ANNUAL REPORT

OF THE

METEOROLOGICAL

AND THE

SEISMOLOGICAL OBSERVATIONS

MADE AT THE

INTERNATIONAL LATITUDE OBSERVATORY

OF MIZUSAWA

FOR

THE YEAR 1922.

WITH

APPENDIX

GENERAL MEAN OF THE METEOROLOGICAL OBSERVATIONS

DURING THE TWENTY YEARS BETWEEN 1902 AND 1921.

LATITUDE 39° 8' N., LONGITUDE 141° 8' E.,

HEIGHT ABOVE MEAN SEA LEVEL 61 METRES.

PUBLISHED BY THE INTERNATIONAL LATITUDE OBSERVATORY

OF MIZUSAWA.

1923

The present report gives the results of the meteorological and seismological observations made at the observatory during the year 1922. No alteration has been made in the nature and methods of observation. The observations and the calculations were made by Messrs. K. Torihata, S. Satô and I. Kumagai under the superintendence of Dr. T, Ikeda.

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

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

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

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

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

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

Tension of Water Vapour,—is given in millimetres.

Relative Humidity.—is given in percentages.

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

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

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

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

The heights of the meteorological instruments are as follows,

Barometer.—63.1m above sea level.

Air tempterature thermometer.—1.7m above the ground.

Anemometer.—from the commencement of observations to 9th. 10h. Nov. 1922. 8.4m

—after 9th. 14h. Nov. 1922. 15.4m

Wind vane.—from the commencement of observations to 9th. 10h. Nov. 1922. 9.4m

—after 9th. 14h. Nov. 1922. 16.6m

In recording meteorological phenomena the following symbols are used:—

●	Rain	⊹	Snow drift	C	Cirrus
*	Snow	←	Ice crystals	CS	Cirro-stratus
⊠	Thunder storm	⊙	Solar corona	CK	Cirro-cumulus
⊤	Thunder without lightning	⊕	Solar halo	KC	Cumulo-cirrus
≤	Lightning without thunder	☋	Lunar corona	SC	Strato-cirrus
△	Graupel	☋	Lunar halo	SK	Strato-cumulus
▲	Hail	≪	Gales	N	Nimbus
≡	Mist, fog	∩	Rainbow	K	Cumulus
⊔	Hoar frost	☋	Aurora	KN	Cumulo-nimbus
⌓	Dew	∞	Dust haze	S	Stratus
V	Silver thaw	⊠	Snow lying	≈	Wave cloud
~	Glazed frost	↳	Ice Column in the ground	☊	Zodiacal light

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

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

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

	EW Component Apparatus		NS Component Apparatus	
Period of free oscillation	16	seconds	37	seconds
Multiplication of the pointer	100	times	20	times
Weight of heavy cylinder	45.0	kilograms	17.6	kilograms
Horizontal distance of the centre of the cylinder from the point of support	20	Centimetres	75	Centimetres
Vertical distance between the points of support and of suspention	104	Centimetres	104	Centimetres

November, 1923.

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

SEISMOLOGICAL OBSERVATIONS

TABLE A.

(Earthquakes)

No.	Date 1922	Time of Occurrence + E W			Time of Occurrence + N S		Beginning of the Principal potion + E W			Beginning of the Principal potion + N S		Duration of Tota' Earthquake (mean)	Maximum Range of Motion E W	Maximum Range of Motion N S	Character of Motion	Intensity	Remarks
		h	m	s	m	s	h	m	s	m	s	m	m m	m m			
1	Jan. 1	9	38	20	38	20	9	38	32	38	33	4.4	0.02	?	Slow	Feeble	
2	1	12	12	10	12	10	12	18	40*	18	40*	?	?	?	"	"	
3	4	6	33	39	33	39	6	34	16	34	15	3.7	0.01	0.01	"	"	
4	4	9	44.0		—	—	9	44	37	—	—	2.1?	0.00	—	"	"	
5	5	18	26	17	—	—	18	26	29	—	—	1.9	0.00	—	"	"	
6	6	12	44	33	?		12	46	00	46	01	5.0	0.02	0.01	"	"	
7	7	10	20	26	?		10	20	55	20	54	4.0	0.01	0.01	"	"	
8	8	2	01	13	01	12	2	04	32*	04	34*	?	?	0.01	"	"	
9	8	23	50	29	50.9		23	50	23	50	18	7.6	0.01	0.05	"	"	
10	11	19	23	51	23	53	19	25	08	25	09	5.1	0.06	0.07	"	"	
11	15	3	35	58	35	49	3	37	49*	37	47*	?	?	?	"	"	
12	17	4	08	52	08	53	4	11	28*	11	27*	68.0	0.04	0.72	"	"	
13	18	17	30	17	?		17	30	31	30	32	2.6	0.02	0.01	"	"	
14	19	6	41	42	41	44	6	42	02	42	06	4.5	0.01	0.01	"	"	
15	21	7	31.0		31.2		?			?		?	0.02	0.02	"	"	
16	22	3	—	—	43.4		3	—	—	51	59*	4.4?	?	0.04	"	"	
17	22	22	05	53	05	52	22	06	13	06	12	21.0	?	3,25	Weak Slow	Quick Feeble	Felt
18	23	22	32	24	32	23	23	32	49	?		10.8	0.03	0.05			
19	24	13	05	46	06	05	13	08	16*	08	25*	?	?	0.02	"	"	
20	24	15	52	02	52	08	?			?		4.1	0.01	0.01	"	"	
21	24	19	53	46	—	—	19	54	04	—	—	3.2	0.00	—	"	"	
22	29	17	42	31	—	—	17	42	39	—	—	1.5	0.00	—	"	"	
23	31	13	19	16	—		?			—	—	2.0	?	—	"	"	
24	31	13	23	32	28	33	13	37	35*	37	32*	104.5	0.01	0.30	"	"	
25	31	23	27	24	27	20	23	27	38	27	37	2.0	0.02	0.01	"	"	
26	Feb. 3	10	44	17	44	17	10	44	30	44	31	3.4	0.05	0.07	"	"	
27	5	14	56.3		—	—	14	57	30	—	—	3.8?	0.01	—	"	"	
28	5	17	15	00			17	15	30	—	—	2.2	0.00	—	"	"	
29	7	22	30	36	?		22	31	53	31	52	7.0	0.02	0.02	"	"	
30	9	14	55	09	55	09	14	56	39	56	31	5.7	0.02	0.05	"	"	
31	9	23	51	03	?		23	52	52	52	58	10.1	0.02	0.02	"	"	
32	10	13	37	24	37	25	13	37	45	37	45	8.6	0.17	0.23	Weak	Quick	Felt
33	12	14	07	30	07	33	14	07	54	07	54	4.3	0.02	0.02	S'ow	Feeb'e	
34	13	0	43	24	43	24	0	44	21	44	22	5.3	0.02	0.04	"	"	
35	14	1	07	45	07	48	1	08	33	08	36	11.7	0.03	0,05	"	"	
36	15	1	16	41	16	41	1	17	03	17	07	7.9	0.17	0.29	Weak	"	Felt
37	20	11	37	48	38.0		11	38	19	38	24	2.7	0.01	0.01	Slow	"	
38	20	12	55	57	55	59	12	56	13	56	16	1.9	0.01	0.01	"	"	
39	22	9	15	46	15	52	9	16	11	16	14	3.5	0.04	0.09	"	"	
40	24	0	56	49	56	53	0	57	12	57	15	3.2	0.02	0.03	"	"	
41	24	8	02	28	02	27	8	02	48	?		4.2	0.01	0.02	"	"	
42	26	8	58	10	58	10	8	59	20	59	22	10.7	0.12	0.11	"	"	
43	28	1	40	57	40	59	1	41	18	41	21	5.5	0.03	0.04	"	"	
44	28	13	59	54	—	—	?			—	—	6.6	0.01	—	"	"	
45	Mar. 4	6	15	42	15	44	6	15	58	15	58	3.4	0.08	0.15	Weak	Quick	Felt
46	4	13	11	35	11	36	13	14	46	14	44	23.4	1.03	0.75	Slow	Feeble	
47	5	4	46	43	?		4	46	57	?		14.3	0.01	0.02	"	"	
48	6	21	24.4		24	30	21	27	31*	27	42*	?	?	?	"	"	
49	10	17	02	57	02	58	?			?		5.1	0.01	0.02	"	"	
50	13	15	05	32	05	35	?			?		2.9	0.01	0.01	"	"	
51	13	16	17	48	17	49	16	18	18	18	23	3.8	0.01	0.02	"	"	
52	16	13	19	32	?		13	19	43	19	45	2.9	0.02	0.04	"	"	
53	16	18	32	22	32	21	18	33	06	33	07	14.0	0.50	0.56	Weak	Quick	Felt
54	16	19	43	18	43.3		?			?		3.4	0.01	0.01	Slow	Feeble	
55	17	21	22	16	?		21	22	33	22	31	2.2	0.03	0.02	"	"	

\+ Greenwich Local Time

* Commence Time of the 2nd preliminary tremor.

TABLE A.

