULY, 1948.



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	49.7	50.7	50.5	49.5	49.9	49.5	50.0	19.6	19.3	23.8	23.3	21.5	20.5	21.3	25.2	19.3	22.3	5.9	15.7	16.1	16.9	17.1	16.7	16.2	16.5
2	49.0	48.6	50.3	49.4	50.4	51.4	49.9	19.4	17.9	19.0	21.3	21.3	19.9	19.8	21.9	17.8	19.9	4.1	16.4	14.8	15.4	17.2	18.2	16.3	16.4
3	51.2	52.7	52.7	52.9	52.6	53.3	52.6	19.0	19.8	23.0	24.0	23.7	19.9	21.6	24.8	18.7	21.8	6.1	15.9	16.4	16.6	16.4	16.3	16.1	16.3
4	52.7	53.6	54.1	53.3	54.4	55.5	53.9	19.7	18.7	22.6	26.9	20.8	18.7	21.2	27.1	18.6	22.9	8.5	16.5	15.8	16.7	18.0	14.7	14.4	16.0
5	54.7	55.5	55.8	54.4	53.6	54.0	54.7	18.1	18.3	19.7	22.1	21.5	20.7	20.1	22.7	17.9	20.3	4.8	15.2	15.1	16.1	17.1	17.6	17.9	16.5
6	53.3	54.9	54.9	53.3	54.0	55.0	54.2	20.8	20.6	25.3	26.3	23.9	21.7	23.1	27.7	20.1	23.9	7.6	18.2	17.8	17.7	17.3	18.0	16.7	17.6
7	54.0	53.7	53.3	52.6	52.0	52.2	53.0	20.3	21.3	26.7	28.0	25.8	22.5	24.1	29.0	18.7	23.9	10.3	15.6	17.0	15.5	17.6	16.9	16.4	16.5
8	51.4	51.4	50.9	50.8	51.3	51.9	51.3	21.1	20.6	22.7	20.9	20.9	19.9	21.0	23.6	19.9	21.8	3.7	17.6	17.0	17.4	17.2	17.2	16.7	17.2
9	51.1	52.0	51.9	51.5	51.3	52.0	51.6	19.9	20.3	22.3	23.2	22.1	21.1	21.5	23.8	19.9	21.9	3.9	17.1	17.3	18.2	18.1	18.3	18.2	17.9
10	51.5	52.2	52.5	51.8	52.0	53.7	52.3	21.1	21.5	24.7	29.0	26.9	23.5	24.5	29.2	21.1	25.2	8.1	18.4	18.8	18.7	21.3	20.2	20.4	19.6
11	53.0	53.8	52.9	52.8	53.3	53.6	53.2	22.3	22.5	25.5	26.4	25.4	23.7	24.3	28.2	22.3	25.3	5.9	19.6	20.0	21.2	21.3	20.9	20.4	20.6
12	52.5	53.0	52.6	52.0	52.2	52.2	52.4	23.2	23.5	27.3	25.9	24.8	23.3	24.7	29.8	22.9	26.4	6.9	20.4	20.2	20.8	20.9	20.3	20.4	20.5
13	51.5	51.8	50.6	49.8	50.3	50.8	50.8	22.9	22.5	24.8	24.5	23.5	22.7	23.5	27.0	21.5	24.3	5.5	20.1	20.0	20.1	21.3	20.4	20.1	20.3
14	49.2	49.5	49.5	49.0	49.7	50.6	49.6	22.1	22.1	24.8	27.7	23.9	22.3	23.8	28.2	21.9	25.1	6.3	19.1	18.7	19.3	19.6	19.2	19.2	19.2
15	50.1	51.1	51.4	50.1	50.7	51.7	50.9	21.3	20.9	25.6	28.0	25.1	22.1	23.8	28.6	20.5	24.6	8.1	17.4	17.0	16.1	17.6	17.8	18.1	17.3
16	50.8	51.5	51.6	51.4	51.9	52.9	51.7	21.3	21.6	24.1	23.7	21.1	21.1	22.2	25.5	20.3	22.9	5.2	18.0	18.1	18.0	19.8	17.2	18.2	18.2
17	52.4	53.0	52.8	51.4	52.0	53.0	52.4	20.1	19.7	22.9	26.2	22.0	20.0	21.8	26.8	19.5	23.2	7.3	17.1	16.1	17.5	17.4	16.1	15.5	16.6
18	52.1	52.1	52.4	51.2	51.6	52.6	52.0	19.5	20.3	22.9	25.6	23.3	20.0	21.9	27.1	19.5	23.3	7.6	16.1	16.2	16.1	17.1	16.6	16.4	16.4
19	52.6	52.8	53.1	52.7	52.4	54.0	52.9	20.1	20.8	24.8	26.2	24.5	20.7	22.9	27.5	19.7	23.6	7.8	16.7	17.1	16.5	17.0	16.8	16.1	16.7
20	53.1	53.8	54.8	54.6	55.2	56.0	54.6	20.0	20.5	24.5	26.3	23.1	21.1	22.6	27.0	19.7	23.4	7.3	16.0	16.2	17.1	17.5	17.5	16.3	16.8
21	56.1	56.7	56.8	56.0	56.4	56.7	56.5	20.4	20.5	23.3	25.0	23.1	21.7	22.3	25.8	20.2	23.0	5.6	16.5	16.2	16.7	18.3	17.5	17.5	17.1
22	55.9	55.8	54.9	53.3	53.4	53.9	54.5	21.5	21.8	25.1	27.8	24.5	23.3	24.0	28.8	21.2	25.0	7.6	18.0	18.6	19.0	20.8	21.5	20.4	19.7
23	53.0	53.7	53.8	53.7	53.1	54.6	53.7	23.1	23.0	26.7	25.8	27.3	22.0	24.7	28.8	21.1	25.0	7.7	20.5	20.0	20.2	19.3	20.1	17.8	19.7
24	54.1	54.8	54.6	53.4	53.6	54.7	54.2	20.1	20.3	27.1	30.9	25.5	23.7	24.6	32.0	19.7	25.9	12.3	16.9	17.3	19.5	18.8	21.2	18.4	18.7
25	54.1	54.1	52.7	51.4	51.2	51.5	52.5	22.5	22.9	28.7	31.5	26.1	23.1	25.8	32.1	21.1	26.6	11.0	19.2	18.6	18.4	19.0	19.9	19.1	19.0
26	50.5	50.8	51.1	50.1	50.6	51.6	50.8	22.8	23.3	28.5	30.1	27.7	24.5	26.2	31.1	22.3	26.7	8.8	19.3	20.4	20.9	21.3	21.3	20.2	20.6
27	51.9	52.9	52.6	51.9	52.7	54.2	52.7	23.5	22.3	29.9	33.1	28.7	24.4	27.0	33.8	21.5	27.7	12.3	18.7	19.2	20.4	20.7	21.3	20.9	20.2
28	53.9	55.2	55.4	54.8	55.2	55.9	55.1	23.0	22.7	29.8	32.7	29.9	25.0	27.2	33.0	22.4	27.7	10.6	20.0	20.1	19.8	20.8	21.7	21.0	20.6
29	56.1	57.0	56.9	57.1	57.0	57.3	56.9	24.3	24.3	30.1	25.7	25.7	22.4	25.4	31.3	21.4	26.4	9.9							

JULY, 1948.

DIRECTION AND
SPEED OF CLOUDS ×

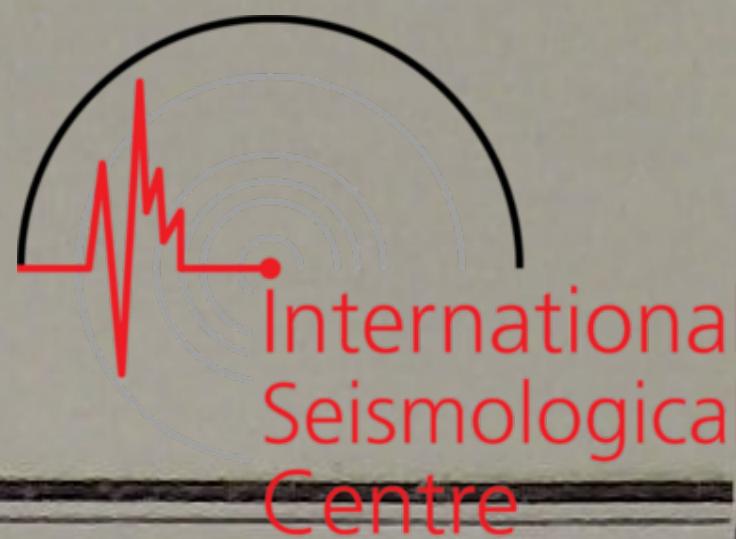
AMOUNT (0-10) AND FORMS OF CLOUDS

PRECIPITATION
mm

Day	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 s	10 n	10 sk	10 sk	10 sk	10 n	10.0	—	0.0	0.2	—	—	0.0	0.2
2	—	—	—	s8	—	—	10 n	10 n	10 n	10 s	10 s	10 s	10.0	3.9	5.7	0.6	0.2	1.5	0.2	12.1
3	—	—	w8	—	—	—	10 s,sk	10 s	10 s,sk	9 sk,k,e	3 c,k	3 sk	7.5	—	0.4	0.2	—	—	—	0.6
4	—	—	—	—	—	—	10 s	10 n	10 s,sk	10 es,sk	10 s	10 s	10.0	—	0.4	0.2	—	—	—	0.6
5	—	—	—	—	—	—	10 s	10 n	10 s	10 s	10 s	1 sk	8.5	0.3	0.5	0.0	—	—	2.5	3.3
6	—	—	w7	w7	w7	—	3 s	10 sc,s,e	10 sk	10 sk,se	10 es,sk,n	10 sk	8.8	—	—	—	—	—	—	0.1
7	—	—	w7	—	—	—	7 sk,es	10 es,sk	10 ck,k,c	10 ck,k,c	10 c,ck,k	10 ck,k	9.5	—	—	—	—	—	—	—
8	—	—	—	—	—	—	10 sc	10 sc	10 sk,s	10 n	10 sk,s	10 s	10.0	—	—	0.3	4.6	3.0	0.1	8.0
9	—	—	—	—	—	—	10 s	10 n	10 s	10 s	10 n	10 n	10.0	—	0.0	0.0	—	0.0	1.7	1.7
10	—	—	—	ssw4	—	—	10 s	10 s	10 sk,s	7sk,ke,ck	6 ke	10 s	8.8	3.8	—	—	—	—	—	3.8
11	—	—	—	w7	—	10 n	10 n	10 s,sk	10 n	9 sk,s	10 s	9.8	0.0	0.8	—	0.3	0.7	—	—	1.8
12	—	—	—	—	—	10 s	10 s,sc	10 ck,sk	10 sc,sk,kc	10 s	9 sk,s	9.8	—	—	0.3	0.8	0.3	—	1.4	
13	—	—	—	—	—	10 s	10 n	10 k,c,s	10 n,k,ke	10 n,sk,ck	9 c,cs	9.8	—	0.2	9.5	0.5	12.6	0.1	22.9	
14	—	—	s7	—	—	10 s	10 sk,s	10 sk,s	10 sk,ck,s	10 n	10 sk,s	10.0	—	—	0.2	6.3	0.3	1.0	7.8	
15	—	—	—	—	—	10 sk,es	10 sc,sk	8 ke,k	8 ck,k,c	4 ck,k	7 ke,sk	7.8	—	0.2	—	—	—	—	0.2	
16	—	—	—	—	—	10 sk	10 s	10 sk	10 n,sk	10 sk,s	10 s	10.0	—	—	—	2.7	4.9	—	7.6	
17	—	—	—	—	—	10 s	10 s	10 sk,s	6 c,k,ck	10 c,k,ck	10 sk,sc	9.3	—	—	—	—	—	—	—	
18	—	—	—	—	—	10 s	10 sk,ck	10 sk,s	10 sk,ck	10 sk,cs,ke	9 kc	9.8	—	—	—	—	—	—	—	
19	—	—	s7	—	—	10 s	10 s	8 sk,sk	8 sk,k,c	1 k,c	10 sk	7.8	—	—	—	—	—	—	—	
20	—	—	—	—	—	10 sk	10 s	10 sk,s	9 ke,sk	7 sk	10 sk	9.3	—	—	—	—	—	—	—	
21	—	—	—	—	—	10 sk	10 s	10 sk	10 sk	10 sk	10 sk	10.0	—	—	—	—	—	—	—	
22	—	—	—	—	—	10 s	10 s	9 sk,n,kn	10 sk,n	10 s	9.8	—	—	—	1.3	—	—	—	1.3	
23	—	—	—	—	—	10 s	10 s,sk	10 sk,k,c	10 n,sk,k	7 c,k,kn	7 ck,c,cs	9.0	—	—	0.3	0.0	0.0	—	0.3	
24	—	—	—	—	—	9 ke,ck	10 ck,ke,k	10 ck,sk,k	10 k,sk,ck	10 ke,sk	10 sk	9.8	—	—	—	3.1	—	—	3.1	
25	—	—	w7	—	—	10 ke	10 ke,sk	2 k,e	2 k	5 k,ck,c	8 c	6.2	—	—	—	0.7	—	—	0.7	
26	—	—	w8	w8	—	9 sk	10 n,sk	10 sk	10 sk,ke,cs	10 sk,kn	1 sk,ck	8.3	—	0.2	0.0	—	—	—	0.9	
27	—	w7	w7	w7	—	0	—	10 sk	7 k,ck	2 k	8 sk,k	1 ck,kc	4.7	—	—	—	—	—	—	—
28	—	—	—	—	—	9 sk,ke,k	4 ≡,ck	1 sk	2 sk,k	9 ke,sk	0	—	4.2	—	—	—	—	—	—	—
29	—	—	—	—	—	10 sc	10 s	6 kn,ck,k	10 kn,sc,es	9 ke,ck,c	0	—	7.5	—	—	0.3	0.1	—	—	0.4
30	—	—	—	w4	—	10 ≡	10 ≡	6 ke,kn	10 sk,kn	10 ke,cs,sk	10 sk,s	9.3	—	—	—	—	0.0	—	—	0.0
31	—	—	—	—	—	10 s	10 ≡,ke	8 ck,k,kn	10 sk,n,kn	8 c	8 c,≡	9.0	—	—	2.6	1.0	—	—	3.6	
							9.3	9.8	8.9	8.8	8.6	7.8	8.8	8.0	8.0	11.3	19.1	28.7	6.9	82.0

Day	Duration of Sunshine (in hours)	Amount of Evaporation		REMARKS																		
		Open Air	in the Shelter																			
1	0.26	2.0	0.2	≡:15 ^h 46—9 ^h 20.≡:15 ^h 35...																		
2	—	(1.3)	0.5	...≡:0 ^h 02—○ ⁰ 13 ^h 30—○ ⁰ 4 ^h 20—≡:0 ^h 34—○ ⁰ 8 ^h 40—≡:19 ^h 20—○ ⁰ 13 ^h 42—16 ^h 33,18 ^h 20—18 ^h 44.																		
3	6.21	(2.9)	0.9	○ ⁰ ,△ ¹ p.																		
4	3.93	(4.5)	1.3	△ ⁰ p.≡:13 ^h 30—8 ^h 46.																		
5	—	(1.6)	0.4	○ ⁰ 0 ^h 55—1 ^h 30,2 ^h 18...4 ^h 10—6 ^h 08,18 ^h 55—○ ¹ 19 ^h 20—19 ^h 30,21 ^h 07—21 ^h 10.																		
6	0.90	(2.4)	1.3	○ ⁰ 18 ^h 08—18 ^h 16.																		
7	7.38	(4.2)	1.5	○ ¹ a.○ ¹ ,△ ⁰ p.																		
8	—	(0.8)	0.5	△ ¹ ,○ ⁰ a.○ ⁰ 6 ^h 53—8 ^h 16,11 ^h 14—○ ¹ 14 ^h 47—○ ⁰ 1																		

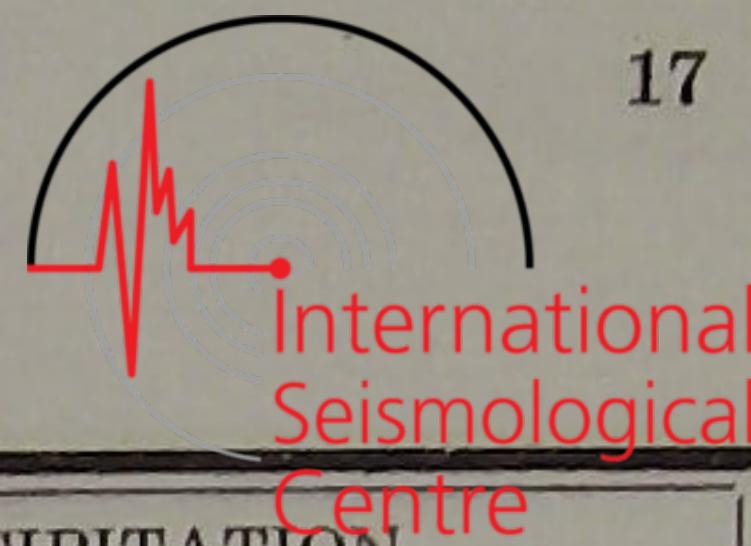
METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.



AUGUST, 1948.