(Earthquakes)

No.	Date 1922	Time of Occurrence + E W	Time of Occurrence + N S	Beginning of the Principal potion + E W	Beginning of the Principal potion + N S	Duration of Total Earthquake (mean)	Maximum Range of Motion E W	Maximum Range of Motion N S	Character of Motion	Intensity	Remarks
		h m s	m s	h m s	m s	m	m m	m m			
56	Mar. 18	8 46 11	46 08	8 47 36	47 39	5.9	0.03	0.04	Slow	Feeble	
57	18	8 58 49	58 49	8 59 18	59 23	8.3	0.07	0.10	„	„	
58	18	21 34 31	34.6	21 34 44	34 43	1.8	0.01	0.01	„	„	
59	21	?	?	3 39 03	39 02	?	0.01	0.01	„	„	
60	21	?	?	3 50 46	50 47	?	0.02	0.02	„	„	
61	21	10 59 42	59 43	11 00 17	00 17	3.3	0.01	0.02	„	„	
62	24	3 40 53	— —	3 41 05	— —	1.7	0.01	—	„	„	
63	26	3 39 59	39 58	3 41 34	41 34	7.8	0.05	0.05	„	„	
64	26	14 37 54	37 54	14 38 11	38 12	3.1	0.02	0.02	„	„	
65	27	0 02 50	02 52	0 03 00	?	2.0	0.02	0.01	„	„	
66	28	4 17 34	17 32	?	?	7.4	0.02	0.03	„	„	
67	28	16 52 35	— —	16 52 42	— —	1.1	0.00	—	„	„	
68	30	14 55 58	56 01	14 56 20	56 21	4.3	0.06	0.10	„	„	
69	Apr. 1	5 43 20	43 20	?	?	3.8	0.01	0.01	„	„	
70	1	9 09 00	09 01	9 09 28	09 32	2.9	0.01	0.01	„	„	
71	2	16 46 03	46 05	16 46 20	46 23	2.8	0.03	0.04	„	„	
72	8	1 35 06	35 06	1 35 13	35 13	2.6	0.03	0.02	„	„	
73	10	13 58 18	58 19	13 59 19	59 17	9.4	0.07	0.13	„	„	
74	10	15 44 56	45.2	15 45 43	45 47	6.5	0.03	0.02	„	„	
75	10	17 09 56	?	17 10 42	10 45	5.7	0.01	0.01	„	„	
76	12	8 ?	09 22	8 10 05	10 07	7.0	0.07	0.06	„	„	
77	12	8 ?	40.9	8 41 28	41 32	4.8?	0.03	0.02	„	„	
78	12	12 38 19	?	12 38 58	38 55	4.5	0.00	0.01	„	„	
79	13	10 44 35	44 38	10 44 55	44 59	3.8	0.02	0.03	„	„	
80	19	9 43 26	43 36	9 44 05	44 07	4.9	0.01	0.01	„	„	
81	20	18 10.6	— —	18 10 37	— —	1.3?	0.00	—	„	„	
82	23	5 05 48	05 48	5 06 09	06 10	10.6	0.42	0.50	Weak	Quick	Felt
83	25	22 23 39	23 39	22 25 26	25 29	10.8	0.06	0.08	Slow	Feeble	
84	26	1 12 29	12 29	1 13 17	13 18	?	?	3.29	Weak	Quick	Felt
85	26	4 ?	32 05	4 ?	34 39*	?	?	0,17	Slow	Feeble	
86	27	9 16 12	16 14	9 16 44	16 44	12.4	0.29	0.26	„	„	
87	28	0 44 02	?	0 44 37	44 40	4,7	0.01	0.01	„	„	
88	28	6 36 01	— —	6 36 22	— —	3.3	0.01	—	„	„	
89	28	17 05 24	05 23	17 05 50	05 43	7.3	0.13	0.16	„	„	
90	29	9 11 00	— —	9 11 28	— —	3.1	0.01	—	„	„	
91	29	17 23 48	23 52	17 24 14	24 16	5.1	0.05	0.05	„	„	
92	30	19 37 12	37 11	19 37 26	37 24	4.1	0.08	0.11	„	„	
93	May 1	10 52 51	?	10 54 02	54 04	13.8	0.06	0.10	„	„	
94	1	22 03 56	03 54	22 04 14	04 11	2.4	0.01	0.01	„	„	
95	3	22 50 30	50 32	22 50 56	50 53	2.8	0.01	0.01	„	„	
96	5	0 07 11	07 13	0 08 38	08 38	6.6	0.01	0.02	„	„	
97	5	0 20 58	20 58	0 22 42	22 40	12.7	0.06	0.02	„	„	
98	5	1 46 57	46 57	1 ?	47 07	2.3	0.00	0.01	„	„	
99	6	2 37 32	37 45	2 39 12	39 16	9.1	0.02	0.04	„	„	
100	6	10 59 21	59.5	10 59 46	59 49	3.4	0.01	0.01	„	„	
101	6	12 22 36	22.7	12 24 29	24 31	9.3	0.03	0.06	„	„	
102	7	19 29 56	29 56	19 30 24	30 26	6.3	0.03	0.03	„	„	
103	9	3 29 39	29 39	3 30 15	30 15	10.1	0.29	0.44	„	„	
104	10	16 34 25	34 24	16 36 39	36 39	6.5	0.03	0.02	„	„	
105	11	12 23 20	23 20	12 23 25	23 25	3.3	0.02	0.03	„	„	
106	14	18 04 36	— —	18 05 02	— —	4.3	0.01	—	„	„	
107	15	6 37 47	37 48	6 37 58	38 00	3.6	0.05	0.06	„	„	
108	15	20 22 08	22 07	20 22 41	22 39	15.9	?	1.54	Weak	Quick	Felt
109	16	8 12 18	12 19	?	?	8.6	0.03	0.02	Slow	Feeble	
110	20	15 14 01	— —	15 14 38	— —	3.2	0.01	—	„	„	

TABLE A.

(Earthquakes)

No.	Date 1922	Time of Occurrence + E W	Time of Occurrence + N S	Beginning of the Principal potion + E W	Beginning of the Principal potion + N S	Duration of Total Earthquake (mean)	Maximum Range of Motion E W	Maximum Range of Motion N S	Character of Motion	Intensity	Remarks
		h m s	m s	h m s	m s	m	m m	m m			
111	May 24	17 47 29	?	17 47 53	47 54	4.6	0.03	0.03	Slow	Feeble	
112	28	12 09 38	09 39	12 10 10	10 09	8.5	0.17	0.23	„	„	
113	June 2	20 18 32	18 31	20 24 01*	24 01*	32.3	0.01	0.02	„	„	
114	3	4 57 09	57 08	4 57 40	57 40	15.6	0.68	0.82	„	Quick	Felt
115	5	13 59 11	59 11	13 59 56	59 56	19.9	0.07	0.08	„	Feeble	
116	5	15 43 32	43 33	15 44 19	44 19	9.2	0.04	0.08	„	„	
117	7	17 53 42	53 42	17 54 28	54 28	6.5	0.06	0.06	„	„	
118	8	6 50 55	50 53	6 51 57	51 57	6.0	0.07	0.06	„	„	
119	12	2 58 21	58 22	2 58 30	58 32	4.5	0.10	0.11	„	„	
120	12	3 35 08	35 09	3 35 18	35 20	3.5	0.05	0.05	„	Quick	Felt
121	12	3 50 47	50 49	3 51 40	51 43	6.3	0.04	0.04	„	Feeble	
122	18	12 18 47	18 49	12 20 22	20 22	8.1	0.03	0.06	„	„	
123	20	1 28 52	— —	1 29 11	— —	2.5	0.01	—	„	„	
124	21	13 48 08	48 11	13 48 43	48 45	6.6	0.01	0.04	„	„	
125	22	2 53 51	— —	2 54 10	— —	4.8	0.01	—	„	„	
126	22	19 48 42	— —	19 49 05	— —	3.8	0.02	—	„	„	
127	23	15 06 49	— —	15 07 01	— —	2.7	0.01	—	„	„	
128	24	10 23 21	— —	?	— —	2.1	0.00	—	„	„	
129	24	12 54 04	— —	?	— —	2.1	0.00	—	„	„	
130	25	6 49 31	— —	6 49 52	— —	2.6	0.00	—	„	„	
131	25	18 42 04	42.1	18 42 45	42 45	8.5	0.02	0.05	„	„	
132	29	4 51 54	51 53	4 53 25	53 26	9.0	0.02	0.03	„	„	
133	30	13 33.6	?	13 33 58	33 59	3.8	0.01	0.01	„	„	
134	July 2	8 27 38	27 36	8 28 24	28 24	10.5	0.03	0.05	„	„	
135	2	13 43 42	43 41	13 49 54*	49 54*	38.7	0.00	0.04	„	„	
136	5	20 20 33	20 34	?	?	30.9	?	?	Weak	Quick	Felt
137	6	5 ?	?	5 ?	31 56	?	0.02	0.02	Slow	Feeble	
138	6	13 22 19	22 18	13 ?	22 32	2.7	0.02	0.01	„	„	
139	6	14 20 38	— —	14 20 49	— —	2.7	0.01	—	„	„	
140	7	17 23 10	23 12	17 23 37	23 43	5.4	0.03	0.02	„	„	
141	7	17 42 41	42 42	17 43 14	43 20	6.7	0.03	0.02	„	„	
142	7	19 57 06	57 07	19 57 35	57 36	4.3	0.04	0.03	„	„	
143	8	2 15 01	15 02	2 15 36	15 31	7.8	0.08	0.10	„	„	
144	8	2 35 11	?	2 35 42	?	5.5	0.01	0.01	„	„	
145	8	9 21 33	21 33	9 21 53	21 55	5.5	0.02	0.02	„	„	
146	8	14 32 35	— —	14 32 49	— —	2.0	0.01	—	„	„	
147	8	15 32 49	— —	15 33 19	— —	5.3	0.01	—	„	„	
148	11	14 17 04	17 04	?	?	.?	0.03	0.10	„	„	
149	11	14 20 08	20 10	14 ?	20 20	5.9	0.06	0.14	„	„	
150	14	9 21 58	21 55	9 23 58	23 59	6.7	0.04	0.05	„	„	
151	14	11 09 57	09 58	11 10 15	10 16	7.1	0.14	0.20	„	„	
152	16	20 33 02	33 02	20 33 13	33 17	2.7	0.03	0.05	„	„	
153	21	23 01 17	01 19	23 01 40	01 38	4.9	0.04	0.05	„	„	
154	24	19 26.9	?	19 27.3	?	3.6?	0.01	0.01	„	„	
155	28	11 33 56	33 56	11 35 06	35 07	6.8	0.02	0.05	„	„	
156	Aug. 1	12 15 32	— —	12 15 46	— —	3.3	0.01	—	„	„	
157	3	5 41 55	41 55	?	?	4.3	0.01	0.01	„	„	
158	6	0 57 55	57 52	0 59 23	59 24	20.1	0.08	0.21	„	„	
159	10	17 27 55	— —	17 28 28	— —	3.5	0.01	—	„	„	
160	11	9 37 54	37 52	9 38 16	38 15	4.3	0.02	0.02	„	„	
161	11	13 43 23	43 22	13 47 36*	47 36*	31.0	0.00	0.04	„	„	
162	14	11 44 35	44 34	11 47 18	47 16	11.0	0.20	0.25	„	„	
163	14	15 31 32	— —	15 32 29	— —	4.4	0.01	—	„	„	
164	16	16 ?	?	16 00 50*	00 51*	?	0.02	0.17	„	„	
165	19	21 13 50	— —	21 14 20	— —	5.7	0.01	—	„	„	

TABLE A.