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	55.1	56.4	56.7	55.3	55.3	56.7	55.9	21.8	22.7	27.8	29.9	27.7	23.3	25.5	31.0	21.7	26.4	9.3	19.0	19.6	21.4	20.4	19.8	20.4	20.1
2	56.3	56.8	56.6	55.8	55.4	56.5	56.2	22.7	23.3	28.3	29.8	26.5	24.9	25.9	30.5	21.7	26.1	8.8	19.8	19.7	18.7	18.2	19.9	20.9	19.5
3	56.1	56.0	55.1	54.2	53.9	54.3	54.9	24.3	25.1	30.0	27.4	26.5	24.0	26.2	30.3	23.5	26.9	6.8	21.0	21.8	22.0	21.8	22.4	20.6	21.6
4	53.0	53.0	53.0	50.9	50.6	51.2	52.0	22.5	23.5	27.5	30.1	25.9	23.0	25.4	30.4	21.2	25.8	9.2	19.6	20.6	20.4	21.3	19.4	19.0	20.1
5	50.6	50.5	49.7	48.7	49.2	49.7	49.7	21.1	21.5	26.6	26.5	23.3	23.9	23.8	29.8	20.7	25.3	9.1	17.6	18.2	19.9	20.8	20.8	21.6	19.8
6	49.8	49.9	50.2	50.1	50.4	51.2	50.3	22.6	23.1	27.0	28.3	26.2	23.5	25.1	29.2	22.6	25.9	6.6	19.9	20.5	21.2	21.2	20.4	20.0	20.5
7	50.1	51.2	51.0	49.6	47.9	51.3	50.2	22.7	22.9	25.7	24.7	25.5	24.0	24.3	26.0	22.6	24.3	3.4	20.1	20.3	21.3	22.4	21.2	20.8	21.0
8	52.6	54.5	54.8	54.3	55.2	56.6	54.7	23.8	23.7	28.5	30.3	26.9	23.7	26.2	31.7	23.3	27.5	8.4	20.6	21.1	21.7	22.5	21.8	20.9	21.4
9	57.1	57.9	58.1	57.4	57.8	58.0	57.7	23.9	23.8	27.6	28.2	25.4	24.2	25.5	30.5	23.3	26.9	7.2	21.1	21.2	21.6	21.8	21.1	20.9	21.3
10	57.6	57.9	57.7	56.8	56.7	57.4	57.4	23.9	24.1	27.3	28.7	26.3	24.3	25.8	30.4	23.6	27.0	6.8	21.1	21.0	21.6	22.5	20.7	21.4	21.4
11	56.0	56.3	57.0	54.5	55.2	56.6	55.9	23.9	24.1	28.6	30.2	25.3	21.5	25.6	31.0	21.2	26.1	9.8	21.3	21.6	19.5	21.6	19.1	18.0	20.2
12	54.9	55.5	55.5	53.8	53.6	52.6	54.3	21.0	20.2	26.5	28.1	25.7	19.8	23.6	29.4	18.9	24.2	10.5	18.1	17.2	18.3	18.3	18.9	16.2	17.8
13	51.1	51.0	50.0	48.5	49.6	50.5	50.1	19.3	20.5	23.9	25.7	24.1	23.4	22.8	25.8	18.9	22.4	6.9	16.4	17.7	21.1	22.2	21.6	21.2	20.0
14	49.2	49.9	50.3	49.6	50.1	51.1	50.0	23.6	23.7	28.6	28.7	25.9	24.5	25.8	29.6	23.1	26.4	6.5	21.2	21.3	23.0	22.7	22.0	22.1	22.1
15	50.2	51.0	51.0	50.5	50.9	51.8	50.9	23.8	23.5	28.7	29.9	27.3	24.7	26.3	30.9	23.3	27.1	7.6	21.7	21.3	22.2	22.1	22.5	21.5	21.9
16	51.7	52.6	52.3	51.3	51.7	53.0	52.1	24.0	24.1	27.1	31.5	26.9	23.0	26.1	32.2	22.5	27.4	9.7	21.3	21.6	22.3	20.8	21.8	19.8	21.3
17	52.7	54.0	54.0	53.1	53.2	54.8	53.6	22.0	21.7	27.7	30.9	27.1	23.9	25.6	31.4	21.1	26.3	10.3	19.0	18.3	20.4	20.0	19.9	21.1	19.8
18	54.8	55.0	54.7	53.7	53.7	53.6	54.3	22.8	22.9	28.7	27.5	26.1	24.6	25.4	30.4	22.5	26.5	7.9	19.8	20.3	20.9	24.0	23.0	22.3	21.7
19	52.3	52.0	51.5	50.6	52.1	53.6	52.0	24.4	23.0	24.7	28.5	24.0	22.6	24.5	29.2	22.5	25.9	6.7	22.2	20.4	20.8	21.3	20.8	19.9	20.9
20	53.8	54.4	54.9	53.9	54.3	54.8	54.4	22.2	22.0	26.5	28.7	23.7	22.5	24.3	29.5	21.7	25.6	7.8	19.7	19.0	20.4	20.9	18.6	18.2	19.5
21	54.0	55.0	53.8	52.9	52.6	53.4	53.6	21.6	21.2	26.4	29.3	25.4	21.5	24.2	29.5	20.4	25.0	9.1	17.6	17.9	18.4	19.8	19.8	18.0	18.6
22	52.7	52.0	51.5	49.9	49.6	50.5	51.0	20.9	21.5	26.2	26.1	24.7	22.3	23.6	30.0	20.5	25.3	9.5	17.7	18.4	18.5	21.6	20.6	17.7	19.1
23	49.3	50.1	49.4	48.5	49.3	50.0	49.4	20.5	20.9	24.6	24.9	25.5	22.9	23.2	26.6	20.1	23.4	6.5	17.3	18.2	19.9	20.0	21.3	19.3	19.3
24	50.3	51.5	52.0	51.3	52.9	55.6	52.3	21.7	20.9	25.0	29.5	22.9	19.9	23.3	29.8	18.3	24.1	11.5	18.7	16.0	17.1	16.9	16.5	15.9	16.9
25	56.3	57.6	58.5	56.2	57.6	58.2	57.4	17.4	18.1	23.9	28.1	23.1	20.0	21.8	28.5	17.0	22.8	11.5	14.1	14.9	16.6	16.4	17.9	16.6	16.1
26	58.2	58.5	58.1	57.2	56.6	56.6	57.5	18.4	18.1	26.0	27.3	23.1	20.5	22.2	28.0	16.8	22.4	11.2	15.2	15.4	17.1	17.3	17.3	17.3	16.6
27	55.1	54.3	53.1	50.8	50.6	51.4	52.6	20.4	21.0	25.7	29.8	24.4	22.5	24.0	30.0	20.3	25.2	9.7	17.2	17.7	18.1	18.8	18.4	18.6	18.1
28	50.7	50.3	49.6	48.1	48.5	49.8	49.5	20.6	19.9	26.1	28.2	23.3	21.8	23.3	28.4	18.9	23.7	9.5	17.2	16.5	17.0	17.0	17.1	17.4	17.0
29	48.7	50.3	51.2	51.8	53.5	54.9	51.7	19.2	19.3	21.9	24.7	20.1	17.8	20.5											

AUGUST, 1948.



Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	—	—	—	10 ≡	10 s	1 sk	3cs,k, kn	5 cs,k	6 cs,sk	5.8	—	—	—	—	—	—	—
2	—	s8	—	—	—	—	7 sk	9 sk,s	6 k	6 k,ke	7 k,ke	10 s	7.5	—	—	—	—	—	—	—
3	—	—	—	—	—	—	10 s,sk	9 sk,ke,s	9 k,e	10 c,k	10 ck,k,c	0 sk	8.0	0.0	0.0	0.0	2.5	4.2	—	6.7
4	—	—	—	—	—	—	6 ≡	10 ≡	10 kc,sk	8k,ke,es	7 cs,sk	2 sk	7.2	—	—	—	—	—	—	—
5	—	—	—	—	—	—	10 sk	10 sk	10 sk,s, kn	10 n	10 n	10.0	—	0.2	—	—	20.1	0.8	21.1	
6	—	—	—	—	—	—	10 n	10 n	10 sk,ke,s	10 kc,k,e	8 ck,c,k	7 sk	9.2	19.5	3.0	0.1	0.1	—	—	22.7
7	—	—	—	—	n8	—	10 n	10 n	10 s	10 n	10 sk	7 sk	9.5	7.5	2.8	0.6	16.8	1.8	—	29.5
8	—	—	—	—	—	—	10 s	10 s	8 sk,ke	8sk,ke,k	8 sk,ke	10 kc,sk	9.0	0.1	0.2	0.0	—	—	—	0.3
9	—	—	—	—	s9	—	10 s	10 n	10 k,c,ck	10 sk,k,e	10 s,sk	10 n	10.0	—	0.0	—	—	—	—	0.0
10	—	—	—	—	—	—	10 s	10 s	10 kc,sk	10 sk,s,ke	10 sc,es,sk	10 s	10.0	0.0	—	—	—	—	—	0.0
11	—	—	—	—	—	—	10 s	10 s	4 k	2 k	3 c,k	3 c	5.3	—	—	—	—	—	—	—
12	—	—	—	E7	—	4 ≡	10 ≡	10 cs,sk	10 cs,k	10 sk,e	10 n	9.0	—	—	—	—	—	—	9.0	9.0
13	—	—	—	—	—	—	10 n	10 n	10 n	10 n	10 n	10 n	10.0	26.2	5.3	3.2	20.0	12.0	0.5	67.2
14	—	—	s8	SE8	E8	—	10 s	10 s	9 sk	10 sk	9 sk	10 n	9.7	1.0	0.3	0.6	—	1.2	0.1	3.2
15	—	s9	SE7	—	S8	—	10 s	10 s	5 k	2 c,k	2 k,c	10 sk,s	6.5	0.6	—	—	—	—	—	0.6
16	—	—	—	—	—	—	10 n	10 n	10 sk	2 sk	2 sk,ck	7 cs,k	6.8	0.1	0.3	—	—	—	—	0.4
17	—	—	—	—	s8	—	9 sc,cs	10 sk,s	10 k,ck,c	1 k,ck,c	2 k,ck,c	10 sk,k	7.0	—	—	—	—	—	—	—
18	—	—	—	—	7 c,ck	—	10 ≡	10 sk,es	10 n,sk	10 sk,s	10 n	9.5	—	—	—	0.7	3.6	6.1	10.4	
19	—	—	—	—	10 n	—	10 n	10 n	7 c,ck,k	10 n,sk,c	10 c,ck	9.5	2.0	14.3	1.3	1.0	0.6	—	19.2	
20	—	—	s8	—	—	10 s	10 s	9 sk,es	9 sk,ck	10 sk,es,s	10 sk	9.7	—	—	—	—	—	—	—	
21	—	—	—	—	—	—	10 sk	2 c,sk	3 k	6 c,k	10 c,k	5 c,ck	6.0	—	—	—	—	—	—	—
22	—	—	—	—	—	—	10 s	10 s	8 sk	10 sk,sc,s	8 kc,sk	10 n,sk	9.3	—	—	0.0	0.1	0.1	0.2	
23	—	—	—	—	—	—	8 ck,sk	10 ≡	10 sk,s	10 sk,kn,ke	10 ck,sk,c	10 sc,ke	9.7	0.2	—	0.2	—	—	0.4	
24	—	—	—	—	—	—	10 s,sk	10 s,sk	10 kc,sk	5 sk,k,c	2 sk,k,c	7 sk,c	7.3	—	—	—	—	—	—	
25	—	—	—	—	—	—	10 s	10 sk,≡	8 c,k,ck	6 c,k	10 c,sk,k	9 kc	8.8	—	—	—	—	—	—	
26	—	—	—	—	—	—	1 k	10 ≡,ck	9 es,sk	10 es,k	10 es,sk	10 sc,es	8.3	—	—	—	—	—	—	
27	—	—	—	—	—	—	10 sc	10 sk	9 sk	6 sk,es	10 sk,es	8 sk,es	8.8	—	—	—	—	—	—	
28	—	—	w2	—	—	—	10 sk	8 sk,c,s	7 ck,c,k	4 k	8 sk,ck	10 sk	7.8	—	—	—	—	—	—	
29	—	—	E8	NNE8	—	—	8 c,ke	10 ≡	10 sk,k	10 sk,es,k	10 sc,sk	10 sc	9.7	—	—	—	0.1	—	0.1	
30	—	NNE8	E7	E7	—	—	1 sk	6 sk	6 sk,k	7 sk,k,es	5 sk,es	9 sk	5.7	—	—	—	—	—	—	
31	—	—	—	—	—	—	10 sk	10 kc,sc	3 c,ck,k	2 k,ck,es	10 kc,sk	0 cs	5.8	—	—	—	—	—	—	
							8.7	9.5	8.2	7.2	7.9	8.1	8.3	57.2	26.4	5.8	41.4	43.6	16.6	191.0

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm	REMARKS																		
			Open Air	in the Shelter																	
1	9.25	7.5	1.9	—	∞ ⁰ a.—=—4 ^h 00.	**[—● ⁰ 17 ^h 30—● ^{17^h45—●^{21^h55—●^{18^h15—18^h50,21^h50—●^{12^h00—●^{23^h20—}}}}}															
2	9.50	6.8	2.3	—	△ ¹ , X ⁰ , 0 ¹ a. 0 ¹ p. < ⁰ SW20 ^h 45—21 ^h 40. ● ⁰ 22 ^h 20—23 ^h 00.	**[● ⁰ SW23 ^h 25—● ^{12^h35—●⁰SW23^h40—●⁰23^h45—}															
3	5.02	(3.5)	1.0	—	∞ ⁰ , 0 ⁰ a. 0 ⁰ , 0 ⁰ p. < ⁰ S2 ^h 10—3 ^h 00. ● ⁰ 5 ^h 35—5 ^h 40. ≈ ^{7^h23—7^h30. ●⁰11^h14—●^{11^h30—●⁰11^h46—12^h12. ⊥⁰E12^h08.*}}	**[● ⁰ 21 ^h 53—● ⁰ 15 ^h 00—15 ^h 08. ≈ ^{12^h40—}															
4	5.00	(5.3)	1.6	—	0 ² p.—=—4 ^h 30—7 ^h 26.	*[● ⁰ 21 ^h 53—● ⁰ 15 ^h 00—15 ^h 08. ≈ ^{12^h40—}															
5	3.60	(7.3)	0.8	—	△ ¹ , 0																

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

SEPTEMBER, 1948.



Day	AIR PRESSURE (700mm+)*							AIR TEMPERATURE °C								TENSION OF THE VAPOUR mm									
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	Max.	Min.	Mean	Range	2	6	10	14	18	22	Mean
1	56.2	57.3	56.8	56.1	58.4	56.9	57.0	15.5	15.2	24.1	27.1	23.3	18.9	20.7	29.0	13.8	21.4	15.2	12.6	12.2	13.8	15.4	16.6	15.3	14.3
2	57.0	56.8	56.4	54.7	54.7	54.8	55.7	16.9	18.1	22.8	27.8	24.5	23.5	22.3	28.2	16.4	22.3	11.8	14.0	15.3	16.9	18.8	19.3	20.2	17.4
3	53.6	52.9	52.9	51.8	51.0	52.5	52.5	23.3	23.2	23.9	27.5	25.9	24.1	24.7	28.4	23.2	25.8	5.2	20.2	20.0	20.9	21.7	21.3	21.8	21.0
4	52.0	52.9	54.6	53.7	54.3	55.7	53.9	23.0	22.7	26.9	28.8	25.1	20.4	24.5	29.2	19.9	24.6	9.3	20.4	20.1	18.8	19.7	19.4	16.3	19.1
5	54.8	55.2	54.6	52.3	54.2	54.9	54.3	17.5	17.7	26.3	30.5	24.2	22.1	23.1	31.0	16.6	23.8	14.4	14.3	14.9	17.3	18.3	17.2	17.5	16.6
6	54.2	55.1	56.3	54.6	54.9	54.9	55.0	20.3	17.9	20.5	23.2	21.2	20.5	20.6	24.0	17.9	21.0	6.1	16.5	14.9	15.8	17.0	18.3	17.7	16.7
7	55.3	56.7	57.2	57.3	57.5	58.4	57.1	20.7	19.9	24.9	25.1	21.5	18.1	21.7	26.0	17.4	21.7	8.6	17.5	16.5	15.5	14.9	15.0	14.2	15.6
8	58.3	59.1	58.6	57.6	57.7	57.3	58.1	16.9	16.6	22.5	25.3	21.3	20.5	20.5	25.4	16.0	20.7	9.4	13.6	13.0	14.1	17.1	16.3	16.8	15.2
9	54.6	52.8	51.7	50.5	51.6	53.5	52.5	20.3	21.2	26.5	27.5	27.0	22.7	24.2	29.4	20.3	24.9	9.1	17.1	18.3	21.2	22.2	16.4	18.4	18.9
10	53.3	54.8	55.5	54.2	54.7	56.4	54.8	21.2	19.2	25.6	28.0	25.5	22.5	23.7	28.8	18.0	23.4	10.8	16.4	15.1	14.7	16.1	20.2	18.6	16.9
11	55.9	56.7	57.0	56.0	55.9	55.4	56.2	20.9	20.6	22.1	23.1	22.1	21.1	21.7	23.3	20.3	21.8	3.0	17.4	17.0	17.5	19.3	18.7	18.2	18.0
12	53.1	52.1	51.2	48.8	48.1	49.0	50.4	20.5	20.7	22.2	24.2	23.8	22.3	22.3	24.6	20.5	22.6	4.1	17.7	17.7	19.2	21.1	21.2	19.6	19.4
13	49.3	50.5	50.6	49.6	50.8	52.1	50.5	20.7	21.0	23.3	26.5	21.8	17.7	21.8	27.3	17.7	22.5	9.6	17.9	18.3	19.3	14.3	11.7	13.3	15.8
14	52.7	54.5	55.3	54.7	55.7	57.2	55.0	17.8	17.4	23.1	27.3	23.7	20.3	21.6	27.8	17.0	22.4	10.8	14.1	14.1	14.7	16.6	17.0	15.1	15.3
15	56.2	56.4	55.4	53.2	52.9	52.5	54.4	18.1	18.1	25.9	27.9	23.3	22.9	22.7	27.9	17.2	22.6	10.7	14.6	14.9	16.8	18.0	18.5	19.5	17.1
16	51.0	49.9	49.1	46.1	43.2	40.3	46.6	22.9	22.7	25.1	23.1	20.7	20.3	22.5	25.8	20.2	23.0	5.6	20.1	20.3	22.5	20.3	17.9	17.7	19.8
17	37.3	42.1	46.3	49.6	52.6	54.4	47.1	19.9	19.5	24.4	22.9	17.4	15.5	19.9	25.0	14.0	19.5	11.0	17.1	13.6	11.5	10.1	9.8	9.9	12.0
18	55.5	58.0	60.3	60.8	62.9	65.2	60.5	15.8	14.6	19.6	21.4	16.1	10.6	16.4	21.7	9.3	15.5	12.4	8.8	9.3	9.6	9.9	7.9	8.7	9.0
19	65.0	65.8	64.8	61.9	61.6	61.4	63.4	7.9	6.5	17.1	20.3	16.4	13.6	13.6	21.3	6.0	13.7	15.3	7.7	7.0	9.3	10.4	10.7	10.7	9.3
20	59.9	59.5	58.8	57.3	56.5	56.1	58.0	13.7	13.0	17.9	19.5	18.4	17.3	16.6	20.2	12.5	16.4	7.7	10.9	10.6	12.2	13.5	14.6	13.8	12.6
21	54.8	54.2	54.0	53.3	54.3	54.6	54.2	16.8	16.6	18.2	20.7	17.9	16.9	17.9	21.4	15.7	18.6	5.7	13.7	13.7	14.5	14.9	14.5	13.8	14.2
22	54.4	56.2	56.9	55.7	56.6	57.8	56.3	13.8	14.0	22.7	25.3	18.4	16.4	18.4	26.0	13.0	19.5	13.0	11.4	11.7	12.4	10.0	13.3	13.2	12.0
23	57.4	57.1	56.7	57.5	55.1	54.9	56.5	14.9	15.8	18.1	20.7	18.9	18.1	17.8	21.1	14.7	17.9	6.4	12.0	12.4	14.4	15.8	15.7	14.9	14.2
24	54.9	55.8	56.5	56.7	58.5	59.4	57.0	16.1	15.4	20.6	21.1	14.6	13.0	16.8	23.5	11.9	17.7	11.6	13.3	12.5	11.7	9.6	9.0	7.7	10.6
25	59.6	61.0	60.0	58.9	59.1	59.5	59.7	10.0	7.6	18.8	21.8	14.4	10.0	13.8	22.3	6.3	14.3	16.0	7.8	7.4	8.5	9.0	10.0	8.6	8.6
26	58.4	57.6	55.8	52.6	52.0	51.1	54.6	8.8	9.2	17.9	19.4	16.2	14.2	14.3	20.5	8.6	14.6	11.9	8.2	8.4	10.7	12.7	12.4	11.7	10.7
27	49.0	50.1	50.5	50.1	52.0	54.0	51.0	13.8	14.6	18.5	19.4	12.9	11.4	15.1	20.4	9.6	15.0	10.8	11.4	10.0	8.3	7.4	9.5	6.9	8.9
28	55.4	57.9	58.3	58.9	60.2	61.4	58.7	9.2	9.4	16.4	18.3	13.0	10.7	12.8	19.1	8.1	13.6	11.0	6.9	8.3	7.6	7.4	7.6	8.2	7.7
29	61.8	62.5	62.6	60.5	60.5	60.8	61.5	8.9	5.9	13.2	17.8	15.4	14.4	12.6	18.5	5.6	12.1	12.9	8.1	6.8	8.9				



SEPTEMBER, 1948.

Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm								
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22	2	6	6-10	10-14	14-18	18-22	Total
1	—	—	—	—	—	—	0—	10 cs	10 cs,sk,k	9 c,es,k	2 sk,ck	0—	5.2	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	6 s	10 s	10 s,sk	9 kc,es,k	10 kc,sk	10 s,sk	9.2	—	—	0.0	—	—	—	—	0.0
3	—	—	w8	w8	—	—	10 sk,s	10 s	10 n	10 sk,k,c	10 sk,sc,s	10 n	10.0	0.0	—	2.8	1.5	—	0.5	4.8	
4	—	—	w7	—	w9	—	10 s	10 c,k,ck	10 sk,cs	10 kc,sk	10 sk,kc,es	0—	8.3	1.6	—	—	—	—	—	1.6	
5	—	—	—	—	—	—	0—	10 ≡	2 k	4sk,ke,k	10 sk,kc	10 s,sk	6.0	—	—	—	—	—	—	—	
6	—	—	—	—	—	—	10 n	10 n	10 n,sk	10 ck,c,k	10 n	10 s	10.0	0.9	32.0	1.3	0.1	13.5	2.5	50.3	
7	—	w4	—	w4	—	—	10 s	10 kc,se,sk	10 kc,sk,k	10 kc,sk	10 sc,k	10 sc	10.0	—	—	—	—	—	—	—	
8	—	—	w8	—	—	—	10 sc	10 kc	10 c,ke,k	10 sk,ke	10 sk	10 s	10.0	—	—	—	—	—	—	—	
9	—	—	s8	w8	w8	—	10 n	10 n	10 s,sk,ck	10 sk,k,ke	10 ck,sk,k	10 n	10.0	0.0	1.4	0.0	—	—	0.2	1.6	
10	—	—	w5	w7	w7	—	0 cs	1 ck,c	8 kc,sk	6 ck,c,sk	10 sk,ck	10 sk,cs	5.8	0.0	—	—	—	—	—	0.0	
11	—	—	—	—	—	—	10 s	10 s	10 n,sk	10 n	10 s	10 n	10.0	—	—	0.0	1.8	0.3	0.4	2.5	
12	—	—	—	—	—	—	10 n	10 n	10 n	10 n	10 n	10 n	10.0	6.5	5.6	4.5	0.8	1.2	2.9	21.5	
13	—	—	s7	w9	—	—	10 n	10 n	10 sk,s	10 sk,cs	10 cs,kc,sk	10 sk	10.0	1.0	1.5	0.1	0.2	—	—	2.8	
14	—	w8	—	—	—	—	9 sk	2 sk	10 sk	6 sk,k	7 sk	10 sk	7.3	—	—	—	—	—	—	—	
15	—	s7	sw8	—	—	—	10 sk	10 sk	8 sk,k	10 k,c,sk	10 sk,s	10 s	9.7	—	—	—	—	—	—	—	
16	—	s9	s9	—	—	—	10 n	10 s,sc	10 n,sk	10 n	10 n	10 n	10.0	0.8	3.2	5.6	9.3	123.7	104.3	246.9	
17	—	w9	NW9	NW9	—	—	10 n	9 sk	3 sk	2 k	2 sk,k	5 sk,k	5.2	37.3	0.6	—	—	—	—	—	37.9
18	—	w7	—	—	—	—	5 sk,k	4 sk	2 k	1 k	2 k	0 kc	2.3	—	0.4	—	—	—	—	0.4	
19	—	—	—	—	—	—	0—	0 cs,c	1 k	10 es,k	10 sc,sk	10 cs	5.2	—	—	—	—	—	—	—	
20	—	—	—	—	—	—	10 kc,sk	10 sc,k	10 sc,sk	10 sc	10 sc,sk,s	10 n,sk	10.0	—	—	—	—	—	0.0	0.0	
21	—	—	—	—	N9	10 n	10 ≡	10 n	10 s,sk	10 n	2 sk,s	8.7	0.1	0.1	2.4	0.1	0.0	0.1	2.8		
22	—	—	—	—	—	—	0—	3≡,k,ck	2 sk,k	2 sk,k	0 ck,sk	6 sk	2.2	—	—	—	—	—	—	—	
23	—	—	—	—	—	—	10 sc	10 s	10 n,sk	10 sc,sk	10 sc	10 n	10.0	—	—	0.2	0.4	0.6	0.6	1.8	
24	—	w7	—	—	—	—	6 sk	7 kc,sk,c	8 c,ck,k	10 ck,cs,c	0 k	0 k	5.2	0.5	—	—	—	—	—	0.5	
25	—	—	—	—	—	—	0 k	0 k	1 k	0 sk	1 cs	0.3	—	—	—	—	—	—	—		
26	—	—	s7	—	—	—	10 cs	10 cs	10 sc,sk	10 sk,sc	10 n	10 n	10.0	—	—	—	—	3.9	3.2	7.1	
27	—	w8	w8	w7	—	—	10 sk	3 k	6 sk	4 k,ke	8 n	6 sk	6.2	0.8	—	—	—	0.4	0.5	1.7	
28	—	w8	w9	w9	—	—	3 ck	6 sk	9 sk	9 cs,sk	10 cs,k	10 sc,es	7.8	0.1	2.1	—	—	—	—	2.2	
29	—	—	—	—	—	—	6 sk	10 ≡,cs	10 sk	10 sk,cs	9 sk,ck	10 sk	9.2	—	—	—	—	—	—	—	
30	—	—	—	w2	—	—	6 sk,es	6 sk	9 c,es,k	10 cs,ck,k	7 ck,k,c	10 cs	8.0	—	—	—	—	—	—	—	
							7.0	7.7	7.9	8.1	7.9	7.7	7.7	49.6	46.9	16.9	14.2	143.6	115.2	386.4	

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	10.02	4.0	1.0	$\Delta^1, 0^0, \infty^0 a. 0^2, \Delta^1 p.$
2	5.55	(3.5)	1.2	$\Delta^1 a. \infty^0 p. \equiv^0 22^h 20 - 24^h 00.$
3	1.31	(2.5)	0.8	$\odot^0 8^h 25 - 10^h 53 \dots 11^h 43, 19^h 10 \dots$
4	2.67	3.0	1.0	$0^0 a. 0^1, \Delta^1 p \dots \odot^0 \dots 0^h 50.$
5	8.40	(5.4)	1.4	$\Delta^1, 0^1 a. 0^1 p. \leq^0 NW 19^h 30 - 20^h 30. \odot^0 23^h 05 -$
6	1.08	(2.2)	0.4	$0^0 p. - \odot^0 - \odot^0 12^h 40 - \odot^0 3^h 50 - \odot^0 14^h 30 - \odot^0 5^h 20 - 9^h 25, 10^h 12 \dots 13^h 05, 15^h 50 - \odot^0 16^h 03 - \odot^0 16^h 48 - \odot^0 17^h 28 - *$
7	2.68	3.0	1.0	$0^2 a. p. * - \odot^0 17^h 50 - 20^h 50.$
8	5.92	(2.9)	1.1	$\Delta^0, 0^2 a. \infty^0 p.$
9	2.68	(3.5)	1.4	$\equiv^0 0^h 30 - \odot^0 2^h 30 - 4^h 35, 5^h 27 \dots 6^h 12, 7^h 23 - 7^h 27, 21^h 10 - 22^h 20.$
10	8.98	3.5	1.2	$\Delta^1, 0^1 a. 0^2, \nabla^0 p. \odot^0 22^h 50^m 11^s.$
11	—	(0.5)	0.4	$\odot^0 7^h 23 - 15^h 30, 20^h 05 - \odot^0 123^h 45 -$
12	—	(0.9)	0.3	$- \odot^1 - \odot^0 1^h 28^h - 9^h 30, 9^h 40 - 10^h 15, 11^h 25 - 12^h 05, 13^h 37 - 13^h 40, 13^h 47 - 14^h 50, 15^h 20 - 16^h 30, 18^h 55 - .$
13	3.90	(3.3)	1.3	$0^1 p. - \odot^0 - 3^h 09, 3^h 28 - 5^h 10, 5^h 55 - 6^h 35, 10^h 49 - 10^h 56.$
14	7.12	4.1	1.2	$\Delta^1, 0^2 a, 0^1 p.$
15	7.81	(3.7)	1.3	$\Delta^0 a. \odot^0 23^h 12 - .$
16	—	(0.0)	1.0	$- \odot^0 - \odot^0 12^h 15 - \odot^0 2^h 27 \dots 6^h 23 - \odot^0 17^h 26 - \odot^0 7^h 55 - 10^h 07, 10^h 50 - \odot^0 12^h 32 - \odot^0 14^h 50 - \odot^0 15^h 57 - **$
17	10.05	(5.9)	2.9	$\Delta^0, 0^0 a. 0^1, \Delta^0 p. - \odot^2 - \odot^0 10^h 00 - \odot^0 1^h 58 - 4^h 47. \nabla^0 4.2^h. ** - \odot^0 16^h 40 - , \nabla^0 z 17^h 33.$
18	10.27	4.3	1.7	$\Delta^0, 0^2 a. 0^2, \Delta^1 p. \odot^0 3^h 35 - 3^h 55.$
19	9.93	3.4	1.4	$\Delta^1, 0^2, \infty^0 a. 0^2, \infty^0, \nabla^0 p.$
20	0.40	(0.6)	0.5	$\Delta^1 a. \odot^0 16^h 00 \dots 16^h 02, 17^h 50 \dots 17^h 52, 20^h 30 \dots 22^h 20.$
21	—	(1.4)	0.4	$\odot^0 1^h 45 - 3^h 00. \equiv^0 3^h 40 - \equiv^0 4^h 40 - \equiv^0 7^h 10. \odot^0 7^h 20 - \odot^0 18^h 14 - \odot^0 8^h 50 - 10^h 06, 15^h 58 \dots \equiv^0 17^h 02 - 18^h 50.$
22	9.82	(3.9)	1.8	$\Delta^1, 0^0 a, p. \equiv^0 4^h 30 - \equiv^0 5^h 50 - \equiv^0 5^h 58 - \equiv^0 6^h 45 - 8^h 10.$
23	—	(1.5)	0.7	$\odot^0 9^h 24 - 9^h 50 \dots 10^h 10 - 11^h 10, 14^h 20 - 15^h 55, 16^h 20 \dots 16^h 30 - 17^h 10, 19^h 05 - 19^h 20, 20^h 10 - 22^h 40. \odot^0 19^h 53^m 19^s$
24	9.85	4.0	2.0	$\nabla^0, 0^2 a, 0^2, \Delta^0 p.$
25	10.75	3.7	1.4	$\Delta^1, 0^2 a, p.$
26	3.61	(2.7)	1.0	$\Delta^1, \nabla^0 a. \odot^0 16^h 55 - \odot^0 17^h 02 - \odot^0 17^h 20 -$
27	9.24	(4.5)	2.0	$0^1 a, p. - \odot^0 - 0^h 20, 16^h 45 - 16^h 55, 17^h 05 - 17^h 10, 17^h 20 - 17^h 35, 17^h 43 - 18^h 20, 18^h 36 - 19^h 30. \nabla^0 15.5^h - 15.7^h.$
28	9.17	3.4	1.5	$0^1, \nabla^0 a. 0^2 p. \odot^0 1^h 47 - 1^h 50, 2^h 45 - \odot^0 12^h 55 - \odot^0 3^h 10 - 3^h 20, 3^h 35 - 3^h 45, 5^h 10 - 5^h 30, 5^h 53 - 5^h 57.$
29	1.10	2.1	0.9	$0^1 \Delta^0 a, 0^1 p. \equiv^0 25^h 45 - \equiv^0 5^h 57 - \equiv^0 6^h 07 - \equiv^0 6^h 42 - \equiv^0 7^h 30 - 7^h 50.$
30	6.85	2.1	0.8	$\Delta^1, 0^0, \infty^0 a. 0^1, \infty^0, \Delta^0 p.$
Mean	5.31	3.4	1.2	

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

OCTOBER, 1948.



Day	AIR PRESSURE (700mm+)*						AIR TEMPERATURE °C								TENSION OF THE VAPOUR mm										
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	Max.	Min.	Mean	Range	2	6	10	14	18	22	Mean
1	61.0	61.5	61.8	60.2	60.3	61.6	61.1	11.0	10.6	15.8	20.8	15.9	12.2	14.4	21.6	10.4	16.0	11.2	9.5	9.1	10.0	10.4	10.5	10.0	9.9
2	61.4	61.9	62.2	60.7	61.6	62.5	61.7	10.0	9.3	17.2	21.9	15.2	11.2	14.1	22.1	9.2	15.7	12.9	9.0	8.5	9.5	10.3	10.4	9.4	9.5
3	62.1	62.8	62.5	61.5	61.7	61.5	62.0	8.6	9.2	15.3	18.1	16.2	15.2	13.8	18.6	7.9	13.3	10.7	8.2	8.5	10.0	10.1	10.5	10.8	9.7
4	60.1	59.8	59.3	56.6	55.3	54.3	57.6	14.4	13.6	14.3	15.3	16.1	17.2	15.2	17.4	13.4	15.4	4.0	11.4	11.3	11.7	12.4	13.4	14.4	12.4
5	52.3	52.7	52.4	51.2	50.8	50.9	51.7	17.4	17.7	18.8	19.3	18.0	17.0	18.0	19.8	16.4	18.1	3.4	14.8	14.9	15.8	16.3	14.6	14.0	15.1
6	50.6	51.1	51.7	52.1	52.6	53.7	52.0	16.5	14.2	14.0	14.1	12.8	12.4	14.0	16.8	11.3	14.1	5.5	13.4	11.6	10.7	10.8	10.4	10.3	11.2
7	53.5	53.8	54.3	53.6	55.1	56.5	54.5	10.4	10.6	14.0	18.1	14.8	10.2	13.0	19.3	10.3	14.8	9.0	8.9	9.4	10.0	9.9	9.7	8.9	9.5
8	57.2	58.9	59.9	59.0	60.4	61.9	59.6	8.3	8.2	15.4	18.8	13.7	13.3	13.0	20.2	7.7	14.0	12.5	8.0	8.1	8.8	9.0	10.3	10.6	9.1
9	62.0	63.2	63.9	62.0	63.2	63.6	63.0	12.6	9.9	16.2	19.3	15.5	14.5	14.7	20.4	9.6	15.0	10.8	10.0	8.8	9.7	9.7	10.2	11.2	9.9
10	62.9	62.8	62.5	60.9	61.1	60.4	61.8	13.4	11.8	16.5	17.0	14.0	12.9	14.3	17.8	10.9	14.4	6.9	10.8	10.0	10.5	9.5	10.4	10.3	10.3
11	58.3	58.2	57.4	54.7	55.2	55.9	56.6	9.9	10.9	17.4	20.8	17.5	13.9	15.1	22.5	9.9	16.2	12.6	8.9	9.3	10.5	10.6	10.8	10.5	10.1
12	56.2	57.4	58.0	56.5	57.4	58.0	57.3	10.2	8.9	18.3	21.7	17.4	13.8	15.1	22.7	8.4	15.6	14.3	9.0	8.4	10.6	11.2	11.8	11.0	10.3
13	57.2	57.8	57.9	56.4	56.5	57.1	57.2	11.9	9.2	17.1	23.3	17.4	17.0	16.0	24.0	8.7	16.4	15.3	9.9	8.4	11.4	10.9	11.1	12.7	10.7
14	56.5	57.6	58.2	58.5	60.4	61.5	58.8	16.2	14.6	17.4	15.3	14.4	11.6	14.9	18.3	10.9	14.6	7.4	11.6	10.7	9.2	10.3	9.8	9.7	10.2
15	62.4	64.3	64.5	62.8	63.5	63.5	63.5	9.3	6.4	13.5	18.9	14.5	13.3	12.7	19.2	6.3	12.8	12.9	8.3	7.1	8.0	9.8	9.8	10.3	8.9
16	61.7	61.1	60.4	58.6	59.2	59.8	60.1	12.5	12.5	15.4	20.9	15.4	10.6	14.6	22.4	9.3	15.9	13.1	10.2	10.3	10.0	10.4	9.0	8.8	9.8
17	59.4	59.1	58.3	54.8	52.9	51.4	56.0	8.7	9.7	13.4	18.4	16.9	16.6	14.0	18.8	8.1	13.5	10.7	8.2	8.6	9.4	12.2	12.5	8.9	10.0
18	51.3	54.7	57.1	58.1	59.4	60.3	56.8	12.3	10.3	11.5	11.0	9.6	10.8	10.9	16.7	8.3	12.5	8.4	8.1	6.1	5.2	5.1	5.1	5.6	5.9
19	61.1	63.0	63.5	62.7	63.4	64.2	63.0	10.4	9.0	16.4	17.9	10.8	6.7	11.9	18.3	5.5	11.9	12.8	6.0	6.5	7.5	7.6	7.9	7.0	7.1
20	64.1	63.5	62.9	60.5	60.9	60.7	62.1	4.1	3.9	10.8	17.8	13.7	11.2	10.3	19.4	3.8	11.6	15.6	6.0	5.9	8.0	9.5	9.7	9.5	8.1
21	60.1	60.1	60.1	59.0	59.7	60.0	59.8	10.2	8.4	16.9	21.2	17.9	13.0	14.6	23.6	8.2	15.9	15.4	9.0	8.2	11.1	10.5	12.4	10.7	10.3
22	59.0	58.9	58.3	56.9	58.2	58.1	58.2	10.9	10.6	16.5	18.5	15.3	13.8	14.3	20.1	10.3	15.2	9.8	9.4	9.4	11.8	12.3	10.9	10.5	10.7
23	58.0	59.7	59.8	59.3	61.2	61.9	60.0	14.1	9.8	16.1	17.4	11.0	8.0	12.7	17.7	6.3	12.0	11.4	8.4	8.0	7.8	6.6	7.4	6.8	7.5
24	63.1	64.5	65.4	63.9	65.0	64.9	64.5	5.6	3.3	11.4	16.5	10.3	10.3	9.6	16.7	3.2	10.0	13.5	5.9	5.4	5.9	6.0	6.9	7.2	6.2
25	62.8	61.9	60.0	55.7	53.7	52.5	57.8	10.5	10.5	11.0	12.4	13.8	14.7	12.2	14.7	10.1	12.4	4.6	7.5	7.8	9.0	10.4	11.3	12.0	9.7
26	52.2	54.5	56.3	55.9	58.0	58.5	55.9	13.9	12.6	15.9	15.6	11.4	10.0	13.2	16.9	9.3	13.1	7.6	11.4	8.4	6.4	6.2	5.2	5.4	7.2
27	59.1	60.4	61.0	61.2	62.5	62.9	61.2	9.5	9.2	11.6	10.1	8.6	3.7	8.8	13.8	3.6	8.7	10.2	5.5	5.6	6.1	6.1	5.8	5.4	5.8
28	63.3	63.8	64.0	62.5	63.9	64.2	63.6	4.0	4.3	11.7	11.8	8.7	8.8	8.2	13.9	3.0	8.5	10.9	5.7	5.9	5.7	6.3	5.1	5.1	5.6
29	64.9	64.6	64.4	62.9	63.5	62.7	63.8	6.7	5.3	8.6	11.8	8.8	7.8	8.2	12.2	4.4	8.3	7.8	5.0	4.9	5.3	5.4	6.9	7.4	5.8
30	61.5	60.4	59.2	56.5	55.7	55.1	58.1	7																	

OCTOBER, 1948.



Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	—	—	—	10 sc	10 sc	10 ck,es,sk	2 sk,ke	5 c,ck,sk	9 sk	7.7	—	—	—	—	—	—	—
2	—	—	—	—	—	—	10 sk	10 cs,ck	4 sk,ke,c	6 ck,sk,cs	7 cs,ck,k	3 cs,sk	6.7	—	—	—	—	—	—	—
3	—	—	—	—	—	—	7 es,sk	10 ≡,es	10 sc,sk	10 sc,sk	10 sc	10 sc	9.5	—	—	—	—	—	—	—
4	—	—	—	—	—	—	10 n	10 n	10 n	10 n	10 n	10 n	10.0	1.5	7.5	8.6	9.2	13.7	3.1	43.6
5	—	—	—	—	—	—	10 n	10 n	10 n	10 n	10 n	10 n	10.0	4.6	16.2	2.0	11.9	3.6	5.3	43.6
6	—	—	—	—	—	—	10 n	10 n	10 sc,n	10 n	10 n	10 n	10.0	11.8	11.3	10.2	2.0	3.7	4.9	43.9
7	—	—	—	—	—	—	10 n	10 n,sc	9 kc,sk	8 kc,sk	1 sk	0 sk	6.3	7.7	2.0	0.2	—	—	—	9.9
8	—	—	—	—	—	—	1 sk	10 ≡	1 sk	3 k	10 sk,es	10 sk	5.8	—	—	—	—	—	—	—
9	—	—	—	—	—	—	10 sk	10 cs,sk	1 k,sk	6 sk,ke,k	9 sk	10 sc	7.7	—	—	—	—	—	—	—
10	—	—	—	—	—	—	7 sk	10 sk,ck	10 sk	10 sc,sk	10 sc,sk	10 sc	9.5	—	—	0.0	—	—	—	0.0
11	—	s7	—	—	w9	6 ≡	10 sk	2 k	4 cs,sk	8 n,sk	5 sk	5 sk	5.8	—	—	—	—	0.0	0.0	0.0
12	—	—	—	—	s8	0 cs	10 ≡	0 k	0 k	0 —	3 sk	2.2	—	—	—	—	—	—	—	—
13	—	—	—	—	—	0 ke	10 ≡	1 c,sk	10 cs,k	1 kc	10 sc	5.3	—	—	—	—	—	—	—	—
14	—	—	—	—	—	10 s	10 sc	10 sc,es,sk	10 n,sk	10 sc	10 sc,ke	10.0	—	0.2	—	0.2	0.1	—	0.5	—
15	—	—	—	—	—	4 kc,sk	10 ≡	1 c,k	2 k,sk	10 sk	10 sk,s	6.2	—	—	—	—	—	0.2	0.2	0.2
16	—	—	—	—	—	10 sk,s	10 sk,n	10 kc,k	4 kc,k	0 kc	7 kc	6.8	—	0.1	0.0	—	—	0.3	0.1	0.1
17	—	s8	—	—	—	2 ck,sk	10 s	10 sc,sk	10 sk	10 n	10 sk	8.7	—	—	—	—	0.3	2.8	3.1	—
18	—	w8	w8	w8	w8	10 n,sk	5 sk	10 s,sk,k	10 sk,k	6 k	8 k	8.2	0.1	0.1	0.1	—	—	—	—	0.3
19	w8	w8	w9	—	—	0 k	3 k,sk	4 k	2 k	0 k	0 —	1.5	—	—	—	—	—	—	—	—
20	—	—	—	—	—	10 ≡	10 ≡	10 s,es	10 cs,ck	10 sk,cs	10 es,sk	10.0	—	—	—	—	—	—	—	—
21	—	—	w8	—	—	1 kc	10 ≡	8 sk	10 sk,k	1 k	10 cs,sk	6.7	—	—	—	—	—	—	—	0.3
22	—	—	w8	—	—	10 sc	10 ≡,cs,ck	10 sk,s	10 sk,ke	1 sk	10 n	8.5	—	—	—	0.0	—	0.3	0.3	1.9
23	—	—	—	—	—	2 sk	2 kc,sk	3 sk,c	4 kc,sk	6 sk	8 sk	4.2	1.9	—	—	—	—	—	—	—
24	—	—	—	—	—	8 cs,sk	10 cs,sk	0 c	0 c,k	10 cs	10 sc	6.3	—	—	—	—	—	—	—	15.6
25	—	s5	—	—	—	10 sc	10 sc	10 n	10 n	10 n	10 n	10.0	—	—	1.6	6.5	4.0	3.5	—	0.8
26	—	—	w8	—	—	10 sk	4 sk,ke	3 sk,ke	5 sk,ke,c	6 sk	8 sk,cs	6.0	0.8	—	—	—	—	—	—	—
27	w8	w8	w8	—	—	10 sk	10 sk	10 sk,k	10 sk,k	0 k	2 k	7.0	—	—	—	—	—	—	—	0.0
28	w8	—	w8	—	—	5 sk	8 k	10 sk,cs	10 sk,cs	8 sk	9 sk	8.3	—	—	—	—	—	—	—	1.4
29	—	—	—	—	—	10 sk	7 kc,ck,k	10 kc,ek,sk	10 kc,ck,sk	10 sc	10 n	9.5	0.0	—	—	—	—	—	—	6.9
30	—	—	—	—	—	10 n	10 n	10 n,sc	10 sc,s	6 kc	10 ≡	9.3	1.1	3.1	2.6	0.1	—	—	—	1.7
31	—	—	—	—	—	10 ≡	10 n	4 sk,s	3 sk	0 sk	1 sk	4.7	—	0.2	1.5	—	—	—	—	—
							7.2	9.0	6.8	7.1	6.3	7.8	7.4	29.5	40.7	26.8	29.9	25.4	21.5	173.8

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm Open Air in the Shelter	REMARKS																		
1	5.34	2.6	1.0	0°,∞°,△°a. 0°,γ°,△°p.																	
2	8.62	3.0	1.1	△°, 0°a,p.	*—	—	0°13°40—	0°121°10—	0°21°24—	0°122°30—	0°22°40—	0°123°30—	0°23°40—								
3	1.51	(2.3)	1.0	0°p.≡34°10—=25°40—=16°20—=07°00—7°20.																	
4	—	(2.9)	0.2	0°0°10—	0°14°33—	0°08°55—	0°19°30—	0°10°28—	0°15°30—	0°15°45—	0°16°10—	0°17°20—	0°123°13—	0°23°26—							
5	—	(0.4)	0.3	—	0°—	0°12°30—	0°05°00—	0°16°35—	0°06°41—	7°40,8°13—9°45...10°20—	0°11°05—	0°12°22—	0°12°55—*								
6	0.13	(0.6)	0.3	—	0°—	0°11°50—	0°02°20—	0°12°35—	0°02°45—	0°14°15—	0°04°45—	0°16°09—	0°08°05—	0°18°50—	0°09°30—**						
7	3.53	2.3	0.8	0°,△°p.—	0°—	7°24.0°7°15°03°.				</											

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

NOVEMBER, 1948.



Day	AIR PRESSURE (700mm+)*							AIR TEMPERATURE °C								TENSION OF THE VAPOUR mm									
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	Max.	Min.	Mean	Range	2	6	10	14	18	22	Mean
1	61.8	63.0	64.3	63.6	64.9	66.1	64.0	4.3	3.8	10.1	13.0	7.7	2.2	6.9	13.0	0.9	7.0	12.1	5.4	5.7	5.9	6.2	6.1	5.0	5.7
2	66.8	66.8	67.3	64.7	64.3	64.1	65.7	-0.1	-0.6	7.1	14.3	8.8	6.5	6.0	14.5	-0.9	6.8	15.4	4.4	4.4	6.0	6.7	7.4	6.9	6.0
3	63.0	63.0	62.7	59.8	57.8	56.3	60.4	5.4	4.9	8.0	12.8	12.2	11.9	9.2	13.6	4.8	9.2	8.8	6.6	6.5	7.5	10.1	10.0	10.2	8.5
4	52.3	51.6	54.7	57.0	61.0	63.7	56.7	12.2	12.2	13.8	15.4	10.8	9.9	12.4	16.5	6.8	11.7	9.7	10.4	9.9	8.1	6.2	5.6	5.4	7.6
5	65.2	67.1	68.6	66.7	67.3	66.3	66.9	4.2	2.5	8.0	14.5	10.5	7.1	7.8	15.4	1.5	8.5	13.9	5.5	5.2	5.7	7.4	6.8	7.0	6.3
6	64.1	62.2	60.5	53.4	52.2	52.5	57.5	7.7	8.0	8.6	10.8	11.4	10.2	9.5	12.4	7.0	9.7	5.4	7.1	7.4	8.1	9.4	9.9	9.3	8.5
7	51.5	53.4	55.7	55.8	58.9	61.8	56.2	10.0	12.2	13.4	12.5	8.3	6.3	10.5	14.4	5.7	10.1	8.7	9.0	7.2	6.6	6.3	5.3	4.6	6.5
8	60.9	62.1	63.3	62.9	64.4	64.6	63.0	5.9	6.5	8.6	8.0	4.1	1.5	5.8	9.5	0.9	5.2	8.6	4.4	4.3	3.9	4.1	4.7	4.8	4.4
9	64.5	65.5	65.8	64.0	63.2	62.2	64.2	2.5	2.5	5.7	6.9	3.1	0.9	3.6	7.6	1.0	4.3	6.6	5.3	3.7	3.6	3.7	4.1	4.8	4.2
10	61.9	60.9	60.3	57.9	57.4	57.2	59.3	1.3	1.9	7.1	7.2	3.4	3.3	4.0	8.5	1.4	5.0	7.1	4.6	3.9	4.5	4.9	4.6	4.6	4.5
11	57.1	57.8	58.9	58.1	60.2	61.0	58.9	4.5	5.3	6.8	7.6	5.6	3.1	5.5	7.7	1.8	4.8	5.9	4.9	4.6	5.0	4.7	5.0	5.2	4.9
12	61.7	63.3	63.8	62.9	63.7	64.1	63.3	3.9	0.9	9.1	10.8	3.5	-0.1	4.7	11.1	-1.2	5.0	12.3	4.9	4.5	4.7	4.5	5.2	4.2	4.7
13	63.5	63.3	63.2	61.8	62.8	62.6	62.9	-1.8	-0.3	6.6	10.4	5.7	2.9	3.9	12.1	-1.8	5.2	13.9	3.9	4.4	6.2	5.4	5.5	5.1	5.1
14	61.9	61.0	61.3	59.1	60.7	61.7	61.0	1.7	-0.2	7.1	12.3	8.0	4.7	5.6	12.8	-0.3	6.3	13.1	5.0	4.4	6.3	7.2	6.8	5.3	5.8
15	62.5	63.2	65.3	65.2	65.9	67.0	64.9	2.0	5.7	7.1	9.4	3.3	-1.1	4.4	10.3	-1.5	4.4	11.8	4.9	4.8	5.4	4.0	3.9	3.6	4.4
16	65.9	64.1	63.0	59.4	57.1	53.6	60.5	-1.3	-0.5	2.5	4.1	4.1	4.8	2.3	5.2	-1.5	1.9	6.7	3.9	3.9	4.2	5.6	6.0	6.3	5.0
17	52.1	52.6	58.5	60.9	63.9	66.9	59.2	5.0	6.7	10.7	11.4	7.6	5.8	7.9	12.5	0.0	7.3	12.5	6.5	7.2	5.1	5.2	4.5	4.7	5.5
18	67.5	68.2	68.7	65.8	65.7	64.9	66.8	-0.9	1.1	8.3	13.1	7.3	3.5	5.4	13.5	-1.0	6.3	14.5	4.1	4.4	5.4	5.3	6.2	5.4	5.1
19	63.7	61.4	59.8	56.9	54.4	52.6	58.1	4.1	4.2	5.5	6.1	6.9	7.5	5.7	7.8	3.1	5.5	4.7	5.9	5.6	6.0	6.9	7.3	7.6	6.6
20	52.6	54.4	55.6	54.9	57.4	58.5	55.6	8.0	8.6	13.4	17.6	10.6	5.0	10.5	18.5	2.9	10.7	15.6	8.0	8.1	9.2	8.8	7.6	6.3	8.0
21	59.4	61.0	62.0	61.2	62.9	63.7	61.7	2.9	5.3	12.7	14.6	7.8	2.9	7.7	14.8	2.0	8.4	12.8	5.5	6.0	6.8	5.8	5.6	5.2	5.8
22	63.9	65.0	66.2	65.3	66.8	66.8	65.7	2.5	2.1	12.1	13.0	9.2	4.7	7.3	13.4	1.6	7.5	11.8	5.0	5.1	5.9	6.0	5.8	5.6	5.6
23	66.9	67.6	68.1	66.5	67.3	66.5	67.2	3.3	1.1	8.8	14.6	8.5	4.9	6.9	15.2	1.2	8.2	14.0	5.6	4.7	5.8	5.5	6.1	6.0	5.6
24	65.0	63.4	61.7	57.9	56.0	52.9	59.5	4.5	5.8	7.3	11.9	10.4	10.6	8.4	12.1	2.5	7.3	9.6	6.1	6.5	6.9	8.5	8.7	9.2	7.7
25	49.2	48.9	49.4	51.1	54.6	55.6	51.5	10.6	10.5	14.0	11.0	5.3	2.5	9.0	15.6	1.8	8.7	13.8	9.2	9.3	8.8	6.5	4.1	5.1	7.2
26	54.9	57.4	57.8	57.8	59.8	60.8	58.1	3.1	2.5	6.8	6.1	3.0	2.9	4.1	7.2	1.4	4.3	5.8	4.2	4.5	5.1	4.1	3.7	3.3	4.2
27	61.0	61.6	62.5	61.5	60.8	59.4	61.1	2.9	2.7	4.7	4.7	0.7	0.0	2.6	5.4	-0.5	2.5	5.9	3.1	3.6	3.0	3.0	3.6	4.5	3.5
28	57.1	55.6	57.9	57.4	59.1	59.6	57.8	-0.9	-0.5	0.7	-0.4	-2.4	-2.2	-0.9	3.3	-3.7	-0.2	7.0	4.2	4.2	3.8	4.4	3.8	3.8	4.0
29	60.2	60.0	60.9	59.8	60.3	60.0	60.2	-2.6	-3.6	-0.3	0.7	-0.5	-0.9	-1.2	0.7	-5.6	-2.4	6.3	2.8	2.9	3.5	3.8	4.4	4.3	3.6
30	59.5	59.8	61.5	63.0	65.4	66.8	62.7	-0.6	-0.9	-0.3	-0.2	-0.2	0.4	-0.3	0.5	-1.2	-0.3	1.7	4.4	4.3	4.1	2.8	3.0	3.2	3.6

Mean	60.6	60.8	61.6	60.4	61.2	61.3	61.0	3



NOVEMBER, 1948.

Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	w9	w7	w8	—	—	10 sk	10 sk	10 sk	5 k	4 sk	4 sk,cs	7.2	—	—	—	—	—	—	—
2	—	—	—	—	—	—	5 sk,≡	10 ≡	10 sc,sk	10 cs,ck	1 sk	10 cs,kc	7.7	—	—	—	—	—	—	—
3	—	—	—	—	—	—	10 sc	10 cs,≡	10 n	10 s,sc	10 n	10 n	10.0	—	—	0.8	0.1	0.0	4.6	5.5
4	—	—	w8	—	—	—	10 n	10 sc,n,sk	9 sk	0 k	2 cs	8 cs	6.5	8.0	4.1	0.2	—	—	—	12.3
5	—	—	s7	s8	—	—	10 cs,sk	8 kc,c,sk	3 k	10 sk,k,cs	0 ck	10 sc	6.8	—	—	—	—	—	—	—
6	—	—	—	—	—	—	10 sc	10 sc,s	10 n	10 n	9 s,sk	10 sk,s	9.8	—	—	8.8	6.9	11.7	—	27.4
7	—	w9	w8	—	—	—	10 sk	10 sk,sc,s	6 sk,k	6 sk,k	6 sk	7 sk	7.5	—	—	—	—	—	—	—
8	—	w9	—	w8	—	—	5 sk	8 sk,cs	1 k	2 k	7 k	3 n	4.3	—	—	—	—	—	0.0	0.0
9	—	—	—	—	—	—	4 n	2 k	1 sk,k	1 sk,k	1 s	10 n	3.2	0.3	0.0	—	—	—	1.1	1.4
10	—	—	w7	—	—	—	8 sk,s	2 sk	5 sk	5 sk,ke,s	7 sk	9 sk,s	6.0	1.0	—	—	—	—	—	1.0
11	—	w7	w8	w8	w8	—	7 n	10 sk	10 sk	10 sk,k	6 k,sk	2 k	7.5	0.1	0.4	—	—	—	—	0.5
12	—	—	—	—	—	—	4 k	0 k	1 sk,k	1 k	1 sk	0 sk	1.2	—	—	—	—	—	—	—
13	—	—	w7	—	—	—	0 sk	10 n	10 sk	10 sk	7 sk,cs	8 sk,cs	7.5	—	0.0	0.8	0.1	—	—	0.9
14	—	—	w9	w8	—	—	6 sk,cs	3 sk	10 s,sk,k	9 sk,k	0 k	1 k	4.8	—	—	0.0	0.1	—	—	0.1
15	—	—	w8	NW8	—	—	7 k	8 sk	10 sk	2 sk	0 —	4 ck	5.2	—	—	—	—	—	—	—
16	—	—	—	—	—	—	10 kc	10 sc	10 sc	10 n	10 n	10 n	10.0	—	—	—	0.9	11.6	5.4	17.9
17	—	—	—	—	—	—	9 sk	10 sk,ck,cs	1 k	0 k	0 —	0 k	3.3	0.1	—	—	—	—	—	0.1
18	—	—	—	—	—	—	0 —	0 ck	1 c	10 c,cs	10 sc	10 sc,cs	5.2	—	—	—	—	—	—	—
19	s8	—	—	—	—	—	10 sk	10 s	10 n	10 n	10 n	10 n	10.0	—	—	0.4	10.7	15.4	5.2	31.7
20	—	—	—	—	—	—	10 s,sk	10 sk	0 k,ck	0 k,ck	0 —	0 —	3.3	0.4	—	—	—	—	—	0.4
21	—	—	—	—	—	—	0 —	0 k	0 sk	0 k	0 —	0 k	0.0	—	—	—	—	—	—	—
22	—	—	—	w8	—	—	0 sk	0 sk	1 sk	2 kc,sk	8 kc,cs,sk	8 kc,cs,sk	3.2	—	—	—	—	—	—	—
23	—	—	—	—	—	—	10 kc,ck,sk	8 kc,ck,cs	0 —	10 cs,c	10 cs,c	3 cs	6.8	—	—	—	—	—	—	—
24	—	s8	—	—	—	—	10 sc	10 s,sk	10 s	10 sc,s	10 s	10 n	10.0	—	—	—	—	—	2.5	2.5
25	—	w8	w8	—	—	—	10 sk,s	10 sk	10 sk	6 sk,s,cs	10 sk,s,cs	10 n	9.3	0.4	0.1	—	—	0.1	1.1	1.7
26	—	w8	—	w9	—	—	4 sk,cs	8 n,sk	10 n	4 sk,k,s	1 k	8 sk	5.8	1.0	0.1	0.0	0.0	—	—	1.1
27	—	—	w8	—	—	—	8 sk	10 sk,n	9 cs,sk	10 cs,sk	10 sk	10 n	9.5	—	—	—	—	—	0.4	0.4
28	—	—	—	—	—	—	10 s	10 n	10 n	10 n	10 n	10 n	10.0	1.8	0.1	0.7	0.1	3.3	0.0	6.0
29	—	—	—	—	—	—	10 cs,sk	10 n	9 n	10 n	10 n	10 n	9.8	0.1	0.0	0.4	0.8	0.9	1.0	3.2
30	—	—	—	w8	—	—	10 n	10 n	10 n	5 sk	10 sk,s	10 s	9.2	4.4	3.5	6.3	0.8	—	—	15.0