(Earthquakes)

No.	Date 1922	Time of Occurrence + E W			Time of Occurrence + N S		Beginning of the Principal potion + E W			Beginning of the Principal potion + N S		Duration of Total Earthquake (mean)	Maximum Range of Motion E W	Maximum Range of Motion N S	Character of Motion	Intensity	Remarks
		h	m	s	m	s	h	m	s	m	s	m	m m	m m			
166	Aug. 21	23	25	43	25	51	22	26	14	26	14	8.1	0.05	0.05	Slow	Feeble	
167	24	7	31	49	31	51	7	32	16	32	15	?	0.05	0.05	„	„	
168	24	19	46	14	?		19	46	53	46	51	?	0.04	0.05	„	„	
169	26	11	54	12	54	12	11	54	23	54	22	4.1	0.03	0.06	„	„	
170	26	19	29	43	29	43	19	30	27	30	26	6.2	0.04	0.04	„	„	
171	27	11	21	11	—	—	?			—	—	3.3	0.01	—	„	„	
172	30	0	41	23	—	—	0	42	06	—	—	6.9	0.04	—	„	„	
173	31	20	49	54	49	53	20	50	17	50	16	5.5	0.02	0.03	„	„	
174	Sept. 1	6	15	33	15	40	?			?		1.8	0.01	?	„	„	
175	1	19	20	54	20	53	19	25	42	25	40	12.5	?	6.85	„	„	
176	3	1	25	15	—	—	1	25	29	—	—	1.3	0.00	—	„	„	
177	3	6	23	38	23	35	6	29	39	29	37	4.1	0.02	0.01	„	„	
178	4	13	23	59	22	51	13	23	32	23	32	6.7	0.03	0.02	„	„	
179	5	10	47	32	47	31	10	47	59	47	56	9.4	0.03	0.18	„	„	
180	10	6	11	09	11	09	6	12	53	12	52	9.2	0.07	0.06	„	„	
181	10	21	42	01	—	—	21	42	16	—	—	2.4	0.00	—	„	„	
182	10	22	50	07	—	—	22	50	18	—	—	3.7	0.00	—	„	„	
183	11	10	22	13	22	15	10	22	30	23	31	9.1	0.21	0.31	„	„	
184	11	14	37	15	—	—	14	37	34	—		3.3	0.00	—	„	„	
185	11	14	52	19	52	13	14	53	41*	53	40*	?	?	0.01	„	„	
186	12	21	01	43	—	—	21	02	02	—	—	3.7	0.01	—	„	„	
187	14	19	36	31	36	32	19	42	18*	42	18*	39.4	0.03	1.71	„	„	
188	15	7	15	25	15	25	7	16	46	16	46	6.9	0.02	0.02	„	„	
189	23	6	37	51	37	51	6	33	24	38	25	6.5	0.09	0.11	„	„	
190	25	9	43	33	—	—	?			—	—	3.1	0.01	—	„	„	
191	23	12	13	24	—	—	12	13	40	—	—	2.3	0.00	—	„	„	
192	30	11	44	35	44	35	11	44	45	44	44	6.9	0.03	0.04	„	„	
193	Oct. 4	12	39	01	—	—	?			—	—	4.0	0.01	—	„	„	
194	5	5	21	13	21	18	5	27	21*	27	21*	?	?	?	„	„	
195	5	16	45	40	45.7		16	49	22	49.5		14.9	0.11	0.17	„	„	
196	9	20	01	41	—	—	20	02	00	—	—	3.4	0.01	—	„	„	
197	14	17	30	56	—	—	?			—	—	2.7	0.01	—	„	„	
198	14	23	51	55	51	50	23	55	49*	55	51*	75.6	?	0.70	„	„	
199	20	7	25	50	—	—	7	26	14	—	—	3.9	0.01	—	„	„	
200	20	8	41	59	?		8	45	00	45	00	6.8	0.01	0.02	„	„	
201	23	6	25	56	25	57	6	26	34	26	34	7.6	0.11	0.15	„	„	
202	24	21	23	43	23	43	21	25	37	25	33	110.5	0.53	0.66	„	„	
203	27	1	06	36	06	36	1	07	03	07	10	7.2	0.16	0.17	„	„	
204	23	5	01	22	01	20	5	01	33	01	34	3.2	0.04	0.05	„	„	
205	31	5	36.6		—	—	5	37	06	—	—	2.8?	0.01	—	„	„	
206	31	13	04	17	04.4		13	06	35	06	38	7.4	0.02	0.03	„	„	
207	31	20	46	18	—	—	20	47	02	—	—	4.3	0.00	—	„	„	
208	31	22	25	51	—	—	22	26	14	—	—	4.1	0.01	0.01	„	„	
209	Nov. 1	9	46	12	?		9	46	50	46	56	4.8	0.01	0.01	„	„	
210	1	17	20	44	20	43	17	21	06	21	07	5.2	0.04	0.05	„	„	
211	2	16	42	04	42.1		16	43	47	43	42	7.6	0.02	0.02	„	„	
212	2	17	04	07	04.4		17	04	29	04	45	5.6	0.01	0.02	„	„	
213	3	15	40	13	40	14	15	40	48	40	48	4.2	0.01	0.01	„	„	
214	3	22	36	55	37.2		22	33	46	33	45	7.2	0.01	0.01	„	„	
215	4	4	29	15	29	17	4	29	34	29	35	4.4	0.02	0.02	„	„	
216	4	10	53	27	?		10	53	43	53	50	3.5	0.01	0.01	„	„	
217	5	5	37	20	—	—	5	37	42	—	—	2.2	0.01	—	„	„	
218	7	23	20	12	—	—	23	20	35	—	—	3.4	0.00	—	„	„	
219	8	20	17	10	17	09	20	?		18	07	8.0	0.12	0.16	„	„	
220	10	11	29	30	29	30	11	29	59	30	00	9.7	0.03	0.05	„	„	

TABLE A.

(Earthquakes)

No.	Date 1922	Time of Occurrence + E W			Time of Occurrence + N S		Beginning of the Principal potion + E W			Beginning of the Principal potion + N S		Duration of Total Earthquake (mean)	Maximum Range of Motion E W	Maximum Range of Motion N S	Character of Motion	Intensity	Remarks
		h	m	s	m	s	h	m	s	m	s	m	m m	m m			
221	Nov. 10	12	28	30	—	—	12	28	50	—	—	3.8	0.01	—	Slow	Feeble	
222	10	20	41	05	41	08	20	41	41	41	41	20.2	0.07	0.08	„	„	
223	11	4	52	37	52	35	5	15.2	*	15	31 *	161.8	1.01	2.10	„	„	
224	11	5	05	06	05	06	5	05	24	05	24	4.8	0.12	0.36	„	„	
225	11	16	16	28	—	—	16	16	47	—	—	3.0	0.01	—	„	„	
226	12	16	00	47	—	—	16	01	02	—	—	2.4	0.01	—	„	„	
227	15	11	35	30	—	—	11	36	09	—	—	3.5	0.01	—	„	„	
228	15	23	31	34	?		23	33	02	33	01	5.9	0.02	0.01	„	„	
229	17	11	22	59	—	—	11	23	18	—	—	4.2	0.01	—	„	„	
230	20	1	33	26	—	—	1	33	36	—	—	2.8	0.01	—	„	„	
231	20	14	57	57	—	—	14	58	19	—	—	4.0	0.01	—	„	„	
232	21	21	13	47	—	—	21	13	04	—	—	3.0	0.01	—	„	„	
233	22	14	11.1		?		14	13	15	13	15	7.3?	0.02	0.02	„	„	
234	Dec. 3	14	24	22	24	22	14	45	33	45	31	28.5	0.16	0.20	„	„	
235	4	13	13	07	13	07	13	14	10	14	10	5.5	0.01	0.01	„	„	
236	6	?			—	—	1	32	39	—	—	?	0.01	—	„	„	
237	6	14	04	40	04	40	14	05	25	05	27	15.7	0.07	0.06	„	„	
238	7	16	52	55	52	55	16	55	39	55	41	28.9	0.08	1.84	„	„	
239	8	2	04	48	04	47	2	07	27	07	28	15.6	0.02	0.04	„	„	
240	8	22	33	52	33	53	22	34	17	34	18	26.4	?	?	Weak	Quick	Felt
241	9	19	20	28	20	28	19	20	48	20	49	5.3	0.07	0.11	Slow	Feeble	
242	12	21	32	29	—	—	?			—	—	2.9	0.00	—	„	„	
243	12	22	21	24	21	24	22	21	36	21	36	3.1	0.07	0.06	„	„	
244	14	16	15	16	15	15	16	15	28	15	30	2.9	0.02	0.03	„	„	
245	14	19	35	14	—	—	19	35	38	—	—	7.0	0.14	—	„	„	
246	15	14	26	00	26	02	14	26	15	25/6	16	2.4	0.02	0.02	„	„	
247	16	10	44	16	44	16	10	47	57	48	01	?	0.05	0.15	„	„	
248	23	13	52	44	52	45	13	53	21	53	21	5.6	0.02	0.02	„	„	
249	26	4	28	38	28	39	4	28	49	28	47	3.3	0.02	0.02	„	„	
250	26	6	21	35	21	34	6	22	00	21	59	10.6	0.31	0.60	„	Quick	Felt
251	27	9	31	52	31	54	9	32	35	32	36	7.0	0.02	0.04	„	Feeble	
252	29	15	13	25	?		15	14	04	14	06	3.4	0.01	0.01	„	„	
253	31	7	22	28	22	29	7	24	09	24	09	9.0	0.42	0.94	„	„	

TABLE B.

(Pulsatory Oscillations EW Component.)