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS
		Open Air	in the Shelter	
1	6.54	1.7	0.9	$\gamma^0, 0^1 a. 0^2, \Delta^1 p.$
2	5.50	(1.6)	0.8	$\square^1, \text{H}^0 a. 0^2, \sim^0 p. = 1^h 55 - 4^h 20 = 26^h 10 - 6^h 45 = 47^h 10 - 27^h 30 - 7^h 40.$
3	—	(0.9)	0.5	$= 15^h 43 - \odot^0 7^h 12 - 10^h 45 \dots 12^h 10, 17^h 57 - \odot^1 19^h 38 - \odot^0 19^h 55 - \odot^1 20^h 43 - \odot^0 20^h 57 - \odot^1 21^h 33 - \odot^0 23^h 40 - .$
4	5.27	2.9	2.1	$0^1, \sim^0 a. 0^2 p. - \odot^0 - \odot^1 0^h 27 - \odot^0 1^h 00 - 8^h 05.$
5	7.42	(1.7)	0.8	$\text{H}^0, \square^0, \gamma^0, \sim^0 a. \sim^0 p.$
6	—	(1.2)	0.8	$\Delta^0 a. \odot^0 6^h 25 - 12^h 50, 13^h 54 - \odot^1 14^h 35 - \odot^0 16^h 13 - 17^h 30.$
7	6.54	3.5	2.2	$0^1 a. 0^2 p.$
8	8.75	(2.5)	1.5	$\gamma^0, 0^2 a. 0^2, \text{H}^0, \square^0 p. \odot^0 21^h 36 - 22^h 12 \dots$
9	8.92	(1.7)	1.0	$0^0 a. \dots \odot^0 \dots 2^h 30, 18^h 07 - \odot^0 *^0 19^h 18 - *^0 21^h 30 - , \odot^1 19^h 11^m 42^s.$
10	8.36	(1.7)	0.9	$\text{H}^0, 0^0 a. 0^0, \sim^0 p. - *^0 - 0^h 32.$
11	—	1.2	0.8	$0^0 a. p. \odot^0 1^h 30 \dots 2^h 30 - 2^h 50 \dots 3^h 30.$
12	7.82	(2.1)	1.0	$\text{H}^0, \square^0 a. 0^0, \square^0, \text{H}^0 p.$
13	4.20	(1.7)	0.6	$\text{H}^0, \square^1 a. 0^1 p. \odot^0 5^h 58 - 6^h 57, 10^h 10 \dots 10^h 45. \odot^1 12^h 00^m 26^s$
14	3.77	(1.5)	1.1	$\square^0, \text{H}^0, \sim^0, \sim^0 a. 0^0, \square^0 p. \odot^0 9^h 18 \dots 10^h 27. \odot^1 15^h 16^m 06^s$
15	5.32	2.4	1.0	$\square^0, \text{H}^0, 0^0, \sim^0 a. 0^2, \text{H}^0, \square^0 p.$
16	—	(1.8)	0.7	$\text{H}^0, \square^0 a. \odot^0 11^h 23 - \odot^1 15^h 30 - \odot^0 16^h 05 - 22^h 30.$
17	8.18	2.8	1.8	$0^0, \sim^0 a. p. \not\gamma 7.3^h - 7.8^h, 8.0^h - 8.3^h.$
18	8.05	(1.5)	0.7	$\square^1, \text{H}^1, \sim^0, 0^2 a. 0^2 p.$
19	—	(1.4)	0.1	$\odot^0 9^h 30 - \odot^1 13^h 35 - \odot^0 13^h 50 - \odot^1 15^h 30 - \odot^0 17^h 15 - 23^h 55.$
20	7.74	2.0	0.8	$0^0 a. 0^0 \square^0 p.$
21	8.93	2.4	1.5	$\square^0, 0^0, \sim^0 a. 0^2 p.$
22	8.72	2.0	1.2	$\Delta^1, \sim^0 a. \sim^0, \sim^0 p.$
23	8.52	1.4	0.7	$\text{H}^0, \Delta^0, \sim^0 a. \sim^0, \Delta^0 p.$
24	0.10	(0.7)	0.4	$\Delta^0 a. \sim^0 p. \odot^0 18^h 03 - 23^h 30.$
25	5.04	(2.0)	1.3	$\sim^0 p. \odot^0 3^h 20 - 3^h 46, 17^h 10 - 17^h 30, 19^h 45 - , \not\gamma 14.0^h, 18.5^h - 18.7^h, 19.7^h - 19.8^h.$
26	8.13	2.4	1.7	$- \odot^0 - 1^h 30, 5^h 10 \dots 6^h 15, 7^h 10 \dots \odot^0 *^0 7^h 30 \dots \odot^0 7^h 40 \dots 7^h 45, *^0 9^h 33 \dots \odot^0 9^h 45 \dots 11^h 50. \not\gamma 3.5^h, 4.2^h - 4.5^h, 10.8^h, *$
27	5.95	(1.3)	0.8	$0^2 a. p. \Delta^0 5^h 10 - 7^h 20. *^0 20^h 32 \dots \Delta^0 20^h 54 - *^0 21^h 57 - , \not\gamma 22^h 36 - . * [15.0^h - 15.2^h, 16.3^h].$
28	2.41	(1.1)	0.7	$\text{H}^0, 0^0 a. \text{H}^1 p. - *^0 - 1^h 10, 5^h 58 - *^0 19^h 35 \dots 10^h 15, 13^h 15 \dots 14^h 05 - *^0 15^h 30 - *^0 16^h 40 - 17^h 05, 17^h 45 - 18^h 25. **$
29	—	(0.0)	0.2	$\text{H}^1 a. \text{H}^0 p. *^0 5^h 05 - *^0 12^h 25 - , - \not\gamma - . ** [*^0 21^h 05 \dots 21^h 25 - 21^h 50 \dots 23^h 30. - \not\gamma - 11^h 30. \not\gamma, \not\gamma 14^h 20 - .$
30	1.95	(1.5)	1.2	$\text{H}^0 a. p. - *^1 - *^0 11^h 25 - 11^h 43, *^0 13^h 49 - 13^h 54. - \not\gamma - .$
Lean	5.07	2.2	1.0	

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

DECEMBER, 1948.



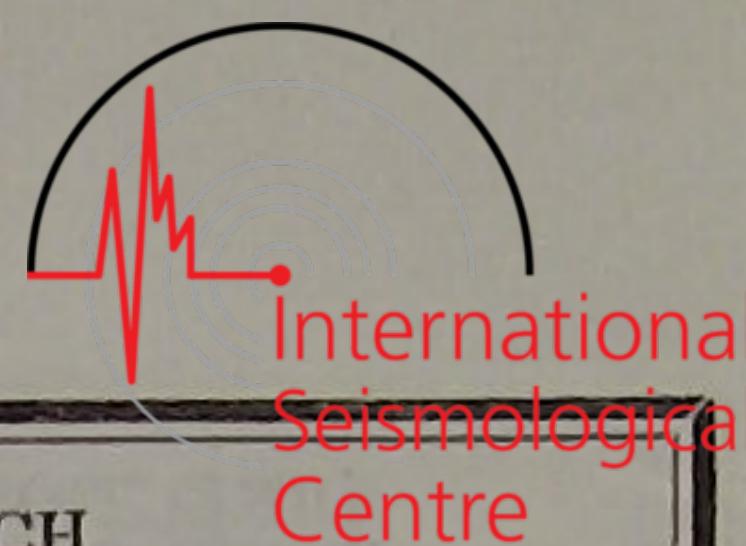
Day	AIR PRESSURE (700mm+)*						AIR TEMPERATURE °C								TENSION OF THE VAPOUR mm										
	2	6	10	14	18	22	Mean	2	6	10	14	18	22	Mean	Max.	Min.	Mean	Range	2	6	10	14	18	22	Mean
1	66.8	67.0	67.5	65.0	64.3	62.0	65.4	-0.3	-4.1	-0.7	2.1	-1.5	-4.5	-1.5	3.2	-7.9	-2.3	11.1	3.3	2.7	3.1	3.7	3.8	3.3	3.3
2	59.3	56.0	54.6	53.6	55.1	55.3	55.7	-3.8	-2.2	1.7	4.2	5.1	4.2	1.5	6.4	-4.7	0.9	11.1	3.5	3.8	3.1	4.9	3.8	4.0	3.9
3	54.7	54.7	54.9	53.9	55.6	57.2	55.2	5.1	1.8	4.5	4.3	3.9	3.7	3.9	6.3	1.9	4.1	4.4	3.9	4.9	4.4	4.4	3.5	3.4	4.1
4	57.7	58.8	60.3	59.9	60.7	60.4	59.6	3.5	3.5	5.5	6.8	3.9	3.5	4.5	7.2	2.6	4.9	4.6	3.7	3.7	4.1	4.4	4.4	4.5	4.1
5	60.1	59.8	60.0	58.8	59.0	58.5	59.4	4.5	2.7	4.5	5.7	2.1	0.7	3.4	6.2	0.4	3.3	5.8	4.4	4.9	5.6	6.3	5.1	4.7	5.2
6	57.8	57.5	57.1	55.2	55.0	55.0	56.3	1.5	2.3	4.6	7.1	6.0	4.3	4.3	8.3	0.9	4.6	7.4	5.1	5.4	6.1	6.7	5.0	4.0	5.4
7	53.4	54.1	55.1	54.3	56.9	59.1	55.5	1.9	1.9	2.4	-0.8	-2.6	-2.6	0.0	4.6	-2.9	0.9	7.5	4.6	3.9	3.6	3.6	3.0	2.8	3.6
8	61.4	62.6	62.8	61.9	61.8	62.7	62.2	-1.5	-0.7	2.0	3.0	2.2	2.8	1.3	3.3	-3.1	0.1	6.4	2.7	3.2	3.2	3.2	3.4	3.3	3.2
9	62.3	61.2	61.1	57.6	56.3	53.5	58.7	2.4	1.5	5.9	10.4	5.3	5.6	5.2	11.1	1.2	6.2	9.9	3.8	4.3	4.7	5.7	5.0	5.1	4.8
10	52.2	52.7	54.8	55.2	57.7	59.3	55.3	5.1	4.5	6.6	7.5	3.5	1.7	4.8	8.1	1.0	4.6	7.1	6.0	5.3	5.3	4.1	3.8	4.0	4.8
11	60.6	61.2	62.2	60.1	60.8	60.6	60.9	0.5	-2.1	4.3	8.8	2.3	-1.9	2.0	9.1	-2.9	3.1	12.0	3.8	3.6	4.4	4.3	4.4	3.8	4.1
12	59.2	58.3	58.8	57.6	58.4	58.9	58.5	-3.2	-3.4	-0.5	2.3	-0.4	-0.1	-0.9	4.6	-3.7	0.5	8.3	3.3	3.5	4.0	4.9	4.2	4.4	4.1
13	57.8	57.3	56.4	55.4	56.9	57.9	57.0	-0.8	0.3	2.9	10.0	7.7	4.7	4.1	10.4	-1.0	4.7	11.4	4.3	4.5	5.3	6.5	5.4	4.7	5.1
14	58.7	59.2	59.4	56.1	54.4	51.0	56.5	4.9	3.5	9.1	13.1	8.6	6.5	7.6	13.1	2.0	7.6	11.1	5.4	5.3	5.8	5.7	6.1	7.2	5.9
15	46.4	43.5	44.0	43.8	50.3	53.0	46.8	5.8	4.7	5.3	3.7	4.2	3.1	4.5	6.1	2.3	4.2	3.8	6.9	6.4	6.2	5.6	5.5	4.9	5.9
16	55.1	56.5	59.1	60.9	62.8	64.7	59.9	2.8	0.2	1.1	3.5	0.5	0.2	1.4	4.4	-0.8	1.8	5.2	4.7	4.0	3.1	3.2	3.5	3.9	3.7
17	65.9	66.5	67.6	66.5	67.1	66.5	66.7	-0.4	-0.2	0.7	5.5	1.3	1.3	1.4	6.0	-0.7	2.7	6.7	3.9	3.5	3.9	4.3	4.4	4.5	4.1
18	65.1	64.2	63.2	61.1	61.6	61.6	62.8	3.2	2.4	9.7	14.2	11.9	9.4	8.5	15.0	2.1	8.6	12.9	4.4	4.1	5.0	6.0	6.7	6.8	5.5
19	61.7	61.8	62.5	61.1	62.1	62.9	62.0	8.3	5.9	6.7	6.1	5.3	3.9	6.0	8.6	3.0	5.8	5.6	6.7	5.8	5.6	6.1	5.4	5.1	5.8
20	64.1	65.5	67.4	66.0	66.9	66.6	66.1	2.5	1.9	6.1	7.8	1.8	3.0	3.9	8.3	1.5	4.9	6.8	3.9	3.8	4.4	4.1	4.3	4.7	4.2
21	65.3	62.9	60.4	54.7	51.7	51.6	57.8	3.5	4.7	4.9	5.8	8.8	9.2	6.2	11.7	3.0	7.4	8.7	5.2	6.4	6.4	6.9	8.1	8.3	6.9
22	53.9	56.0	60.4	61.8	64.9	66.5	60.6	9.5	6.6	4.5	3.1	-0.2	-1.1	3.7	11.6	-1.1	5.3	12.7	6.1	5.0	4.2	3.5	2.9	2.8	4.1
23	67.2	68.3	70.1	70.4	71.2	71.8	69.8	-1.3	-1.2	-0.1	0.1	-2.5	-5.2	-1.7	1.6	-6.3	-2.3	7.9	2.6	2.4	2.6	2.7	2.6	2.6	2.6
24	70.8	70.1	70.2	67.1	67.2	66.7	68.7	-6.6	-8.3	-4.0	1.9	-2.3	-2.9	-3.7	2.3	-8.8	-3.2	11.1	2.6	2.4	2.6	3.1	3.4	3.5	2.9
25	66.0	64.6	64.8	63.0	62.8	62.3	63.9	-2.5	-1.7	-0.3	0.9	0.5	0.7	-0.4	1.2	-3.4	-1.1	4.6	3.5	3.3	3.6	4.6	4.5	4.6	4.0
26	61.1	59.5	59.0	55.6	56.1	56.2	57.9	1.1	1.0	1.9	3.9	2.9	3.7	2.4	4.4	0.8	2.6	3.6	4.7	4.8	5.2	6.0	5.6	5.8	5.4
27	56.8	56.3	56.1	54.0	54.4	54.3	55.3	2.3	3.6	4.7	6.5	5.0	4.1	4.4	6.6	2.4	4.5	4.2	5.4	5.9	6.4	7.1	6.3	5.8	6.2
28	53.9	54.2	54.1	52.4	55.8	57.6	54.7	4.0	3.3	5.3	7.6	4.5	2.2	4.5	8.8	1.2	5.0	7.6	6.0	5.7	6.5	5.0	4.7	4.7	5.4
29	57.7	58.4	60.0	60.0	61.7	63.1	60.2	1.1	0.8	1.9	0.9	-0.1	-0.5	0.7	2.0	-0.7	0.7	2.7	3.9	3.6	3.5	3.3	2.8	3.1	3.4
30	63.9	64.4	65.2	63.9	65.4	66.0	64.8	-0.6	-1.1	1.7	1.7	1.0	-0.1	0.4	3.0	-1.5	0.8	4.5	3.0	2.8	3.1	3.8	3.6	3.2	3.3
31	66.1	67.5	69.0	66.0	65.9	64.5	66.5	-0.9	-1.0	2.5	5.1	1.1	1.9	1.5	5.4	-1.9	1.8	7.3	3.3	3.6	3.5	3.5	3.7		

DECEMBER, 1948.



Day	DIRECTION AND SPEED OF CLOUDS ×						AMOUNT (0-10) AND FORMS OF CLOUDS						PRECIPITATION mm							
	2	6	10	14	18	22	2	6	10	14	18	22	Mean	22-2	2-6	6-10	10-14	14-18	18-22	Total
1	—	—	—	—	w9	—	—	10 sk	3 sk	10 cs, kc, sk	10 sc, sk	10 sc	10 sc	8.8	—	—	—	—	—	0.5
2	—	—	—	w9	—	—	10 s	10 sc	10 sc, es	10 n, sk	9 sk, s	1 sk	8.3	—	—	—	0.5	—	—	1.4
3	—	—	—	—	—	—	10 s	10 sk, n	10 sk	9 n, sk	9 sk	10 sk	9.7	—	1.0	0.3	0.1	—	—	—
4	—	—	w8	w8	—	—	10 sk	10 sk	10 sk	6 sk	4 sk	8 sk	8.0	—	—	—	—	—	—	—
5	—	—	w7	—	—	—	10 sk	10 sk, sk	10 n	10 sk, n	0 c	10 ≡	8.3	—	—	0.2	0.5	—	—	0.7
6	—	—	w7	w7	—	10 n	10 ≡	10 ≡	10 sk	9 sk	1 sk	8.3	0.2	0.4	—	—	—	—	—	0.6
7	—	—	—	—	—	10 n	4 sk	5 sk, n	10 n	10 n	4 sk, s	7.2	0.1	0.6	0.1	0.2	0.2	0.1	—	1.3
8	—	—	w8	w9	w8	—	0	8 n, sk	6 s, k	9 n, sk, k	9 sk	10 sk	7.0	—	0.0	—	0.0	—	—	0.0
9	—	—	w7	—	—	10 sk	10 sk	8 sk	2 sk, kc	5 ke	10 n	7.5	—	—	—	—	—	—	0.2	0.2
10	—	—	—	—	—	10 s, sk	4 sk	10 sc, sk, kc	1 sk	0	—	4.2	0.5	—	—	—	—	—	—	0.5
11	—	—	—	—	—	0	0	1 sk	0 sk	1 sk	0	—	0.3	—	—	—	—	—	—	—
12	—	—	—	—	—	2 cs	10 cs, sk	10 sk	10 n, sk	0	10 sk	7.0	—	—	—	—	0.3	—	—	0.3
13	—	—	w8	w8	—	10 sk	10 sk	10 sk, s	10 sk	9 sk	1 sk	8.3	—	—	0.3	0.0	—	—	—	0.3
14	—	w8	w7	—	—	10 sk	7 sk	8 k, sk	3 kc, sk, c	10 sc	10 n	8.0	—	—	—	—	7.4	7.4	—	23.8
15	—	—	—	—	—	10 n	10 n	10 sk, s	10 n	10 s	1 sk	8.5	6.5	3.5	3.8	4.8	5.2	—	—	—
16	—	—	w8	—	—	10 n	10 n	6 n, sk, k	3 sk, k	1 sk, kc	10 sk	6.7	0.4	0.2	0.0	0.0	—	—	—	0.6
17	—	—	w8	w8	—	10 sk	10 sk	10 sk	6 sk, k	7 sk	10 sk	8.8	—	—	—	—	—	—	—	—
18	—	—	—	—	—	10 sk	5 sk	2 k, c	7 c, k	10 n	10 sk, k	7.3	—	—	—	—	0.0	0.3	0.3	—
19	—	—	—	—	w8	10 sk	10 c, ck, k	10 sc	10 sc, s	10 sk, s	9 sk	9.8	0.0	—	—	1.4	—	—	1.4	—
20	w9	—	w2	—	—	8 sk	1 sk	3 k, c	8 c, k	5 cs	10 sc	5.8	—	—	—	—	—	—	—	—
21	—	—	—	—	—	10 sc	10 n, sc	10 n	10 n	10 n, s	10 sk, s	10.0	—	0.6	6.1	2.1	3.3	2.9	5.0	
22	w9	w8	w8	w8	—	7 sk	9 sk	10 n, sk	8 sk	10 sk	10 sk, n	9.0	0.2	—	0.0	0.0	—	—	—	0.2
23	—	—	w8	—	—	8 sk	10 sk	8 sk, s	1 sk, k	0	—	4.5	—	—	0.1	—	—	—	—	0.1
24	—	—	—	—	—	0	0	1 cs	10 cs	10 cs, kc	10 cs, sk	5.2	—	—	—	—	—	—	—	—
25	—	—	—	—	—	10 sc	10 sc, sk	10 s	10 n, ≡	10 n, ≡	10 n, ≡	10.0	—	—	0.0	0.2	0.7	1.5	2.4	
26	—	—	—	—	—	10 n, ≡	10 n, ≡	10 n, ≡	10 ≡	10 ≡	8 ≡	9.7	8.7	5.1	4.9	0.6	—	—	19.3	
27	—	—	—	—	—	10 ≡	10 ≡, sc	10 n	10 n	10 n	10 s	10.0	—	—	0.5	8.8	5.6	0.3	15.2	
28	—	—	—	—	—	10 s	10 s	8 ck, sk, s	10 sk, sc	7 sk	4 sk	8.2	—	0.3	0.1	—	0.7	—	1.1	
29	—	w7	—	—	—	2 cs	3 sk	10 sk	10 n, sk	3 sk	10 n	6.3	—	—	—	0.0	0.0	0.0	—	0.0
30	—	w7	—	—	—	3 sk	3 sk, k	2 sk	10 n, sk	10 sk	1 sk	4.8	0.0	—	—	0.0	0.0	—	0.0	
31	—	—	—	—	—	8 sk	9 sk	6 c, sk	10 c, k	10 cs, sk	10 sc, s	8.8	—	—	—	—	—	—	—	—
						8.0	7.6	7.9	7.8	7.0	7.0	7.6	16.6	11.7	16.4	19.2	16.0	12.7	92.6	

Day	Duration of Sunshine (in hours)	Amount of Evaporation mm		REMARKS																	
		Open Air	in the Shelter																		
1	5.15	1.5	1.0	■ ¹ , 0°a.∞°, ■ ⁰ p.—■—																	
2	1.56	(1.2)	1.3	■ ¹ a. 0°p.● ⁰ 11°55—12°25.																	
3	1.35	(2.1)	1.8	0°a. 0°p.● ⁰ 3°20—8°34, 13°30—14°30. ↗ 13.3°.																	
4	4.30	(1.4)	1.2	0°a. 0°p.																	
5	0.26	(0.5)	0.1	□ ⁰ , ■ ⁰ p.● ⁰ 6°10—13°40, = ¹ 19°25—= ² 21°30—23°30.																	
6	0.62	(1.3)	0.8	∞°p.● ⁰ 0°40—2°50, = ⁴ 4°00—= ² 8°17—10°40.																	
7	5.11	(2.1)	1.1	■ ¹ a. ■ ¹ p.● ⁰ 1°53—3°10. △ ⁰ 6°16—6°22. ↗ ⁰ 8°55—9°15. * ⁰ 10°30... ↗ ⁰ 11°10—↗ ⁰ 11°20—* ⁰ 11°30—* ⁰ 14°10—*																	
8	6.35	2.3	1.5	■ ⁰ a. 0°, ■ ⁰ a. * ⁰ 5°50—																	

AIR PRESSURE (Mean sea level) 700 mm + 1948.

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	60.4	58.8	57.2	55.6	56.4	56.7	57.5	70.9	70.6	70.4	67.5	66.2	63.4	68.2	59.1	60.2	60.0	58.3	59.8	60.8	59.7
2	55.1	55.6	57.1	58.9	61.0	61.8	58.3	58.1	53.6	51.7	49.9	51.5	53.6	53.1	60.2	60.8	61.1	60.3	61.6	62.4	61.1
3	62.1	62.1	63.6	63.4	65.8	67.4	64.1	55.2	58.1	61.2	60.7	62.1	62.6	60.0	62.2	62.4	62.7	61.7	62.1	62.3	62.2
4	67.7	68.1	69.2	67.5	68.3	68.3	68.2	62.9	63.0	64.5	63.9	65.9	66.1	64.4	62.2	62.4	62.9	59.6	59.0	57.9	60.7
5	67.4	67.0	66.8	63.2	62.8	60.7	64.7	65.9	65.6	66.6	65.7	66.7	66.8	66.2	56.4	56.9	60.4	61.9	63.8	64.9	60.7
6	55.9	50.7	50.7	51.0	51.0	51.4	51.8	66.2	65.8	67.0	65.1	65.3	65.4	65.8	64.5	63.9	63.0	59.9	58.5	55.0	60.8
7	51.8	52.9	53.8	53.2	55.5	57.0	54.0	64.9	65.5	66.3	64.6	64.8	64.7	65.1	50.5	49.3	47.8	47.8	49.9	52.9	49.7
8	59.4	60.9	63.3	63.8	65.9	66.1	63.2	63.2	63.1	63.5	62.1	62.9	62.9	63.0	53.5	55.1	57.9	57.9	59.7	60.7	57.5
9	66.0	66.0	66.5	64.9	64.9	65.0	65.6	62.4	63.0	63.4	62.3	63.4	63.8	63.1	61.2	62.2	63.4	62.9	64.7	64.3	63.1
10	64.4	64.1	63.6	59.5	57.4	54.9	60.7	63.9	64.2	64.9	64.9	65.0	64.8	64.6	63.6	64.7	65.2	64.1	65.5	66.7	65.0
11	55.2	54.1	57.1	55.9	58.0	59.0	56.6	64.0	64.0	63.6	60.8	61.5	62.1	62.7	67.3	67.9	68.2	66.7	67.9	70.2	68.0
12	60.9	61.3	63.0	63.5	65.1	65.5	63.2	62.5	64.4	65.7	64.8	66.3	65.6	64.9	70.1	70.3	70.0	67.8	67.1	65.0	68.4
13	66.2	66.1	66.6	64.4	64.9	64.1	65.4	65.0	65.0	64.5	62.9	63.6	63.4	64.1	61.1	59.7	57.8	56.0	57.7	58.6	58.5
14	63.0	61.6	58.6	50.8	43.7	45.4	53.9	63.1	63.7	63.7	62.0	62.5	64.1	63.2	58.5	59.3	60.4	60.2	62.3	64.5	60.9
15	46.1	48.0	47.1	45.5	46.9	48.0	46.9	65.1	66.8	68.0	67.2	68.8	67.0	67.2	65.9	68.1	69.3	67.9	68.8	69.8	68.3
16	47.7	48.3	47.7	47.0	48.4	49.5	48.1	65.3	64.3	61.4	57.4	58.5	59.1	61.0	69.8	70.6	70.0	67.2	67.6	67.9	68.9
17	50.7	52.8	55.0	56.2	59.1	62.2	56.0	58.4	59.9	59.9	59.4	61.9	61.9	60.2	67.5	68.3	68.8	67.3	68.6	70.1	68.4
18	64.2	66.4	68.2	67.7	70.2	71.0	68.0	62.0	64.0	65.2	64.8	66.8	67.6	65.1	70.1	71.0	71.0	69.4	71.7	73.3	71.1
19	70.9	71.5	72.2	70.3	71.0	71.3	71.2	68.0	67.6	67.4	66.3	66.9	67.6	67.3	73.6	75.0	74.6	72.1	73.8	74.7	74.0
20	70.3	70.7	70.8	69.3	69.4	69.1	69.9	67.3	67.6	68.5	67.5	68.3	68.6	68.0	72.0	70.3	69.2	66.0	64.5	63.4	67.6
21	68.3	66.7	66.4	66.4	69.0	70.5	67.9	66.8	64.9	63.6	60.5	60.3	59.9	62.7	62.4	62.8	63.4	63.7	65.4	66.7	64.1
22	70.6	71.3	70.9	68.4	69.7	70.6	70.3	57.9	57.5	57.9	57.0	58.7	58.9	58.0	67.0	68.3	68.0	66.2	66.6	67.4	67.3
23	70.5	71.7	71.2	68.2	68.1	67.2	69.5	56.4	56.3	57.8	57.4	59.3	60.6	58.0	66.7	66.5	65.8	63.4	63.0	63.3	64.8
24	65.2	61.1	59.3	56.0	57.3	58.8	59.6	59.9	59.6	60.0	59.2	59.6	59.8	59.7	62.9	64.3	65.9	66.5	67.7	68.9	66.0
25	60.0	61.3	63.1	62.0	62.1	63.4	62.0	60.4	61.2	61.8	60.4	61.3	61.8	61.2	68.6	69.1	69.6	67.8	67.9	68.2	68.5
26	61.4	61.1	60.7	57.0	56.5	55.4	58.7	60.5	59.2	53.9	53.3	55.9	60.1	57.2	67.2	66.7	66.2	65.3	66.8	67.2	66.6
27	56.4	58.7	62.6	63.4	66.1	67.0	62.4	64.0	66.3	67.4	68.3	69.4	69.0	67.4	67.5	68.2	67.9	66.1	66.6	65.6	67.0
28	65.8	64.2	63.7	61.8	65.5	65.7	64.5	68.3	68.5	68.1	65.4	64.7	64.5	66.6	63.1	63.4	63.8	63.4	64.6	66.0	64.1
29	65.9	65.9	66.4	66.1	68.0	68.2	66.8	62.5	61.3	60.2	57.6	58.6	59.2	59.9	65.7	67.0	67.4	66.6	67.7	69.0	67.2
30	68.7	70.0	70.8	68.3	67.4	65.6	68.5								69.0	70.2	69.9	69.0	70.0	71.0	69.9
31	64.5	65.5	68.4	69.1	71.2	71.5	68.4								70.2	70.4	70.0	68.0	68.3	68.8	69.3
Mean	62.0	62.1	62.6	61.2	62.1	62.5	62.1	63.1	63.3	63.4	62.0	63.0	63.3	63.0	64.5	65.0	65.2	63.9	64.8	65.4	64.8
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	68.3	69.3	68.5	66.2	65.8	66.6	67.5	66.4	67.6	67.7	65.2	66.0	66.6	66.6	62.6	6					



AIR PRESSURE (Mean sea level) 700 mm+ 1948.

Centre

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	54.8	55.8	55.6	54.6	55.0	54.6	55.1	60.2	61.6	61.7	60.3	60.3	61.8	61.0	61.5	62.6	61.9	61.1	61.5	62.1	61.8
2	54.1	53.8	55.4	54.5	55.5	56.5	55.0	61.4	61.9	61.6	60.8	60.5	61.6	61.3	62.2	62.0	61.5	59.8	59.8	59.9	60.9
3	56.4	57.8	57.8	58.0	57.6	58.4	57.7	61.1	61.1	60.1	59.2	58.9	59.4	60.0	58.7	58.0	57.9	56.8	56.1	57.6	57.5
4	57.9	58.8	59.2	58.3	59.6	60.7	59.1	58.1	58.1	58.1	55.8	55.6	56.3	57.0	57.1	58.0	59.6	58.7	59.3	60.9	58.9
5	59.9	60.7	61.0	59.5	58.8	59.1	59.8	55.7	55.6	54.7	53.7	54.3	54.8	54.8	60.0	60.4	59.7	57.3	59.3	60.0	59.5
6	58.5	60.0	59.9	58.4	59.1	60.1	59.3	54.9	55.0	55.2	55.1	55.4	56.3	55.3	59.4	60.3	61.5	59.7	60.1	60.1	60.2
7	59.1	58.9	58.3	57.6	57.1	57.3	58.1	55.2	56.3	56.0	54.6	52.9	56.4	55.2	60.5	61.9	62.3	62.4	62.6	63.6	62.2
8	56.6	56.5	56.0	55.9	56.4	57.0	56.4	57.7	59.6	59.8	59.3	60.3	61.7	59.7	63.6	64.3	63.7	62.7	62.9	62.4	63.3
9	56.3	57.2	57.0	56.6	56.4	57.1	56.8	62.2	63.0	63.1	62.4	62.9	63.1	62.8	59.7	57.9	56.8	55.5	56.7	58.6	57.5
10	56.6	57.3	57.6	56.8	57.0	58.8	57.4	62.7	63.0	62.7	61.8	61.8	62.5	62.4	58.4	60.0	60.5	59.2	59.8	61.6	59.9
11	58.1	58.9	57.9	57.8	58.3	58.6	58.3	61.1	61.4	62.0	59.5	60.3	61.7	61.0	61.1	61.9	62.2	61.1	61.0	60.6	61.3
12	57.6	58.1	57.6	57.1	57.3	57.3	57.5	60.0	60.6	60.5	58.8	58.6	57.8	59.4	58.3	57.2	56.3	53.9	53.1	54.1	55.5
13	56.6	56.9	55.7	54.9	55.4	55.9	55.9	56.3	56.2	55.0	53.5	54.7	55.5	55.2	54.4	55.6	55.6	54.6	55.9	57.2	55.6
14	54.3	54.6	54.5	54.0	54.7	55.7	54.6	54.2	55.0	55.3	54.6	55.1	56.2	55.1	57.9	59.7	60.4	59.8	60.8	62.4	60.2
15	55.2	56.2	56.5	55.0	55.8	56.8	55.9	55.3	56.1	56.0	55.4	55.9	56.8	55.9	61.4	61.6	60.4	58.2	58.0	57.6	59.5
16	55.9	56.6	56.7	56.5	57.0	58.1	56.8	56.7	57.7	57.3	56.2	56.7	58.1	57.1	56.1	55.0	54.1	51.2	48.3	45.4	51.7
17	57.5	58.1	57.9	56.4	57.1	58.1	57.5	57.8	59.1	59.0	58.1	58.3	59.9	58.7	42.3	47.2	51.4	54.7	57.7	59.6	52.2
18	57.2	57.3	57.5	56.2	56.7	57.8	57.1	59.9	60.1	59.7	58.7	58.8	58.7	59.3	60.7	63.3	65.5	66.0	68.2	70.6	65.7
19	57.8	57.9	58.1	57.7	57.5	59.1	58.0	57.3	57.1	56.6	55.5	57.2	58.7	57.1	70.5	71.3	70.1	67.1	66.9	66.8	68.8
20	58.2	58.9	59.8	59.6	60.3	61.2	59.7	58.9	59.5	59.9	58.9	59.3	59.9	59.4	65.2	64.8	64.0	62.5	61.7	61.4	63.3
21	61.3	61.8	61.9	61.1	61.6	61.9	61.6	59.2	60.2	58.8	57.9	57.6	58.6	58.7	60.0	59.4	59.2	58.4	59.5	59.8	59.4
22	61.0	60.9	60.0	58.3	58.5	59.0	59.6	57.8	57.1	56.6	55.0	54.6	55.6	56.1	59.7	61.5	62.1	60.8	61.8	63.1	61.5
23	58.1	58.8	58.8	58.7	58.1	59.7	58.7	54.4	55.2	54.5	53.6	54.3	55.1	54.5	62.7	62.4	61.9	62.6	60.3	60.1	61.7
24	59.3	60.0	59.6	58.4	58.6	59.8	59.3	55.4	56.7	57.0	56.2	58.0	60.7	57.3	60.1	61.1	61.6	61.8	63.8	64.8	62.2
25	59.2	59.2	57.7	56.3	56.2	56.6	57.5	61.5	62.8	63.6	61.2	62.8	63.4	62.6	65.0	66.5	65.2	64.0	64.4	64.9	65.0
26	55.5	55.8	56.1	55.0	55.6	56.7	55.8	63.4	63.7	63.2	62.3	61.8	61.8	62.7	63.8	63.0	61.0	57.8	57.2	56.4	59.9
27	56.9	58.1	57.5	56.8	57.7	59.3	57.7	60.3	59.4	58.1	55.8	55.7	56.5	57.6	54.2	55.3	55.7	55.2	57.3	59.3	56.2
28	59.0	60.3	60.4	59.8	60.2	61.0	60.1	55.8	55.4	54.6	53.0	53.5	54.9	54.5	60.8	63.3	63.6	64.1	65.5	66.8	64.0
29	61.2	62.1	61.8	62.2	62.1	62.4	62.0	53.9	55.5	56.3	56.8	58.7	60.1	56.9	67.3	68.0	68.0	65.8	65.8	66.1	66.8
30	62.1	62.8	61.9	60.5	61.1	60.8	61.5	59.8	60.9	60.6	59.3	59.4	60.4	60.1	65.6	65.9	65.7	64.2	65.8	67.0	65.7
31	59.9	60.7	60.2	59.6	59.9	61.0	60.2	59.7	60.6	60.7	59.2	59.9	61.3	60.2							
Mean	57.8	58.4	58.3	57.5	57.8	58.6	58.1	58.3	58.9	58.7	57.5	57.9	58.9	58.4	60.3	61.0	61.0	59.9	60.4	61.0	60.6