Beginning		Ending		Maximum			
Date 1922	Hour	Date 1922	Hour	Date 1922	Hour	Double Amplitude
January 3	1	January 5	0	January 4	3– 5	0.00
6	0	8	16	7	2– 5	0.01
9	19	13	9	11	?	0.02
16	6	17	17	17	4– 5	0.01
19	3	23	11	21	3– 7	0.01
February 3	0	February 5	13	February 4	0– 3	0.01
5	22	7	9	6	1– 3	0.01
8	0	9	6	8– 9	23– 0	0.00
9	23	13	10	12	1– 4	0.02
15	21	21	14	16–17	22– 0	0.05
22	1	23	22	22–23	23– 0	0.01
24	1	27	0	25	1– 4	0.02
28	23	March 2	9	March 1	13–14	0.00
March 4	0	6	10	4	12–14	0.01
10	16	11	12	10–11	22– 0	0.00
15	0	16	9	15	12–13	0.01
16	22	19	12	17	7–10	0.01
20	0	25	19	20	19–21	0.02
28	23	31	12	24	6– 9	0.02
				29	7– 9	0.00
31	17	April 1	18	April 1	4– 6	0.01
April 3	22	6	9	5	4– 6	0.02
7	16	8	16	8	3– 6	0.01
14	20	16	14	15	6– 9	0.01
24	0	26	16	25	4– 5	0.01
May 9	14	May 10	16	May 10	6– 8	0.01
12	10	14	10	13	4– 6	0.00
19	0	20	17	20	1– 2	0.00
23	18	25	12	24	2– 4	0.01
29	16	31	21	30–31	22– 0	0.00
June 10	13	June 12	21	June 10–11	23– 0	0.01
August 22	22	August 25	18	August 25	5– 9	0.02
September 19	11	September 21	16	September 20	4– 6	0.01
29	5	29	22	29	17–18	0.01
October 1	13	October 4	8	October 3	8– 9	0.01
6	22	9	18	8	5– 8	0.01
9	23	10	11	10	7– 9	0.01
10	23	11	9	11	6– 7	0.00
18	22	19	14	19	8– 9	0.01
24	16	27	14	26	0– 1	0.02
				27	5– 6	0.01
November 1	16	November 4	0	November 3	5– 7	0.01
8	16	10	14	9	6– 8	0.01
18	21	20	17	20	5– 7	0.01
23	1	24	10	23	16–17	0.01
26	1	28	18	27	7– 8	0.01
December 4	22	December 7	11	December 5	12–13	0.02
15	7	17	4	15	18–21	0.02

APPENDIX

GENERAL MEAN OF THE METEOROLOGICAL OBSERVATIONS

DURING THE TWENTY YEARS RETWEEN 1902 AND 1921

GENERAL RESULTS

Month	AIR PRESSURE (mm) (700mm+)							AIR TEMPERATURE (°C)								CLOUD		
	Mean	Absolute						Mean	Absolute							AMOUNT Mean	RESULTANT MOTION (upper)	
		Max.	Day	Year	Min.	Day	Year		Max.	Day	Year	Min.	Day.	Year	Range		Direction	%
January	56.8	70.6	27	04	30.1	20	21	−2.3	11.7	9	10	−20.2	7	04	31.9	7.3	S 78° W	84
February	56.6	72.8	24	11	34.5	17	21	−2.0	12.0	29	16	−20.5	2	19	32.5	7.2	S 88° W	83
March	57.0	70.7	22	17	34.3	18	12	1.7	20.0	19,30	02,05	−16.2	16	08	36.2	7.0	S 85° W	78
April	56.3	72.0	13	03	30.0	29	17	8.3	27.3	24	11	−10.3	6	16	37.3	6.7	S 84° W	83
May	53.9	68.8	5	05	33.1	18	08	13.0	29.5	10	11	−2.6	4	10	32.1	7.0	S 83° W	77
June	51.8	63.8	10	07	33.7	19	11	17.7	32.5	10	16	0.4	4	21	32.1	7.8	S 81° W	79
July	52.3	60.6	8	08	34.9	27	04	21.6	35.0	25	18	9.4	20,8,1	07,08,15	25.6	8.3	S 87° W	66
August	52.7	63.2	29	05	16.2	27	13	22.7	35.0	1	17	8.9	16	19	26.1	7.8	W	55
September	55.4	67.2	21	20	28.5	23	12	18.6	33.5	3	03	3.1	27	06	30.4	7.9	S 71° W	73
October	57.9	71.7	28	16	19.5	1	17	12.2	29.4	5	02	−3.6	26	18	33.0	7.0	S 77° W	86
November	58.7	75.1	30	13	35.8	27	08	5.7	22.2	2	20	−8.8	29	14	31.0	6.7	S 76° W	80
December	56.9	74.4	1	13	33.1	21	07	0.1	15.9	15	02	−15.9	20	07	31.8	6.9	S 78° W	83
Annual	55.5	75.1	30 XI	13	16.2	27 VIII	13	9.8	35.0	25 VII 1 VIII	18 17	−20.5	2 II	19	55.5	7.3	S 81° W	76

Month	TENSION OF VAPOUR (mm)							HUMIDITY %				PRECIPITATION (mm)							SUNSHINE DURATION	
	Mean	Absolute						Mean	Absolute			Mean	Maximum						Mean	%
		Max.	Day	Year	Min.	Day	Year		Min.	Day	Year		in 24h.	Day	Year	in 4h	Day	Year		
January	3.2	7.5	13	20	1.0	7,5	04,06	80.5	43	16	07	70.7	33.5	12	11	23.1	2	16	99.8	33
February	3.1	9.5	28	12	1.0	10	13	78.4	36	28	11	55.7	57.9	29	16	25.3	28	15	120.4	40
March	3.9	10.4	24	14	1.3	21	08	75.0	27	29	02	72.8	51.5	20	03	22.1	7	12	158.1	43
April	5.9	13.1	30	12	2.0	6	16	72.0	24	23	10	90.0	97.2	4	11	28.0	4	11	187.1	47
May	8.2	16.6	31	09	3.0	2,3	10	74.3	21	10	11	110.8	69.1	4	03	37.4	5	03	187.5	42
June	11.9	21.1	24	15	5.1	3	21	79.7	26	14	11	136.9	92.5	6	10	47.2	6	10	149.6	34
July	16.1	23.8	9,13	28,29	7.8	20	07	83.5	40	18,29	15,17	154.7	67.6	21	11	51.1	24	13	130.8	29
August	17.3	24.3	21	20	8.1	3	13	84.3	33	5	05	170.8	128.8	27	13	75.1	23	08	148.5	35
September	13.6	22.5	4,6	05,19	6.0	26	08	85.1	38	23	04	157.7	86.8	17	02	48.9	17	02	118.9	32
October	8.9	19.3	8	15	3.6	26	18	82.7	34	23	08	109.9	85.6	8	15	43.0	8	15	133.2	39
November	5.6	14.2	24	11	2.1	28,25	14,21	80.4	33	2	20	78.7	58.4	24	11	53.5	24	11	111.8	37
December	3.8	9.7	15	02	1.4	20	07	80.9	30	4	08	69.6	24.0	12	07	16.7	12	07	101.2	35
Annual	8.5	24.3	21 VIII	20	1.0	{7 I 5 10 II	04 06 13	79.7	21	10 V	11	1278.4	128.8	27 VIII	13	75.1	23 VIII	08	1647.0	37

Month	WIND									NO. OF DAYS WITH										
	Velocity (m. p. s)					Resultants				●* △▲	*	△▲	⚿	≡	Clear	Cloudy	↖	⊏	Sun'ess 1906-1921	⊙
	Mean	Max.	Dir.	Day	Year	Dir.	Vel.	Dir.	%											
January	4.0	30.9	N	7	12	N37°W	2.3	N32°W	41	22.1	21.9	1.2	—	0.7	0.5	15.0	10.3	8.1	5.6	1.7
February	3.9	26.3	NW	23	12	N39°W	2.3	N35°W	43	18.7	19.0	0.7	–	0.3	1.1	12.9	8.1	6.8	3.4	1.9
March	4.4	23.9	NNW	28	12	N50°W	2.1	N47°W	35	18.1	14.7	1.1	–	0.2	1.7	14.0	11.0	9.0	6.1	1.9
April	4.8	41.7	SSE	3	21	N82°W	1.4	N87°W	21	14.4	2.2	0.6	0.5	0.3	2.7	12.9	12.8	6.5	5.0	1.3
May	4.3	27.4	SSE	7	16	S 51°W	1.0	S 48°W	18	14.1	0.1	0.1	1.7	1.3	2.0	15.0	10.5	1.4	5.6	1.2
June	3.5	19.6	WNW	14	09	S 16°W	1.3	S 17°W	27	15.2	–	0.1	1.6	0.9	1.0	18.8	4.2	0.1	6.8	1.1
July	3.3	22.5	W	2	16	S 7°W	1.6	S 8°W	35	17.9	–	–	1.8	1.1	0.5	21.2	2.6	—	7.6	1.3
August	3.0	29.0	S	16	11	S 1° E	1.5	S 4°W	34	15.5	—	—	2.6	1.8	0.8	17.6	2.5	–	4.0	1.4
September	1.7	42.4	S	23	12	S 22°W	0.6	S 49°W	12	16.7	–	–	1.5	1.6	1.3	18.8	2.6	0.2	5.9	1.3
October	1.7	24.2	ESE	1	17	N50°W	0.9	N44°W	21	16.6	0.2	0.2	0.7	2.4	1.9	14.0	3.6	3.0	5.3	1.7
November	3.4	28.9	W	18	20	N41°W	1.6	N35°W	30	17.1	5.7	0.8	0.6	1.9	2.2	10.7	7.3	10.2	4.0	1.2
December	3.8	31.8	NW	7	07	N39°W	2.3	N31°W	39	20.7	17.4	1.5	0.4	0.7	1.2	11.8	8.9	14.1	5.3	1.9
Annual	3.7	42.4	S	23 IX	12	N73°W	0.9	N74°W	16	206.7	80.9	6.2	11.0	12.8	16.5	182.5	84.2	59.2	64.6	17.6