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	66.4	66.9	67.0	65.4	65.6	67.0	66.4	67.3	68.6	69.7	68.9	70.4	71.7	69.4	72.5	72.8	73.2	70.6	70.0	67.8	71.2
2	66.8	67.3	67.5	65.8	66.9	67.9	67.0	72.5	72.5	72.8	70.0	69.7	69.6	71.2	65.0	61.6	60.2	59.1	60.5	60.7	61.2
3	67.5	68.3	67.8	66.7	67.0	66.8	67.4	68.6	68.5	68.2	65.2	63.2	61.6	65.9	60.2	60.2	60.4	59.3	61.1	62.7	60.7
4	65.4	65.1	64.6	61.8	60.6	59.5	62.8	57.6	56.9	59.9	62.2	66.4	69.2	62.0	63.2	64.3	65.8	65.3	66.3	66.0	65.2
5	57.5	57.8	57.5	56.4	56.0	56.1	56.9	70.8	72.7	74.1	72.1	72.7	71.8	72.4	65.6	65.3	65.5	64.2	64.6	64.1	64.9
6	55.8	56.4	57.0	57.3	57.9	59.0	57.2	69.6	67.7	66.0	58.8										

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Month	AIR PRESSURE (700mm+)												TENSION OF THE VAPOUR mm								
	2	6	10	14	18	22	Mean	Max.	Date	Min.	Date	2	6	10	14	18	22	Mean			
January	56.4	56.4	57.1	55.7	56.6	56.9	56.5	66.6	19	37.9	14	3.4	3.4	3.5	3.7	3.7	3.5	3.5			
February	57.5	57.6	57.8	56.5	57.4	57.6	57.4	65.3	1	44.2	2	3.1	3.1	3.3	3.4	3.3	3.2	3.2			
March	58.9	59.4	59.7	58.4	59.3	59.8	59.3	69.7	19	42.0	7	3.9	3.8	4.0	4.1	4.1	4.0	4.0			
April	57.2	57.6	57.6	56.2	56.6	57.5	57.1	65.8	12	37.4	24	6.1	6.1	6.6	6.9	7.0	6.8	6.6			
May	55.4	56.1	55.7	54.7	55.0	55.8	55.5	64.0	16	46.4	19	8.8	8.6	9.1	9.0	9.3	9.3	9.0			
June	52.2	52.7	52.6	51.6	52.0	52.7	52.3	61.0	7	40.2	14	12.6	12.8	13.0	13.4	13.2	13.1	13.0			
July	52.7	53.3	53.2	52.5	52.7	53.5	53.0	57.8	30	48.5	2	17.9	18.0	18.4	18.9	18.8	18.2	18.4			
August	53.2	53.8	53.6	52.5	52.8	53.8	53.3	58.7	26	47.9	7	18.5	18.6	19.4	19.8	19.5	18.8	19.1			
September	55.0	55.7	55.8	54.8	55.3	55.8	55.4	65.8	19	36.8	17	13.7	13.4	14.3	14.8	14.7	14.3	14.2			
October	59.0	59.6	59.8	58.4	59.1	59.4	59.2	65.5	24	50.3	6	8.8	8.3	9.0	9.3	9.4	9.2	9.0			
November	60.6	60.8	61.6	60.4	61.2	61.3	61.0	68.8	18	48.3	25	5.5	5.4	5.7	5.8	5.7	5.6	5.6			
December	60.1	60.0	60.6	59.1	60.0	60.2	60.0	71.8	23	43.1	15	4.3	4.3	4.5	4.8	4.5	4.4	4.5			
Annual	56.5	56.9	57.1	55.9	56.5	57.0	56.7	71.8	XII23	36.8	IX17	8.9	8.8	9.2	9.5	9.4	9.2	9.2			
Month	AIR TEMPERATURE °C												RELATIVE HUMIDITY %								
	2	6	10	14	18	22	Mean	Max.	Min.	Range	Absolute	2	6	10	14	18	22	Mean			
January	-2.6	-2.6	0.5	2.2	-0.1	-1.6	-0.7	3.6	-4.7	8.3	10.1	22	-9.8	10	87	89	74	68	80	86	81
February	-2.6	-2.9	0.0	1.6	-0.8	-1.8	-1.1	2.8	-4.5	7.4	8.7	28	-9.0	1	82	83	71	68	75	80	76
March	-0.1	-0.9	4.2	6.5	3.3	1.1	2.4	7.6	-2.0	9.6	14.6	31	-6.8	11	85	86	65	57	70	80	74
April	5.3	4.9	13.3	16.0	11.9	8.0	9.9	16.9	2.7	14.2	23.8	9	-3.3	1	89	91	58	51	66	83	73
May	10.6	11.4	18.4	20.5	17.0	12.9	15.1	21.9	8.6	13.3	29.5	7	2.5	6	90	85	58	51	65	82	72
June	15.9	16.5	20.9	22.5	20.5	17.5	19.0	23.8	14.8	8.9	30.2	24	8.7	1	92	90	71	66	73	87	80
July	21.2	21.2	25.3	26.4	24.3	22.0	23.4	28.1	20.5	7.6	33.8	27	17.8	2	96	96	77	74	83	92	86
August	21.5	21.6	26.3	28.1	24.8	22.3	24.1	29.2	20.4	8.8	32.2	16	12.6	30	96	96	76	70	83	93	86
September	16.6	16.2	21.6	23.7	20.0	17.8	19.3	24.7	14.6	10.0	31.0	5	5.6	29	94	95	73	67	82	91	84
October	10.5	9.6	14.3	16.8	13.5	11.7	12.8	18.2	8.2	10.0	24.0	13	3.0	28	91	92	73	64	79	88	81
November	3.5	3.7	7.8	9.8	6.2	4.1	5.8	10.8	1.0	9.9	18.5	20	-5.6	29	91	88	71	63	79	89	80
December	1.7	1.0	3.4	5.3	2.9	2.0	2.7	6.7	-0.8	7.5	15.0	18	-8.8	24	82	85	76	71	78	82	79
Annual	8.5	8.3	13.0	15.0	12.0	9.7	11.1	16.2	6.6	9.6	33.8	VII27	-9.8	I10	90	90	70	64	76	86	79
Month	PRECIPITATION mm												CLOUD AMOUNT 0-10								
	2	6	10	14	18	22	Sum	Maximum				2	6	10	14	18	22	Mean			
January	5.3	7.5	11.6	15.9	19.2	17.6	77.1	38.4	14	15.4	14	6.4	7.8	7.8	8.2	7.5	6.7	7.4			
February	2.3	3.8	4.9	13.7	4.4	1.1	30.2	9.7	26	8.5	26	6.6	9.0	8.2	7.8	7.1	6.8	7.6			
March	5.8	7.4	3.5	11.5	13.6	8.7	50.5	21.0	20	9.1	20	6.8	6.7	6.6	6.4	6.5	6.4	6.6			
April	26.2	14.9	6.5	5.1	13.6	9.4	75.7	25.9	4	14.6	4	4.8	7.4	6.9	6.5	6.8	4.9	6.2			
May	18.6	6.1	9.5	8.5	135.7	45.0	223.4	123.6	28	111.5	28	6.7	7.1	7.1	7.3	7.3	6.8	7.1			
June	34.9	32.1	28.2	6.3	1.4	4.8	107.7	50.5	3	31.3	3	8.4	8.9	9.2	9.6	9.2	8.4	9.0			
July	8.0	8.0	11.3	19.1	28.7	6.9	82.0	22.9	13	12.6	13	9.3	9.8	8.9	8.8	8.6	7.8	8.8			
August	57.2	26.4	5.8	41.4	43.6	16.6	191.0	67.2	13	26.2	13	8.7	9.5	8.2	7.2	7.9	8.1	8.3			
September	49.6	46.9	16.9	14.2	143.6	115.2	386.4	246.9	16	123.7	16	7.0	7.7	7.9	8.1	7.9	7.7	7.7			
October	29.5	40.7	26.8	29.9	25.4	21.5	173.8	43.9	6	16.2	5	7.2	9.0	6.8	7.1	6.3	7.8	7.4			
November	17.6	8.3	18.4	20.5	43.0	21.3	129.1	31.7	19	15.4	19	7.2	7.6	6.6	6.3	5.7	6.8	6.7			
December	16.6	11.7	16.4	19.2	16.0	12.7	92.6	23.8	15	8.8	27	8.0	7.6	7.9	7.8	7.0	7.0	7.6			
Annual	271.6	213.8	159.8	205.3	488.2	280.8	1619.5	246.9	IX16	123.7	IX16	7.3	8.2	7.7	7.6	7.3	7.1	7.5			

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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	14.2 21	16.0 28	18.7 31	24.3 2	24.2 6	15.9 24	12.3 24, 27	13.4 31	16.0 25	15.6 20	15.6 20	12.9 18	24.3 IV 2
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VARIABILITY OF DAILY MEAN AIR TEMPERATURE, °C

Mean.	1.6	1.5	1.5	2.0	0.9	1.1	0.9	1.0	1.5	1.4	2.0	2.5	1.5
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FREQUENCY OF VARIATION

Rise	< 2°	11	14	9	11	11	12	15	10	9	7	10	6	125
	2° — 4°	4	2	5	5	1	2	2	2	4	2	2	2	38
	4° — 6°	—	1	—	1	1	1	—	—	—	1	2	1	8
	6° — 8°	1	—	—	—	—	—	—	—	—	—	1	1	2
	8° — 10°	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sum	16	17	14	17	13	15	17	12	13	10	14	15	173
Fall	< 2°	8	9	14	8	15	15	13	16	10	16	8	5	137
	2° — 4°	7	1	3	3	2	—	1	3	7	3	5	9	44
	4° — 6°	—	2	—	2	—	—	—	—	—	2	3	2	11
	6° — 8°	—	—	—	—	—	—	—	—	—	—	—	—	—
	8° — 10°	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sum	15	12	17	13	17	15	14	19	17	21	16	16	192
Stationary	—	—	—	—	1	—	—	—	—	—	—	—	—	1

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

Max. Date	7.9 14	5.3 14	8.2 13	11.6 27	15.6 18	18.2 14	22.6 29	24.0 18	22.5 16	16.3 5	10.4 4	8.3 21	24.0 VIII 18
Min. Date	2.0 29	2.0 23	2.2 25	3.3 11	5.2 12	7.7 1, 5	14.4 4	10.1 29	6.9 28	4.5 31	2.8 30	2.4 23, 24	I 29 II 23
Range	5.9	3.3	6.0	10.5	10.4	10.5	8.2	13.9	15.6	11.8	7.6	5.9	22.0

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

Min. Date	42 5	49 15	24 17	23 1, 6	23 15	27 8	52 25	43 24	40 22	41 16, 24	37 26	45 2	23 IV 1, 6 V 15
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NUMBER OF OBSERVATIONS WITH PRECIPITATION

IN LAST FOUR HOURS

22—2	9	4	6	6	9	8	3	9	10	8	11	7	90
2—6	11	7	6	6	6	4	7	8	9	9	6	8	87
6—10	13	10	5	4	5	4	7	5	7	8	8	10	86
10—14	8	8	5	4	4	6	10	8	8	6	9	10	86
14—18	9	11	5	5	5	4	11	8	7	6	6	7	84
18—22	8	4	3	7	6	5	9	6	10	8	8	7	81
Sum	58	44	30	32	35	31	47	44	51	45	48	49	514
<0.1 mm	19	35	16	4	9	6	11	7	7	6	9	16	145

AT EXACT TIME OF OBSERVATION

2	6	8	4	3	2	2	1	5	6	5	3	5	50
6	8	8	4	3	4	2	2	4	4	7	3	4	53
10	9	8	5	3	3	2	—	2	6	5	4	5	52
14	10	10	4	2	3	1	7	3	3	5	3	7	58
18	8	8	3	4	4	1	2	2	5	6	3	4	50
22	6	7	6	5	4	3	1	6	8	6	6	3	61
Sum	47	49	26	20	20	11	13	22	32	34	22	28	324

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

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

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

NUMBER OF OBSERVATIONS OF THE WIND FROM

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

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

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

1948.



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

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

NUMBER OF DAYS WITH PRECIPITATION (Separated by Amount)

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

EARTH TEMPERATURE °C

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

METEOROLOGICAL OBSERVATIONS AT MIZUSAWA.

1948.



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

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

1948.



NUMBER OF DAYS WITH

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

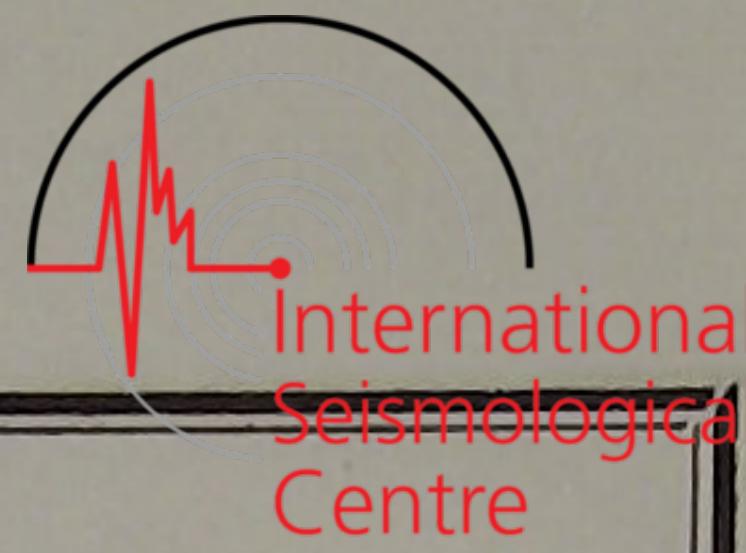
Note 1: In the 2nd Column, the number of days on which the amount is 0.1 mm or more are reckoned, but in the 3rd 4th 5th Columns, the amount is not considered.

Note 2: In the 7th Column, day with \equiv^o are not included.

GENERAL REMARKS.

	First Day (last year) 1947	Last Day (this year) 1948	First Day (this year) 1948
Min. Air Temp. below 0°:	Oct. 31	Apr. 29	Nov. 2
Mean Air Temp. below 0°:	Nov. 22	Mar. 26	Nov. 28
Max Air Temp. below 0°:	Dec. 11	Feb. 23	Mar. 1 (1949)
Max. Air Temp. above 25°:		Sep. 22	May 6
Mean Air Temp. above 25°:		Aug. 18	Jul. 25
Max. Air Temp. above 30°:		Sep. 5	Jul. 24
Hoar Frost:	Oct. 8	Apr. 29	Oct. 24
Snow:	Nov. 12	Mar. 27	Nov. 9
Snow on Ground:	Nov. 12	Mar. 27	Nov. 27
Max. Continuance of Days with Min Temp. below 0° is 52 Days:		from Dec. 2 to Jan. 22	
Max. Continuance of Days with Mean Temp. below 0° is 17 Days:		from Dec. 11 to Dec. 27	
Max. Continuance of Days with Max Temp. above 30° is 12 Days:		from Jul. 24 to Aug. 4	
Max. Continuance of Days with Precipitation is 9 Days:		from Jul. 8 to Jul. 16	
Max. Continuance of Days without Precipitation is 8 Days:		from Apr. 5 to Apr. 12	
Continuance of more than 5 Days with precipitation are			
8 Days: from Jan. 23 to Jan. 30	5 Days: from July 22 to Jul. 26		
8 " from Feb. 2 to Feb. 9	5 " from Aug. 12 to Aug. 16		
6 " from Apr. 19 to Apr. 24	5 " from Oct. 14 to Oct. 18		
6 " from Jun. 10 to Jun. 15	7 " from Nov. 24 to Nov. 30		
9 " from Jul. 8 to Jul. 16	5 " from Dec. 12 to Dec. 16		

1948.



FIVE-DAY MEANS

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

SEISMOLOGICAL OBSERVATIONS

Remarks:

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

Unfelt	0.
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.

SEISMOLOGICAL OBSERVATIONS AT MIZUSAWA.

EARTHQUAKES, 1948.



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

EARTHQUAKES, 1948.

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

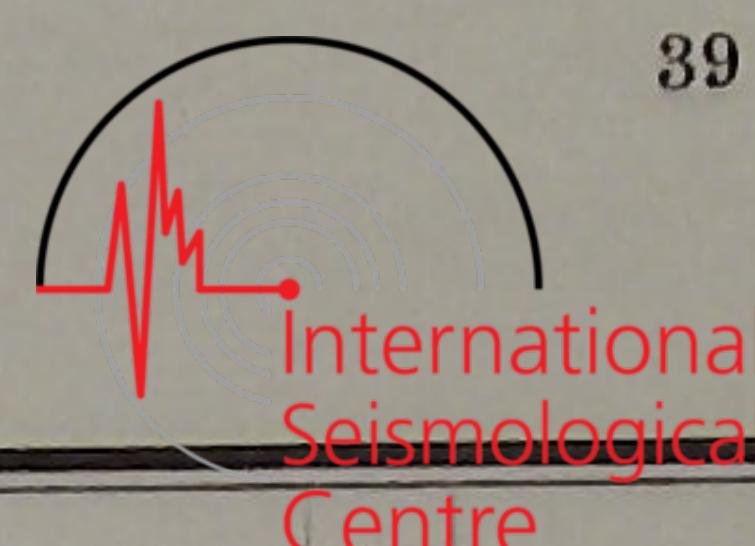
SEISMOLOGICAL OBSERVATIONS AT MIZUSAWA.

EARTHQUAKES, 1948.



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

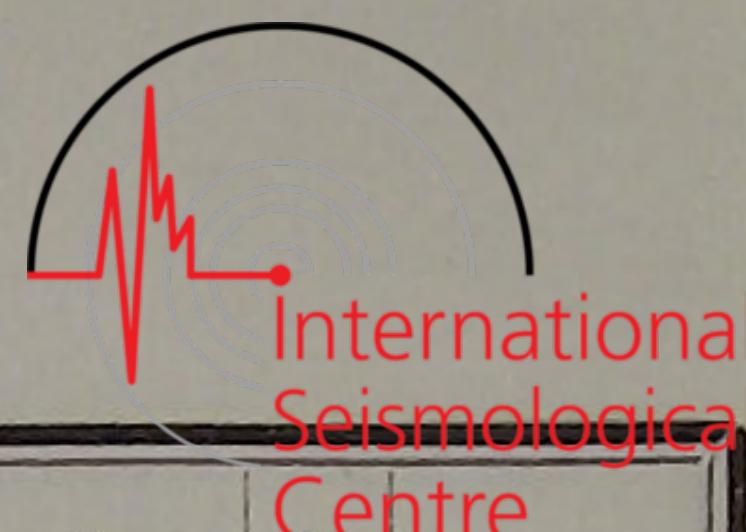
EARTHQUAKES, 1948.