Month / Hour	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
TENSION OF VAPOUR (mm)													
2	3.1	3.0	3.8	5.7	7.8	11.5	15.6	16.9	13.3	8.6	5.4	3.7	8.2
6	3.0	2.9	3.7	5.5	7.8	11.7	15.6	16.8	13.0	8.2	5.2	3.6	8.1
10	3.2	3.1	4.0	6.1	8.5	12.2	16.1	17.4	13.8	9.1	5.7	3.8	8.6
14	3.3	3.3	4.1	6.2	8.6	12.4	16.5	17.5	13.9	9.3	6.0	4.0	8.7
18	3.2	3.3	4.0	6.1	8.5	12.4	16.5	17.8	14.2	9.3	5.9	3.9	8.7
22	3.1	3.2	3.9	5.9	8.2	12.0	16.0	17.2	13.6	8.8	5.6	3.8	8.5
Mean	3.2	3.1	3.9	5.9	8.2	11.9	16.1	17.3	13.6	8.89	5.6	3.8	8.5
RELATIVE HUMIDITY %													
2	85.7	85.4	83.9	84.4	87.7	91.8	93.9	94.5	94.5	92.0	88.0	86.0	89.0
6	86.9	86.3	85.2	85.1	86.8	90.2	92.8	94.7	95.1	92.9	88.7	86.9	89.3
10	77.9	73.7	68.9	63.9	65.4	72.4	76.6	76.5	77.0	75.8	75.8	77.6	73.4
14	69.8	66.3	62.2	55.7	57.4	64.7	69.8	67.9	69.0	64.7	66.0	70.6	65.3
18	79.0	76.3	70.7	65.3	66.9	72.9	78.6	80.5	83.4	81.3	78.6	80.2	76.1
22	83.7	82.8	79.2	77.4	81.0	86.3	89.4	91.1	91.7	89.4	85.4	84.6	85.2
Mean	80.5	78.4	75.0	72.0	74.3	79.7	83.5	84.3	85.1	82.7	80.4	80.9	79.17
AMOUNT OF CLOUD (0—10)													
2	7.0	6.8	6.8	6.4	6.7	7.6	8.3	8.1	7.8	6.8	6.2	6.6	7.1
6	7.8	7.5	7.5	7.0	7.4	8.5	9.0	8.9	8.7	7.6	7.3	7.3	7.9
10	7.7	7.4	7.4	6.8	7.3	8.0	8.6	7.8	7.9	7.4	7.2	7.5	7.6
14	7.7	7.6	7.3	7.0	7.2	7.9	8.3	7.3	8.0	7.3	7.2	7.5	7.5
18	6.9	7.1	6.8	6 9	7.1	7.8	8.2	7.4	7.9	6.3	5.8	6.4	7.0
22	6.4	6.5	6.4	6.0	6.3	7.1	8.2	7.0	7.2	6.5	6.2	6.4	6.7
Mean	7.3	7.2	7.0	6.7	7.0	7.8	8.3	7.8	7.9	7.0	6.7	6.9	7.3
AMOUNT OF PRECIPITATION (mm)													
2	10.8	8.9	12.2	14.8	16.8	21.1	23.2	26.4	22.4	18.5	16.8	13.7	205.6
6	11.4	9.8	14.5	15.5	20.9	21.9	33.4	29.9	29.0	22.5	13.2	11.7	233.6
10	13.9	8.9	13.0	15.2	16.1	22.6	24.1	26.4	29.8	19.0	12.2	12.0	213.2
14	10.4	9.7	9.7	15.0	19.8	25.2	23.6	19.7	26.6	16.2	10.4	10.1	196.5
18	11.7	9.5	12.2	15.3	17.8	21.0	27.2	36.1	25.3	17.0	14.7	10.8	218.5
22	12.6	8.9	11.2	14.3	19.4	25.2	23.2	32.4	24.7	16.6	11.5	11.3	211.1
Mean	70.7	55.7	72.8	90.0	110.8	136.9	154.7	170.8	157.7	109.9	78.7	69.6	1278.4
NO. OF DAYS WITH AMOUNT> 30 (mm) IN A DAY													
Mean	0.1	0.2	0.2	0.4	0.9	0.9	1.4	1.5	1.2	0.6	0.4	—	7.5
FREQUENCY OF PRECIPITATION WITH AMOUNT >0.1 (mm) IN 4 HOURS													
Mean	11.0	9.1	8.3	6.3	6.5	7.3	8.4	7.1	8.4	7.4	8.0	10.3	98.3
FREQUENCY OF PRECIPITATION WITH AMOUNT< 0.1 (mm) IN 4 HOURS													
Mean	24.3	23.0	22.4	10.2	11.5	12.0	15.1	11.2	11.4	10.4	16.5	21.8	190.0

Month / Hour	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
AIR PRESSURE (700mm+)													
2	56.8	56.6	56.9	56.4	54.0	51.9	52.4	52.7	55.4	57.8	58.6	56.8	55.5
6	56.8	56.7	57.2	56.8	54.5	52.3	52.7	53.0	55.7	58.1	58.8	56.9	55.8
10	57.4	57.2	57.5	56.8	54.3	52.2	52.6	53.0	55.8	58.4	59.2	57.5	56.0
14	56.0	55.9	56.3	55.5	53.1	51.2	51.8	52.0	54.6	57.1	57.8	56.1	54.8
18	56.7	56.5	56.8	55.8	53.4	51.4	51.9	52.2	55.0	57.7	58.6	56.9	55.2
22	56.9	56.8	57.3	56.6	54.3	52.2	52.7	53.0	55.7	58.2	58.8	57.0	55.8
Mean	56.8	56.6	57.0	56.3	53.9	51.8	52.3	52.7	55.4	57.9	58.7	56.9	55.5
AIR TEMPERATURE (°C)													
2	−3.7	−3.7	−0.5	5.0	9.1	14.6	19.0	20.3	16.2	9.8	3.8	−1.2	7.4
6	−4.3	−4.4	−1.1	4.6	9.5	15.0	19.3	20.2	15.8	9.0	3.1	−1.6	7.1
10	−1.7	−1.1	3.0	10.4	15.3	19.4	23.0	24.4	20.3	13.9	6.9	0.9	11.2
14	0.4	1.1	5.2	13.0	17.8	21.7	25.1	26.6	22.4	16.7	9.5	2.8	13.5
18	−1.8	−1.1	2.7	10.0	14.9	19.5	23.0	23.9	19.4	13.1	6.5	0.5	10.9
22	−3.1	−2.8	0.8	6.9	11.2	16.2	20.3	21.2	17.2	10.8	4.7	−0.7	8.6
Mean	−2.3	−2.0	1.7	8.3	13.0	17.7	21.6	22.7	18.6	12.2	5.7	0.1	9.8
EARTH TEMPERATUE (°C)													
Surface (1905-1921)													
2	−1.2	−1.0	0.9	5.7	10.5	16.0	20.4	21.9	17.8	11.3	4.6	0.3	8.9
6	−1.4	−1.3	0.5	4.9	10.3	16.1	20.4	21.6	17.2	10.5	4.0	0.1	8.6
10	−0.7	−0.4	4.1	13.1	19.4	23.7	27.1	28.4	23.0	15.6	7.5	0.9	13.5
14	0.3	1.2	8.5	17.0	22.7	26.9	30.4	31.9	25.7	18.5	10.5	2.5	16.3
18	−0.4	−0.1	3.9	11.3	16.5	21.5	25.3	26.2	21.2	14.2	6.8	1.0	12.3
22	−0.9	−0.7	1.8	7.6	12.5	17.7	21.9	23.0	18.8	12.2	5.3	0.5	10.0
Mean	−0.7	−0.4	3.3	9.9	15.3	20.3	24.2	25.5	20.6	13.8	6.4	0.9	11.6
0.3 metres below the surface (1916—1921) observed by the right-angled thermometer directly earthed.													
Mean	−0.6	−0.3	3.5	10.1	15.0	20.2	25.4	26.0	21.1	14.1	6.5	0.6	11.8
0.3 metres below the surface (1905-1915) observed by the thermometer inserted in a straight iron tube													
Mean	2.0	1.5	3.2	8.3	13.3	18.0	21.2	23.3	20.6	15.3	9.4	4.2	11.7
1.0 metres below the surface (1905-1921) observed by the thermometer inserted in a straight iron tube													
Mean	5.8	4.6	4.5	7.1	10.8	14.3	17.7	20.4	20.2	17.2	13.0	8.7	12.0
3.0 metres below the surface (1905-1921) observed by the thermometer inserted in a straight iron tube													
Mean	12.6	11.4	10.4	9.7	9.7	10.3	11.3	12.5	13.8	14.5	14.5	13.8	12.1
6.0 metres below the surface (1905-1921) observed by the thermometer inserted in a straight iron tube													
Mean	12.8	12.6	12.3	11.9	11.6	11.3	11.3	11.4	11.7	12.2	12.5	12.8	12.0

NO. OF OBSERVATIONS OF WIND FROM

Month \ Dir	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Calm
January	23.8	6.9	7.8	3.1	7.0	3.4	5.7	4.7	10.3	4.7	4.8	3.4	13.6	12.8	30.0	33.9	11.9
February	20.9	5.6	6.0	3.0	4.7	3.0	5.4	5.0	8.8	5.1	3.8	3.3	10.8	13.1	32.5	29.7	9.3
March	21.3	5,7	4.9	2.4	4.3	3.1	5.0	9.2	15.9	7.7	5.8	5.4	10.5	13.9	32.4	30.1	8.7
April	17.2	4.9	4.4	2.2	3.4	2.0	5.7	14.3	30.1	9.8	6,7	5.5	11.8	8.5	22.9	22.7	8.3
May	15.9	4.7	4.6	1,9	3,9	2.4	8.2	16.8	38.6	12.4	6.9	4.7	9.6	7.1	18.6	18.2	11.8
June	13.3	5.7	4.3	2.2	3.1	1.9	5,7	20.9	48.4	15.7	6.6	3.1	6.7	3.9	11.8	15.5	11.6
July	13.3	4.7	4.0	1.8	3.1	1.4	7.1	24.5	53.0	19.1	7.6	3.0	4.4	2.6	9.1	13.8	13.8
August	12.6	3.7	3.0	2.2	3.3	2.5	9.8	26.9	45.4	17,5	7.3	2.6	5.1	2.9	8.7	11.9	21.2
September	15.2	5.1	3.5	2.1	3.5	3.0	8.7	16.0	33.1	11.3	6.3	2.6	5.2	5.6	18.0	20.0	21.2
October	22.8	7.5	4.9	2.0	3.1	2.9	7.2	11.4	20.9	8.4	4.8	4,2	7,1	7.0	23.0	27.7	21.5
November	24.8	7.3	6.4	2.5	4.4	3.3	6,2	8.6	16,4	5.8	5.7	3.8	9,1	6,9	28.1	27.5	13.8
December	23.9	9.1	6.4	3.8	5.1	3.8	6.6	5,9	11.0	5.0	5.0	2.7	11.3	12.4	32.0	30.3	12.2
Mean	18.7	5.9	5.0	2.4	4.0	2.7	6.8	13.7	27.6	10.2	5.9	3.7	8.8	8.0	22.2	23.3	13.8

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

Month \ Dir	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
January	4.1	2.8	2.7	2.4	2.2	1.8	2.2	2.7	3.2	3.1	2.9	3,2	4.5	5.7	5.5	5.2
February	3.6	3.1	2.7	2.3	1.9	2.1	2.4	3.0	3.5	2.8	2.4	2.7	3.7	5,4	5.3	5.0
March	3.7	2.6	2.1	2.5	2.0	2.2	3.2	4.1	4.4	3.6	3.1	3.8	4.5	6.3	5.8	4.9
April	4.1	2.9	2.7	1.8	2.1	1.7	3.7	4.6	5.1	4.2	3.6	5.9	4.7	6.2	6.4	5.7
May	3.6	2.5	2.3	2.1	2.0	2.0	3.9	5.0	4.9	3.8	3.1	3.6	4.4	4.8	5.7	5.2
June	3.4	2.6	2.0	1.6	1.8	1.6	3.0	4.6	4.3	3.5	2.7	3.3	2.9	3.8	3.7	4.3
July	2.9	2.1	1.6	1.3	1.4	1.2	2.9	4.1	4.3	3.2	2.8	3.2	2.8	2.9	3.0	3.5
August	2,9	2.3	1.7	1.5	1.4	2.2	3.1	3.9	3.8	3.1	2.4	2.0	1.9	1.4	2.5	2.8
September	2.6	2.2	1.6	1.4	1.5	1.5	3.0	3.3	3.8	2.6	2.0	2.2	2.3	2.8	2.7	3.1
October	2.8	2.1	1.9	1.2	1.5	1.5	1.8	3.1	3.3	2.5	2.0	2.9	3.0	3.3	4·0	4.0
November	3.5	2.3	2.0	1.8	1.7	1.5	2.1	3.6	3.5	2.9	2.4	2.7	2.9	4.3	5.3	4.5
December	3.5	3.0	2.5	2.1	2.1	1.7	2.1	3.0	3.3	2.3	1.9	2.5	4.2	5.9	5.9	4.9
Mean	3.4	2.5	2.1	1.8	1.8	1.8	2.8	3.7	3.9	3.1	2.6	3.2	3.5	4.4	4.7	4.4

NO. OF DAYS WITH GALES 10—15 (m. p. s.)

Year \ Month	Jan.	Feb.	Mar.	Apr.	May	June	Ju'y	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Mean	8.5	6.9	8,4	11.6	10.8	4.8	3.3	2.4	2.0	4.0	6.6	7.1	76.2
15 – 29													
Mean	3.8	2.8	3.8	3.5	2.1	0.5	0.4	0.4	0.8	0.7	2.1	3.4	24.0
> 29													
Mean	0.1	—	—	0.1	0.1	—	—	0.1	0.1	—	0.1	0.1	0,5

VELOCITY OF WIND (m. p. s.)

Month / Hour	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
2	3.6	3.4	3.5	3.1	2.6	2.0	2.0	1.8	1.7	2.0	2.9	3.5	2.7
6	3.4	3.3	3.4	2.8	2.6	2.1	2.0	1.7	1.8	1.9	2.7	3.4	2.6
10	3.9	4.0	4.6	5.5	4.7	3.5	3.3	3.0	3.1	3.1	3.8	3.9	3.9
14	5.0	5.2	6.1	7.2	6.7	5.3	4.9	4.5	4.2	4.4	5.1	5.1	5.3
18	4.2	4.0	4.8	6.0	5.8	5.0	4.5	4.0	3.2	2.8	3.5	3.8	4.3
22	3.6	3.4	3.7	3.9	3.2	3.1	3.1	2.7	2.2	2.2	2.9	3.5	3.1
Mean	4.0	3.9	4.4	4.8	4.3	3.5	3.3	3.0	1.7	1.7	3.4	3.9	3.7

MEAN DIRECTION AND VELOCITY (m. p. s.) OF WIND

Year / Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1902	N36°W 3.5	N55°W 1.7	N42°W 2.7	N79°W 3.2	S65°W 1.8	S28°W 1.7	S15°W 1.6	S17°W 1.2	S 6°W 1.7	N47°W 1.1	N29°W 1.7	N27°W 3.3	N72°W 1.3
1603	N31°W 2.5	N30°W 3.0	N44°W 2.0	S67°W 1.0	S68°W 1.3	S40°W 1.3	S43°W 0.9	S41°W 0.6	S40°W 0.9	N39°W 0.7	N53°W 1.1	N63°W 2.0	N69°W 1.1
1904	N59°W 1.6	N59°W 2.2	N62°W 3.3	S34°W 1.3	S29°W 1.4	S43°W 1.1	S15°W 2.2	S30°W 0.8	S74°W 0.5	N33°W 1.7	N83°W 0.9	N42°W 2.2	N79°W 1.2
1905	N31°W 2.3	N42°W 2.9	N59°W 1.8	N59°W 2.1	S34°W 1.7	S22°W 1.3	S12°W 2.1	S17°W 1.4	S42°W 3.3	N68°W 0.4	N34°W 1.0	N41°W 2.3	N76°W 1.0
1906	N37°W 3.1	N34°W 3.3	N45°W 2.6	N52°W 2.2	S81°W 1.5	S15°W 1.4	S 7°W 2.6	S21°W 1.5	S71°W 0.5	N36°W 0.9	N38°W 2.5	N47°W 1.8	N67°W 1.3
1907	N26°W 2.6	N35°W 2.2	N51°W 1.4	N75°W 1.5	S54°W 1.4	S70°W 0.7	S15°W 1.6	S12° E 3.3	W 0.6	N55°W 1.3	N35°W 2.2	N53°W 2.9	N73°W 1.0
1908	N34°W 2.5	N39°W 2.2	N59°W 2.5	N53°W 1.7	S69°W 1.2	S17°W 1.0	S 5°W 1.9	S 3°W 2.5	S24°W 0.6	N57°W 0.8	N52°W 2.4	N48°W 4.3	N73°W 1.2
1909	N29°W 3.6	N42°W 2.6	N47°W 2.2	S15°W 1.4	W 1.0	S18°W 1.8	S17°W 1.3	S 7°W 2.1	S88°W 0.6	N43°W 1.7	N62°W 1.7	N27°W 3.0	N63°W 1.1
1910	N31°W 2.7	N37°W 2.5	N54°W 2.6	N73°W 1.6	W 1.1	S21°W 1.5	S 6°W 1.7	S21° E 0.8	S42°W 0.7	N33°W 1.2	N39°W 2.2	N33°W 3.1	N59°W 1.2
1911	N34°W 3.2	N35°W 3.1	N26°W 3.5	N47°W 2.2	S38°W 1.5	S28°W 1.2	S35°W 1.3	S10°W 2.1	S30°W 0.6	N56°W 1.0	N44°W 1.3	N23°W 3.0	N57°W 1.2
1912	N14°W 3.0	N15°W 2.3	N18°W 3.5	N51°W 2.0	S28°W 1.1	S12°W 0.7	S36°W 1.2	S32°W 1.2	S72°W 0.2	N26°W 0.7	N 3°W 2.1	N17°W 2.3	N34°W 1.1
1913	N47°W 2.5	N46°W 2.8	N66°W 2.3	N37°W 1.1	W 1.0	S11°W 1.1	S 3° E 1.4	S23° E 0.9	S32°W 0.5	N54°W 1.2	N60°W 2.1	N56°W 1.7	N74°W 1.1
1914	N63°W 1.2	N43°W 2.0	N73°W 1.8	N50°W 2.1	S29°W 1.3	S43°W 0.9	S 5°W 0.8	S 1° E 1.2	S 1°W 1.2	N60°W 0.6	N35°W 0.5	N40°W 1.5	W 0.8
1915	N53°W 2.7	N52°W 2.1	N59°W 2.1	S77°W 2.0	S31°W 0.9	S 5° E 1.0	S 5°W 1.8	S18° E 2.2	S18° E 1.2	N63°W 0.9	N52°W 1.4	N49°W 2.0	W 0.9
1916	N29°W 2.5	N40°W 2.6	N59°W 1.6	S70°W 1.1	S34°W 1.3	S 3° E 2.4	S 4° E 2.0	S16° E 1.3	S25°W 0.3	N59°W 0.7	N20°W 1.5	N36°W 2.4	N30°W 0.7
1917	N47°W 1.4	N39°W 1.9	N33°W 1.3	S76°W 1.1	S49°W 0.8	S21°W 1.1	S 3°W 1.4	S12° E 1.7	S 5°W 1.9	N70°W 0.4	N43°W 1.1	N36°W 1.0	S 86°W 0.5
1918	N55°W 1.2	N39°W 1.9	N50°W 1.9	S35°W 1.0	S36°W 1.5	S 3°W 1.5	S 3° E 1.8	S 2° E 1.3	S12° E 0.8	N23°W 0.4	N30°W 1.4	N38°W 2.8	S 83°W 0.6
1919	N56°W 2.0	N39°W 1.8	N61°W 2.1	S31°W 1.5	S 8°W 0.9	S 1°W 1.8	S15° E 2.0	S 5°W 0.9	S42° E 0.6	N60°W 0.5	N41°W 0.7	N33°W 2.3	N39°W 0.6
1920	N51°W 1.8	N35°W 2.2	N71°W 1.0	N33°W 1.2	N59°E 0.6	S 4°W 1.4	S 3°W 1.5	S19° E 2.9	S14°W 0.7	N34°W 0.7	N46°W 1.5	N42°W 2.1	N39°W 0.6
1921	N32°W 2.1	N46°W 2.1	N43°W 2.1	S16°W 1.3	S11°W 1.1	S 9° E 1.3	S17° E 1.7	S23° E 1.1	S19°W 0.4	N26°W 1.2	N46°W 1.5	N36°W 2.2	N76°W 0.6
Mean	N37°W 2.3	N39°W 2.3	N50°W 2.1	N32°W 1.4	S51°W 1.0	S16°W 1.3	S 7°W 1.6	S 1° E 1.5	S22°W 0.6	N50°W 0.9	N41°W 1.6	N39°W 2.3	N73°W 0.9