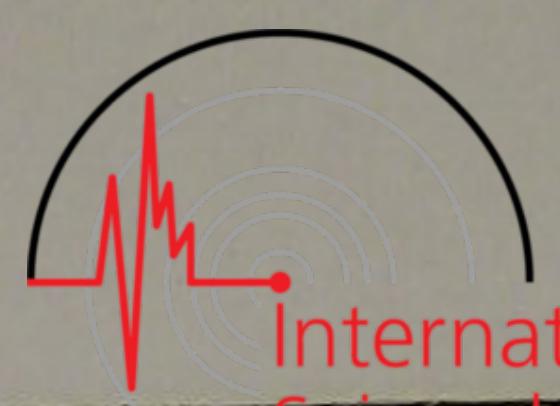
No.	Date 1948	P				S				L				Maximum Range of Motion			Duration of Total Earthquake	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S		
166	May 16	h 23	m 26	s 37		m —	s —	m 28	w 41	m —	s —	m —	s —	μ	μ	m —	s —	0	
167		2 6	17 07	e 17	10	—	—	27	01	27	02	—	—	+ 12	—	4 17	0	0	
168		7 47	44	—	—	—	—	17	54	17	54	—	—	+ 192	+ 210	15 04	0	0	
169		13 30	27	e 30	29	31	06	e 31	09	—	—	—	—	+ 20	- 25	2 44	0	0	
170		—	—	—	—	—	—	—	—	—	—	—	—	—	—	5 30	0	0	
171	17	15	09	16	—	—	e 42	05	—	—	—	—	—	—	—	—	—	0	
172	19	18	09	16	—	—	—	09	57	09	59	—	—	+ 15	+ 8	5 17	0	0	
173	19	19	—	—	—	—	e 14	40	—	—	—	—	—	—	—	—	—	0	
174	20	e 17	05	55	—	—	e 06	23	—	—	—	—	—	—	—	—	2 25	0	
175	23	8 24	03	—	—	—	25	43	—	—	—	—	—	- 6	—	4 33	0	0	
176	23	13 22	24	e 22	26	22	54	22	52	—	—	—	—	+ 13	—	5 34	0	0	
177	23	e 18	16	56	—	18	51	—	—	—	—	—	—	—	—	6 27	0	0	
178	23	19 04	06	04	08	04	49	e 04	53	—	—	—	—	+ 21	+ 18	6 13	0	0	
179	23	21 03	29	—	—	05	05	—	—	—	—	—	—	+ 3	—	4 32	0	0	
180	25	9	—	—	e 33	53	—	—	—	—	—	—	—	—	—	—	—	0	
181	25	13 29	58	—	—	30	29	30	30	—	—	—	—	+ 7	—	4 30	0	0	
182	25	16 18	36	e 18	45	e 26	16	26	13	—	—	—	—	+ 100	- 4023	41 23	0	0	
183	25	21 54	32	—	—	54	52	—	—	—	—	—	—	—	—	2 23	0	0	
184	26	12	—	—	—	04	58	—	—	—	—	—	—	± 5	—	1 58	0	0	
185	27	10 46	46	e 46	47	47	02	47	04	—	—	—	—	—	—	3 18	0	0	
186	28	23 46	52	e 46	52	47	53	e 47	55	—	—	—	—	+ 18	- 23	7 42	0	0	
187	29	i 8 48	36	48	38	48	59	48	58	—	—	—	—	- 180	—	10 11	0	0	
188	29	10 33	47	—	—	34	17	—	—	—	—	—	—	—	—	2 55	0	0	
189	29	12 43	51	—	—	44	24	e 44	27	—	—	—	—	+ 11	—	5 18	0	0	
190	31	14 38	31	—	—	38	57	—	—	—	—	—	—	—	—	3 18	0	0	
191	Jun. 1	3 04	56	—	—	06	46	—	—	—	—	—	—	- 6	—	5 14	0	0	
192		7 06	08	—	—	08	39	—	—	—	—	—	—	- 5	—	8 55	0	0	
193		7	—	e 46	35	—	—	—	—	—	—	—	—	—	—	—	—	0	
194		12 17	13	—	—	17	25	—	—	—	—	—	—	—	—	1 46	0	0	
195		e 21	56	15	—	56	40	—	—	—	—	—	—	- 6	—	3 19	0	0	
196	5	3 39	00	39	01	39	36	39	37	—	—	—	—	+ 36	+ 48	7 03	0	0	
197	5	14 54	15	—	—	54	40	—	—	—	—	—	—	- 7	—	3 57	0	0	
198	5	e 15	05	09	—	05	43	—	—	—	—	—	—	+ 5	—	3 22	0	0	
199	6	e 1	12	09	—	e 12	15	—	—	—	—	—	—	—	—	2 46	0	0	
200	6	15 47	23	—	—	47	38	—	—	—	—	—	—	—	—	1 49	0	0	
201	8	23	—	—	? 17	51	26	—	—	—	—	—	—	- 14	- 15	8 04	0	0	
202	9	3 17	37	—	—	18	15	18	16	—	—	—	—	—	—	2 45	0	0	
203	10	e 1	13	00	—	e 13	47	—	—	—	—	—	—	—	—	2 29	0	0	
204	10	20	53	04	—	53	25	—	—	—	—	—	—	—	—	1 31	0	0	
205	12	0 15	37	—	—	15	52	—	—	—	—	—	—	—	—	—	—	0	
206	13	e 6	35	36	—	e 35	59	—	—	—	—	—	—	—	—	3 19	0	0	
207	13	e 8	13	15	—	e 13	29	—	—	—	—	—	—	—	—	1 52	0	0	
208	14	e 19	04	55	—	05	17	—	—	—	—	—	—	- 2	—	2 56	0	0	
209	14	19	55	35	e 55	37	56	20	56	19	—	—	—	- 15	+ 4	6 41	0	0	
210	15	20	46	32	46	33	47	55	47	55	—	—	—	+ 765	+ 830	35 08	0	0	
211	19	16	—	—	32	06	—	—	—	—	—	—	—	—	—	—	—	0	
212	19	20	—	—	15	56	—	—	—	—	—	—	—	—	—	—	—	0	
213	20	9 34	29	e 34	31	35	29	35	30	—	—	—	—	+ 115	- 153	9 04	0	0	
214	21	21	12	55	12	52	18	39	18	42	—	—	—	—	—	31 31	0	0	
215	24	e 8	23	00	—	—	23	22	—	—	—	—	—	—	—	3 09	0	0	
216	24	e 8	27	19	—	—	28	17	—	—	—	—	—	+ 6	—	6 01	0	0	
217	28	4 23	17	e 23	21														

SEISMOLOGICAL OBSERVATIONS AT MIZUSAWA.

EARTHQUAKES, 1948.



No.	Date 1948	P				S				L				Maximum Range of Motion				Duration of Total Earthquake	Intensity	Remarks
		E	W	N	S	E	W	N	S	E	W	N	S	E	W	N	S			
221	Jul. 2	h 15 53 05	m —	s —		m 53 34	s —	m —	s —	m —	s —	m —	s —	μ	—	m 2 31	s 31	0		
222	3	e 00 10 20	—	—		10 38	—	—	—	—	—	—	—	+ 5	—	2 49	0			
223	3	e 17 51 17	e 51	20		51 50	—	51 51	—	—	—	—	—	- 15	—	5 09	0			
224	7	11 20 59	—	—		22 34	—	—	—	—	—	—	—	- 266	—	19 41	0			
225	7	18	—	25 07		—	—	25 26	—	—	—	—	—	—	—	4 30	0			
226	8	2 40 10	—	—		40 40	—	—	—	—	—	—	—	—	—	3 32	0			
227	8	5 04 55	—	—		05 04	—	—	—	—	—	—	—	+ 7	—	2 36	0			
228	10	8 43 19	—	—		43 40	—	—	—	—	—	—	—	+ 5	—	3 07	0			
229	11	16 18 45	e 18	42		19 03	e 19	06	—	—	—	—	—	- 11	—	3 06	0			
230	11	21 05 16	e 05	24		06 02	e 06	05	—	—	—	—	—	—	—	3 33	0			
231	13	2 55 05	e 55	06		56 05	e 56	05	—	—	—	—	—	+ 10	+ 10	5 47	0			
232	16	21 42 06	—	—		42 18	—	—	—	—	—	—	—	- 8	—	1 11	0			
233	16	e 22 05 12	—	—		05 45	05	47	—	—	—	—	—	- 9	—	3 16	0			
234	20	6 55 50	e 55	48		56 14	e 56	10	—	—	—	—	—	—	—	4 29	0			
235	24	15 15 52	e 15	51		26 11	e 26	08	—	—	—	—	—	—	—	18 05	0			
236	28	2 35 22	—	—		54 10	—	—	—	—	—	—	—	- 5	—	—	—	0		
237	29	9 35 15	—	—		36 53	36	54	—	—	—	—	—	+ 16	—	—	—	0		
238	29	? 9 39 15	—	—		40 40	40	41	—	—	—	—	—	- 31	- 33	7 31	0			
239	30	11 44 53	44	52		45 19	45	19	—	—	—	—	—	- 131	+ 258	8 07	0			
240	31	e 9 35 36	e 35	38		36 07	36	07	—	—	—	—	—	+ 11	—	5 11	0			
241	Aug. 5	8 21 31	e 21	34		22 08	22	09	—	—	—	—	—	- 8	—	4 30	0			
242	6	16 13 09	13	10		13 24	13	24	—	—	—	—	—	+ 12	- 10	4 29	0			
243	7	23 39 44	39	45		42 07	42	09	—	—	—	—	—	—	- 458	58 23	0			
244	8	16 35 47	—	—		36 46	—	—	—	—	—	—	—	- 5	—	6 44	0			
245	13	13 02 22	—	—		02 44	—	—	—	—	—	—	—	—	—	2 13	0			
246	13	e 21 36 15	—	—		e 37 13	e 37	15	—	—	—	—	—	+ 10	—	4 42	0			
247	15	1 56 37	e 56	41		57 06	57	08	—	—	—	—	—	+ 91	- 160	12 04	0			
248	15	2	—	—		07 00	—	—	—	—	—	—	—	—	—	—	0			
249	18	2 09 54	09	55		10 38	e 10	38	—	—	—	—	—	- 88	- 133	24 31	0			
250	18	4 03 00	03	01		03 45	03	46	—	—	—	—	—	- 55	- 50	14 08	0			
251	19	2 04 07	—	—		04 09	e 04	10	—	—	—	—	—	—	—	2 08	0			
252	19	5 03 03	—	—		03 20	—	—	—	—	—	—	—	- 39	—	4 30	0			
253	20	e 21 18 55	—	—		19 12	—	—	—	—	—	—	—	+ 4	—	2 25	0			
254	22	13 09 56	09	56		10 30	10	30	—	—	—	—	—	+ 47	- 48	8 04	0			
255	23	e 5 32 53	—	—		33 22	—	—	—	—	—	—	—	- 3	—	2 32	0			
256	24	12 02 38	—	—		03 23	—	—	—	—	—	—	—	+ 5	—	3 00	0			
257	27	5 40 26	40	24		42 32	42	31	—	—	—	—	—	+ 43	- 50	7 19	0			
258	27	5 57 36	57	36		59 41	59	42	—	—	—	—	—	+ 23	- 25	6 46	0			
259	27	9 22 33	—	—		24 40	e 24	38	—	—	—	—	—	- 5	—	6 48	0			
260	28	e 11 33 08	e 33	07		37 16	e 37	20	—	—	—	—	—	—	—	18 18	0			
261	30	e 6 58 54	—	—		59 30	—	—	—	—	—	—	—	+ 7	—	3 40	0			
262	30	8 32 39	? 32	44		e 36 34	? 36	46	—	—	—	—	—	—	—	14 46	0			
263	30	16	—	—		e 07 51	—	—	—	—	—	—	—	+ 5	—	—	0			
264	31	6 41 49	—	—		42 05	—	—	—	—	—	—	—	- 2	—	1 54	0			
265	Sep. 3	8 41 27	41	26		46 36	46	40	—	—	e 50	01	—	—	—	36 06	0			
266	4	8 25 17	—	—		25 49	—	—	—	—	—	—	—	+ 6	—	3 22	0			
267	5	e 17 31 44	—	—		e 32 18	—	—	—	—	—	—	—	—	—	3 51	0			
268	5	19 02 29	02	31		04 09	04	14	—	—	—	—	—	- 45	- 70	8 23	0			
269	9	0 20 46	20	49		30 16	30	17	—	—	42	59	43	09	- 595	+ 2808	75 12</			



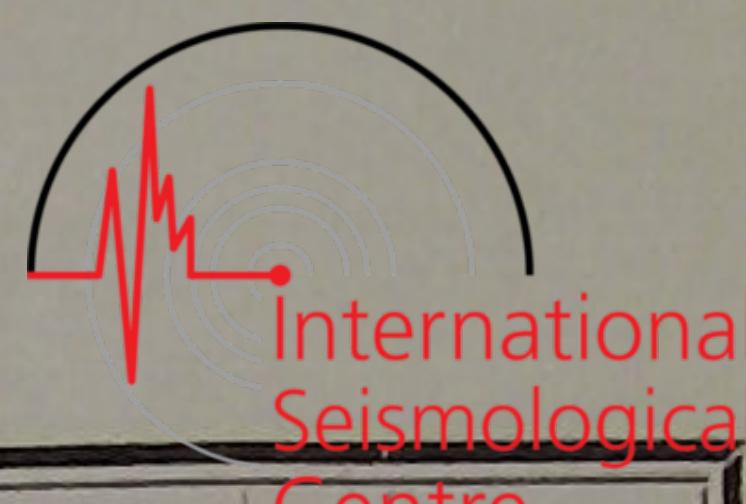
EARTHQUAKES, 1948.

Seismological
Centre

No.	Date 1948	P						S						L						Maximum Range of Motion				Duration of Total Earthquake		Intensity	Remarks
		E W			N S			E W			N S			E W			N S			E W		N S					
		E	W		N	S		E	W		N	S		E	W		N	S		E	W	N	S				
276	Sep. 14	h 1	m 55	s 36		m 55	s 38		m 37	s 48		m —	s —		m —	s —		—	μ 6	—	μ	—	m 5	s 13	0		
277	14	13							09	06		—	—		—	—		+ 10	—	—	—	—	—	—	0		
278	19	8							11	53		—	—		—	—		— 31	—	—	—	—	—	—	0		
279	19	12	55	36	e	55	38		55	49		55	50		—	—		—	—	—	—	—	—	—	0		
280	22	1							43	56		—	—		—	—		—	—	—	—	—	—	—	0		
281	22	2	41	38		—	—		42	46		42	47		—	—		—	10	—	—	5	54	0			
282	22	13	33	42		33	41		34	51		34	50		—	—		—	31	—	—	9	02	0			
283	23	9	53	19		53	17		53	45		53	44		—	—		+ 487	— 595	—	—	16	25	1			
284	24	0	12	46		12	50		13	54		13	54		—	—		+ 34	+ 40	—	—	18	36	0			
285	24	5				—	—		03	03		—	—		—	—		— 4	—	—	—	—	—	—	0		
286	24	e 6	06	08		—	—		07	20		—	—		—	—		—	11	—	—	5	44	0			
287	24	e 11	38	13	e	38	12		38	41		38	43		—	—		+ 4	—	—	—	—	3	44	0		
288	24	11	57	31	e	57	31		58	26	e	58	28		—	—		— 6	—	—	—	—	8	43	0		
289	24	18	08	01		08	03		e 08	57		08	59		—	—		— 10	—	—	—	—	5	58	0		
290	25	3	05	04		—	—		05	32		—	—		—	—		—	—	—	—	—	2	14	0		
291	25	8	33	20	?	33	15		37	37		37	39		—	—		—	—	—	—	—	21	52	0		
292	26	16				—	—		12	43		—	—		—	—		—	—	—	—	—	—	—	0		
293	26	17				—	—		16	00		—	—		—	—		—	—	—	—	—	—	17	48	0	
294	28	? 6	23	19	e	44	44		29	58		29	57		—	—		—	—	—	—	—	—	33	24	0	
295	29	6	44	46	e	44	44		51	01		51	01		—	—		—	—	—	—	—	—	—	—	0	
296	30	5	58	59		—	—		59	34		—	—		—	—		—	—	—	—	—	2	50	0		
297	30	18	03	51		—	—		04	28		—	—		—	—		+ 4	—	—	—	—	2	27	0		
298	Oct. 1	12	15	37		—	—		16	11		—	—		—	—		—	—	—	—	—	4	42	0		
299	1	12	42	17		—	—		42	54		—	—		—	—		—	—	—	—	—	3	04	0		
300	2	6	14	22		—	—		14	46		14	46		—	—		—	13	—	—	—	—	4	09	0	
301	2	e 16	51	29		—	—		52	20		—	—		—	—		+ 5	—	—	—	—	3	41	0		
302	4	8	33	09		—	—		33	23		—	—		—	—		— 7	—	—	—	—	2	51	0		
303	4	11				—	—		—	—		08	00		—	—		+ 9	—	—	—	—	—	—	0		
304	4	e 17	04	35		—	—		05	04		—	—		e	—		e	38	44	—	—	—	2	58	0	
305	6	5	22	36		22	36		30	59		30	58		e	38	37	e	38	44	—	—	—	104	55	0	
306	7	1	09	36		—	—		09	54		09	55		—	—		+ 11	—	—	—	—	1	49	0		
307	7	7	15	03		15	03		15	21		15	21		—	—		- 216	+ 430	—	—	—	8	33	1		
308	7	22	18	29		—	—		18	56		—	—		—	—		—	—	—	—	—	3	36	0		
309	9	21	50	16		—	—		50	44		—	—		—	—		+ 3	—	—	—	—	3	58	0		
310	9	23	47	47		—	—		47	59		47	56		—	—		- 37	+ 50	—	—	—	4	24	0		
311	10	2	28	27		28	27		29	12		29	12		—	—		- 15	- 28	—	—	—	5	08	0		
312	15	19				—	—		53	15		—	—		—	—		—	—	—	—	—	2	00	0		
313	18	e 3	39	53	e	48	22		40	20		48	37		48	37		- 7	- 33	- 48	—	—	5	29	0		
314	20	0	48	19	e	48	22		48	37		48	37		—	—		+ 5	—	—	—	—	3	44	0		
315	23	3	19	13		—	—		19	45		—	—		—	—		—	—	—	—	—	—	—	0		
316	24	0	50	41		—	—		54	40		—	—		—	—		—	—	—	—	—	20	26	0		
317	25	8	15	57		—	—		16	08		—	—		—	—		+ 10	—	—	—	—	2	45	0		
318	29	5	46	15		—	—		46	33		—	—		—	—		- 665	—	—	—	—	26	54	2		
319	30	10	36	53		36	54		37	31		37	31		—	—		- 28	—	—	—	—	5	00	0		
320	30	13	52	24	e	52	25		54	26	e	54	27		—	—		- 8	—	—	—	—	8	21	0		
321	Nov. 1	21	10	55		10	55		14	59		14	59		—	—		—	—								

SEISMOLOGICAL OBSERVATIONS AT MIZUSAWA.

EARTHQUAKES, 1948.



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

PULSATORY OSCILLATIONS, 1948. (EW Component)



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