MEAN DIRECTION AND FREQUENCY OF WIND

1902	N25°W	41	N53°W	27	N50°W	32	S89°W	36	S43°W	26	S39°W	32	S17°W	33	S22°W	23	S12°W	29	N47°W	22	N36°W	29	N16°W	39	N87°W	17
1603	N33°W	41	N30°W	50	N44°W	32	S68°W	18	S49°W	24	S31°W	28	S39°W	18	S35°W	13	S46°W	25	N41°W	16	N44°W	16	N62°W	21	N77°W	17
1904	N38°W	22	N59°W	34	N66°W	49	S79°W	21	S38°W	26	S41°W	17	S22°W	34	S33°W	32	N80°W	13	N35°W	23	N43°W	27	N42°W	38	N82°W	20
1905	N42°W	40	N48°W	42	N62°W	29	N66°W	23	S60°W	26	S27°W	31	S17°W	41	S19°W	40	S72°W	9	N62°W	14	N33°W	38	N46°W	32	N86°W	19
1906	N34°W	46	N36°W	55	N46°W	31	N69°W	27	S64°W	26	S23°W	29	S14°W	52	S31°W	39	N68°W	13	S70°W	18	N37°W	34	N37°W	28	N79°W	20
1907	N34°W	47	N41°W	38	N41°W	29	S89°W	32	S52°W	27	S53°W	15	S18°W	37	S 9° E	62	N73°W	25	N45°W	23	N32°W	42	N30°W	28	N76°W	18
1908	N28°W	42	N43°W	32	N78°W	33	N63°W	26	S69°W	13	S 7°W	50	S10°W	23	S 5°W	44	N74°W	15	N52°W	17	N47°W	38	N41°W	43	N82°W	18
1909	N20°W	62	N41°W	36	N49°W	39	S53°W	18	W	21	S12°W	44	S20°W	20	S 9°W	48	S79°W	12	N42°W	34	N65°W	19	N20°W	55	N73°W	19
1910	N36°W	54	N38°W	37	N54°W	43	N74°W	26	W	13	S30°W	30	S12°W	41	S14° E	21	S46°W	19	N32°W	48	N35°W	44	N38°W	51	N60°W	23
1911	N22°W	60	N37°W	59	N25°W	62	N45°W	31	S30°W	32	S31°W	20	S48°W	38	S23°W	43	S39°W	22	N50°W	30	N29°W	26	N12°W	45	N55°W	22
1912	N 2° E	35	N11°W	42	N 1° E	45	N38°W	23	S27°W	15	S15°W	7	S32°W	27	S45°W	35	N3°W	3	N12°W	16	N 8° E	45	N10°W	29	N23°W	15
1913	N47°W	51	N39°W	58	N51°W	38	N74°W	17	S88°W	11	S23°W	19	S	30	S28° E	23	S52°W	12	N69°W	30	N62°W	29	N53°W	35	N71°W	19
1914	N44°W	21	N49°W	43	N69°W	26	N35°W	34	S29°W	19	S18°W	20	S 9° E	13	S15°W	26	S 9°W	16	N52°W	19	N70°W	9	N26°W	33	N77°W	13
1915	N42°W	35	N35°W	37	N36°W	27	S87°W	22	S79°W	12	S 4°W	24	S 3°W	44	S 9° E	40	S 7° E	20	N69°W	14	N50°W	24	N40°W	28	S 81°W	13
1916	N18°W	36	N35°W	44	N41°W	30	S51°W	14	S39°W	19	S 1° E	42	S 7° E	45	S12° E	31	S47°W	8	N80°W	8	N21°W	45	N34°W	47	N77°W	10
1917	N30°W	28	N26°W	51	N30°W	27	S60°W	16	S78°W	14	S2[illegible]°W	22	S 3°W	26	S13° E	45	S17°W	22	S44°W	6	N37°W	25	N23°W	30	N85°W	9
1918	N23°W	21	N32°W	42	N44°W	36	S55°W	20	S31°W	26	S 7° E	34	S 5° E	26	S 8°W	33	S45°W	9	N 7°W	18	N37°W	43	N39°W	44	N79°W	12
1919	N54°W	55	N30°W	41	N48°W	39	S67°W	23	S32°W	15	S 8°W	43	S18° E	52	S11°W	26	S66°W	1	N31°W	20	N28°W	24	N30°W	54	N78°W	14
1920	N37°W	42	N26°W	62	N73°W	32	N31°W	29	N55°E	9	S14°W	37	S 6°W	47	S19° E	62	S31°W	25	S89°W	17	N40°W	34	N42°W	53	N87°W	15
1921	N22°W	53	N35°W	52	N47°W	54	S39°W	27	S16°W	26	S 1°W	35	S17° E	44	S22° E	41	S69°W	12	N21°W	51	N36°W	33	N18°W	48	N61°W	14
Mean	N32°W	41	N35°W	43	N47°W	35	N87°W	21	S48°W	18	S17°W	27	S 8°W	35	S 4°W	34	S49°W	12	N44°W	21	N35°W	30	N31°W	39	N74°W	16

MAXIMUM CONTINUANCE OF DAYS WITH PRECIPITATION

Year	From		To		No. of	Remarks
	Day	Month	Day	Month	Days.	
1902	2	Jan.	21	Jan.	20	
1903	22	July	4	Aug	14	
1904	26	Oct.	11	Nov	17	27 <0.1
1905	28	Nov.	16	Dec.	19	5 <0.1
1906	25	Jan.	18	Feb.	25	4,8 <0.1
1907	31	Aug.	10	Sept	11	
1908	11	Jan.	29	Jan.	19	12,14,26<0.1
1909	11	Feb.	15	Feb.	15	
1910	3	Aug.	16	Aug.	14	
1911	8	Oct.	19	Oct.	12	11,14(≡)<0.1
1912	11	Ju'y	22	July	12	
1913	8	Jan.	20	Jan.	13	
1914	9	D c.	22	Dec.	14	
1915	18	Aug.	29	Aug.	12	
1916	29	Feb.	17	Mar.	18	3,15,16,17<0.1
1917	18	Feb.	11	Mar.	22	26,3–,8,11<0.1
1918	5	Nov.	29	Nov.	25	17,20,21,29,24–<0.1
1919	2	Jan.	30	Jan.	29	10,18,24—
1920	4	May	14	May	11	12<0.1
1921	12	Mar.	26	Mar.	15	
Abso'ute	25	Jan. (1906)	18	Feb. (1906)	25	4,8 <0.1
	5	Nov. (1918)	~~29~~ 27	Nov. (1918)	~~25~~ 24	17,20,21,29<0.1 24—

MAXIMUM CONTINUANCE OF DAYS WITHOUT PRECIPITATION

Year	From		To		No.of	Remarks
	Day	Month	Day	Month	Days	
1902	3	June	10	June	8	
1903	26	Sept.	7	Oct.	12	1,3,7<0.1
1904	14	Aug.	29	Aug.	16	19,21,22<0.1
1905	9	Apr.	15	Apr.	7	
1906	19	May	26	May	8	
1907	20	July	1	Aug.	13	24<0.1
1908	12	Oct.	24	Oct.	13	
1909	15	July	24	July	10	21<0.1
1910	15	Apr.	24	Apr.	10	24<0.1
1911	18	Feb.	28	Feb.	11	18,21,23<0.1
1912	17	Oct.	23	Oct.	7	22,23<0.1
1913	1	Aug.	9	Aug.	9	
1914	31	Aug.	10	Sept.	11	2,7,8<0.1
1915	15	July	22	July	8	
1916	11	Aug.	22	Aug.	12	
1917	16	July	2	Aug.	18	22(≡)0.1
1918	23	July	29	July	7	
1919	9	July	18	July	10	18<0.1
1920	27	May	3	June	8	
1921	2	Apr.	10	Apr.	9	
Absolute	16	July (1917)	2	Aug. (1917)	18	22(≡)0.1

FIVE DAY MEANS.

Month	Period	Air Press.	Air Temp.	Tension of Vapour	Relative Humidity	Amount of Cloud	Velocity of Wind	Amount of Precip.
January	1— 5	56.4	-2.2	3.2	81.5	7.4	4.1	11.7
	6–10	57.5	-2.0	3.2	79.2	7.0	4.1	9.7
	11—15	56.6	-2.0	3.2	80.8	7.6	3.8	11.9
	16 20	55.8	-2.2	3.2	81.0	7.4	4.2	13.5
	21—25	56.8	-2.7	3.1	80.7	7.2	4.0	12.0
	26–30	57.4	-2.9	3.0	80.1	7.3	3.7	8.9
February	31— 4	56.3	-2.6	3.1	81.1	7.3	3.4	11.8
	5 - 9	56.2	-2.8	3.1	79.9	7.5	3.6	7.7
	10 14	56.1	-2.6	3.0	77.7	7.1	4.4	8.5
	15 19	56.8	-1.5	3.3	78.3	7.3	4.0	10.1
	20—24	57.0	-1.9	3.2	78.0	6.7	3.9	8.5
	25 - 1	57.1	-0.5	3.5	77.7	7.2	4.1	15.7
March	2-- 6	55.9	-0.5	3.4	76.4	7.2	4.6	9.9
	7–11	56.8	1.1	3.8	75.0	6.6	4.3	13.0
	12—16	56.3	1.0	3.8	74.4	7.5	4.3	12.8
	17—21	56.8	2.3	4.0	74.3	6.8	4.6	10.4
	22—26	56.7	2.9	4.3	74.3	7.3	4.5	11.7
	27 -31	59.1	3.8	4.4	73.7	6.6	4.4	11.5
April	1— 5	58.1	5.6	5.1	74.7	7.1	4.7	20.7
	6—10	56.7	6.8	5.4	72.4	6.6	4.8	12.1
	11—15	56.2	8.1	5.8	71.9	6.8	5.0	15.2
	16–20	55.7	8.9	5.9	70.6	6.4	5.0	13.7
	21—25	56.1	9.7	6.3	75.6	6.4	4.6	14.9
	26—30	55.3	10.7	6.9	72.0	6,9	4.9	13.4
May	1— 5	55.3	11.5	7.2	71.9	7.0	4.6	21.5
	6 -10	54.2	12.1	7.6	72.5	6.8	4.5	16.9
	11—15	53.3	12.0	7.8	75.1	7.6	4.4	19.6
	16 - 20	53.2	13.5	8.5	75.0	6.9	4.4	23.0
	21 - 25	53.3	13.3	8.3	73.3	6.3	4.1	6.3
	26 - 30	53.8	15.1	9.7	77.0	7.4	4.0	15.0
June	31 - 4	53.5	15.8	10.2	76.7	6.9	3.9	7.4
	5— 9	52.1	17.0	10.9	76.6	6.7	3.7	25.0
	10 - 14	53.5	17.4	11.6	79.9	8.2	3.4	24.0
	15 - 19	51.5	17.8	12.5	82.3	8.2	3.5	27.5
	20 - 24	51.5	18.5	12.6	79.1	8.1	3.5	20.9
	25 - 29	50.4	19.2	13.6	82.1	8.4	3,1	33.8
July	30 — 4	51.3	19,6	14.0	82.2	8.5	3.4	35.4
	5— 9	51.8	19.7	14.3	83.4	8.6	3.4	23.7
	10 - 14	52.7	21,2	15.8	84.3	8.7	3.5	24.9
	15 - 19	53.0	22.3	16.7	84.2	8.2	3.2	26.2
	20 - 24	52.7	22.7	16.8	82.6	7.9	3.3	18.0
	25 - 29	52.2	23.4	17.6	83.8	8.1	3.2	21.2
August	30 — 3	51.8	23.2	17.5	84.0	8.3	3.4	24.9
	4— 8	51.1	23.8	18.2	84.1	7.9	3.5	28.7
	9—13	52.3	23.6	18.1	83.3	7.4	2.7	30.6
	14 - 18	52.2	22.4	16.7	83.0	7.6	3.2	24.6
	19—23	53.4	21.9	16.8	85.1	7.9	2.7	21.8
	24 - 28	54.0	22.1	16.7	84.8	7.7	2.8	30.8
September	29 — 2	54.1	21.7	16.6	84.8	7.8	2.7	27.2
	3— 7	54.3	21,3	16.3	86.7	8.3	2,5	26.0
	8—12	54.5	19.8	14.4	84.2	7.9	2.9	21.2
	13 - 17	55.0	18.5	13.5	85.1	8.0	2.8	24.3
	18—22	55.8	17.7	12.9	85.4	8.1	2.8	28.9
	23 - 27	57.2	16.2	11.7	84.3	7.7	2.7	30.1
October	28— 2	56.6	15.4	10.6	83.0	7.4	2.8	23.3
	3— 7	57.4	14.1	10.2	85.0	7.6	2.5	24.6
	8—12	57.6	13.2	9.3	81.5	7.1	2.9	21.8
	13—17	58.1	13.1	9.5	84.4	7.2	2.6	30.2
	18—22	57.6	11.8	8.6	82.4	6.8	2.8	16.0
	23—27	59.1	10.2	7.6	81.6	6.2	2.8	11.6
November	28— 1	58.6	8.9	6.9	79.4	6.5	3.0	9.4
	2 - 6	58.4	8.0	6.6	81.2	6.3	3.2	13.9
	7—11	57.6	6.6	5.9	89.8	6.7	3.4	14.0
	12—16	59.7	6.0	5.7	80.4	6.1	3.1	8.9
	17 - 21	58.5	5.4	5.6	81.2	7.1	3.5	14.7
	22 - 26	58.9	4.5	5.2	80.5	6.8	3.6	17.2
December	27— 1	58.2	3.3	4.6	79.5	7.3	3.9	12.2
	2 - 6	58.0	2.0	4.3	80.8	6.6	3.8	8.8
	7 - 11	57.7	1.5	4.1	78.8	6.7	4.7	11.1
	12—16	56.8	0.2	4.0	81.7	6.6	3.8	11.2
	17 - 21	56.1	-0.5	3.6	80.1	7.2	3.8	12.4
	22 - 26	56.0	-1.3	3.5	81.4	7.4	3.6	10.5
	27 - 31	56.3	-1.6	3.3	82.1	7.0	3.9	12.3

NO. OF DAYS WITH MINIMUM AIR TEMP. <0° C

Year \ Month	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Sum	First Date	Last Date	Interval Days
Mean	1.0	11.1	27.0	29.7	27.4	23.5	6.9	0.8	127.2	29.1 Oct.	29.7 Apr.	184.3

NO. OF DAYS WITH MEAN AIR TEMP. <0°

Mean	—	1.3	15.2	23.6	21.4	8.6	0.3	—	70.3	2.9 Dec.	20.8 Mar.	109.9

NO. OF DAYS WITH MAXIMUM AIR TEMP. <0°

Mean	—	0.2	3.7	8.8	5.8	1.9	—	—	20.3	12.8 Dec.	25.6 Feb.	75.5

NO. OF DAYS WITH MAXIMUM AIR TEMP. >25°

Year \ Month	Apr.	May	June	July	Aug.	Sept.	Oct.	Sum	First Date	Last Date	Interval Days
Mean	0.3	2.6	8.5	19.6	24.8	9.8	0.1	65.6	17.4 May	22.8 Sept.	128.3

NO. OF DAYS MAXIMUM AIR TEMP. >30°

Mean	—	0.1	0.5	5.1	8.1	0.9	—	14.6	4.7 July	27.1 Aug.	55.4

NO. OF DAYS MEAN AIR TEMP. >25°

Mean	—	—	—	4.4	6.6	0.4	—	11.3	17.7 July	20.9 Aug.	35.2

HOAR FROST

Year \ Month	First Day		Last Day		Interval	Year \ Month	First Day		Last Day		Interval Days
	Day	Month	Day	Month			Day	Month	Day	Month	
Mean	16.2	Oct.	7.2	May	205.3	Absolute	11	Sept. (1902)	27	May (1904)	260

SNOW

Mean	13.6	Nov.	9.5	Apr.	147.3	Absolute	25	Oct. (1919)	10	May (1917)	198

SNOW ON GROUND

Mean	4.6	Dec.	17.1	Mar.	102.4	Absolute	25	Oct. (1919)	13	Apr. (1902)	171

AMOUNT OF EVAPORATION (mm)

Year \ Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Open Air (1916—1921)													
Mean	1.8	2.2	2.9	4.1	4.8	5.3	5.8	5.3	4.0	2.4	1.7	1.7	3.5
in the Shelter (1917–1921)													
Mean	0.8	0.9	1.0	1.5	1.6	1.5	1.7	1.4	1.0	0.9	0.8	0.9	1.2

HARMONIC CONSTANTS DERIVED FROM THE ABOVE DATA.

DIURNAL

AIR PRESSURE (mm)

January	756.77+0.30	Sin (16°+x)	+0.43	Sin (180°+2x)
February	756.62+0.24	18°	+0.44	178
March	756.99+0.31	29	+0.48	177
April	756.24+0.56	21	+0.46	176
May	753.93+0.53	28	+0.40	181
June	751.85+0.44	26	+0.35	177
July	752.23+0.37	30	+0.34	176
August	752.65+0.42	26	+0.40	174
September	755.38+0.42	27	+0.43	179
October	757.90+0.33	33	+0.51	184
November	758.66+0.27	23	+0.47	187
December	756.83+0.24	10	+0.45	181
Annual	755.52+0.37	25	+0.43	180

AIR TEMPERATURE (°C)

January	−2.37+2.06	Sin (231°+x)	+0.79	Sin (58°+2x)
February	−2.00+2.47	229	+0.86	64
March	1.68+2.94	231	+0.91	75
April	8.32+4.19	232	+1.04	78
May	12.97+4.49	236	+0.77	80
June	17.74+3.68	235	+0.50	67
July	21.63+3.13	234	+0.54	65
August	22.75+3.23	237	+0.81	63
September	18.56+3.18	238	+1.02	72
October	12.23+3.50	235	+1.30	65
November	5.74+2.83	233	+1.06	62
December	0.12+1.93	236	+0.77	59
Annual	9.78+3.14	234	+0.86	68

EARTH SURFACE TEMPERATURE (°C)

January	−0.72+0.69	Sin (223°+x)	+0.27	Sin (43°+2x)
February	−0.39+1.02	225	+0.49	41
March	3.27+3.47	234	+1.50	47
April	9.94+5.74	238	+1.94	73
May	15.30+6.25	242	+1.94	78
June	20.34+5.54	242	+1.58	74
July	24.25+5.02	241	+1.50	68
August	25.51+5.02	242	+1.74	67
September	20.60+4.02	241	+1.50	71
October	13.74+3.57	239	+1.47	68
November	6.43+2.79	237	+1.23	58
December	0.89+0.97	231	+0.59	42
Annual	11.60+3.67	239	+1.23	66

ANNUAL

AIR PRESSURE (mm)

755.52+2.69 Sin (92°+x) +1.44 Sin (242°+2x)

AIR TEMPERATURE (°C)

9.79+ 12.39 Sin (243°+x) +0.68 Sin (311°+2x)

EARTH TEMPERATURE (°C)

Surface

11.60+13.11 Sin (244°+x) +0.87 Sin (232°+2x)

0.3 Metres below the Surface

11.70+10.81 Sin (235°+x) +0.55 Sin (327°+2x)

1 Metres below the Surface

12.03+ 8.02 Sin (216°+x) +0.46 Sin (303°+2x)

3 Metres below the Surface

12.05+ 2.43 Sin (149°+x) +0.10 Sin (226°+2x)

6 Metres below the Surface

12.05+ 0.76 Sin (83°+x) +0.02 Sin (147°+2x)

AMOUNT OF PRECIPITATION (mm)

17.76+ 8.71 Sin (233°+x) +1.73 Sin (1°+2x)

AMOUNT OF CLOUD (0-10)

7.30+ 0.49 Sin (243°+x) +0.47 Sin (33°+2x)

RELATIVE HUMIDITY (%)

79.73+ 4.95 Sin (183°+x) +2.54 Sin (35°+2x)

TENSION OF VAPOUR

8.46+ 6.75 Sin (237°+x) +1.66 Sin (13°+2x)

All diurnal terms are reckoned from the midnight.

All annual terms are reckoned from the beginning of Year.