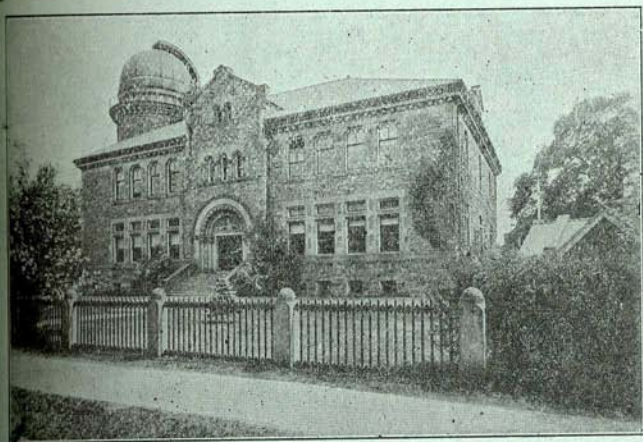


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DEPARTMENT OF MARINE AND FISHERIES
DOMINION OF CANADA.

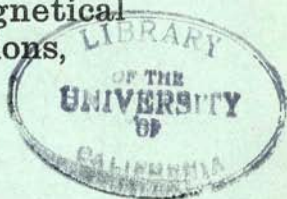
TORONTO OBSERVATORY



**Results of Meteorological, Magnetical
and Seismological Observations,
1922.**

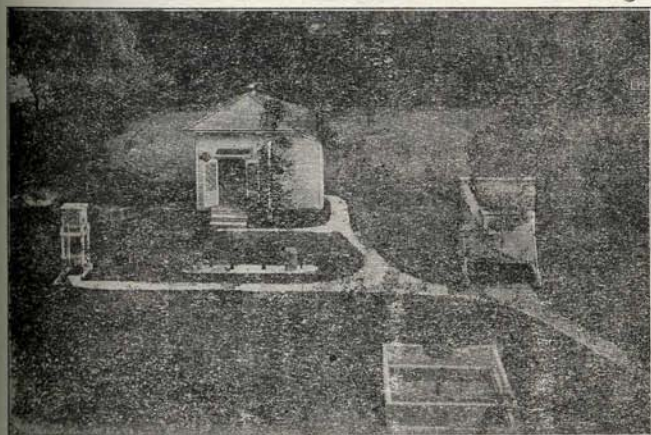
Published under the direction of
Sir Frederic Stupart, F.R.S.C.,
Director of the Meteorological Service, Toronto.

PRINTED BY THE OBSERVATORY PRESS,
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TORONTO OBSERVATORY.

Lat. 43° 40' 0".8 N. Long. 5h. 17m. 35.6s. W. The observations are taken at 75th meridian time. Height of barometer cistern 379 feet above sea level. Height at the old Observatory 350 feet.

BAROMETER—Readings given, are taken from the photographic barograph, and are the means of the 24-hour readings of each day. A correction has been employed to reduce these readings to the original height of the standard barometer in the old Observatory building, so as to make them comparable with previous Toronto registers. Capillarity and gravity corrections have been omitted.

TEMPERATURE—Adopted means are taken from the max. and min. of the thermometers in the Stevenson Screen. Extremes are also from the same screen. The 24-hour means are taken from the photographic thermograph, where the tubes are four feet above the ground.

On August 31st, after 8 p.m., the thermometers were removed from the old Stevenson shed and placed in a similar shed on the lower lawn some 70 feet further from the stone building and subsequent readings are from this shed.

HUMIDITY.—Means are taken from a Julien Friez Hygrometer and are from the 24-hour readings.

WIND—Direction and velocity are from the anemometer at the Eastern Gap on the Island, where the cups revolve at a height of 50 feet above the lake level.

GALE—A velocity of 32 miles and over.

CLEAR DAY—When the mean from six observations is below 0.2.

CLOUDY DAY—When the mean from six observations is above 0.8.

AURORA—Observations have been rendered doubtful owing to the large number of electric lights in the city.

Weather Synopsis for 1922.

JANUARY. Quite cold on the 1st and much more so on the 2nd, the minimum falling to -1.4° . On the 3rd it became much warmer and the mean daily temperature continued well above normal to the 21st, with 46° recorded on the 5th and 40° on the 8th, 9th and 10th. From the 22nd to the 28th winter conditions prevailed, but the last three days were mild, temperature readings being above 35° . The monthly mean was 1.4° above normal. There was a large percentage of cloudy weather; rainfall was slightly in defect, and although snow was frequent the monthly fall was 8 inches below the normal. Winds were strong throughout the month, particularly up to the 23rd, velocity exceeding 30 miles on seven days. A velocity of 50 miles was registered on the 23rd from southwest and west. In sheltered spots there were patches of snow on the ground at the end of the month.

FEBRUARY. A very mild, cloudy month with some rapid temperature changes. The first eleven days were decidedly mild. 40° was recorded on the 2nd and 44° on the 11th. Much colder weather set in during the latter night, continuing to the 17th. Minimums of -5° and -7° were recorded on the 16th and 17th. It became warmer again on the 18th and continued quite mild to the 27th, except on the 24th; 45° was recorded on the night of the 19th, but temperature then rapidly fell to 4° next morning. The 28th was fairly cold. Bright sunshine was above normal, although there were 14 cloudy days. Snowfall was 4 inches below normal; 6 inches fell on the 22nd. Rainfall was 0.77 inch above normal, being quite heavy on the 1st and 22nd. On the latter date it turned at times to heavy sleet with an easterly gale. Strong winds prevailed throughout the month, with 3 gales recorded. Velocities of 48 miles east and 49 miles west were registered on the 1st and 23rd. A thunderstorm from 17.15 to 18.30 hours was rather unusual for February. About two inches of crusted snow remained on the ground at the end of the month.

MARCH. A mild month with bright sunshine considerably in excess. Excepting the 1st and 2nd, mild weather prevailed up to the 16th; 52° was recorded on the 6th and 58° on the 14th. A change to colder weather came on the 17th with blustery north and northwest winds, and it continued cold to the 18th, when the temperature fell to 13°. This was followed by another mild period, and excepting the 22nd and 23rd, maximum readings up to the 28th were well above 45°. 52° was recorded on the 28th. The last three days were much colder. Relative humidity was 5 per cent below normal. Winds were strong, general direction being east. A 50-mile easterly gale was recorded on the 30th and the 31st. On the 30th 0.55 inch of rain fell and 8.5 inches of snow, trees and shrubs being coated with ice. Rainfall on the 31st was 0.42 inch, the monthly total being somewhat above normal and the snowfall slightly so. Snow on the ground at the end of the month, 4 inches.

APRIL. Comparatively mild. After the 2nd it became much warmer. Maximum readings from the 7th to the 11th were well above 60°; 78° was recorded on the 10th, and the daily mean was 21.4° above the normal for the day. It was much colder from the 12th to the 14th, followed by higher temperature to the 19th, and 75° was recorded on the 17th and 63° on the 18th. After this date alternate cold and warm waves followed one another to the end of the month. It was decidedly cold from the 20th to the 23rd and on 27th and 28th. Bright sunshine was 24 hours below the normal, and there were many cloudy days during the first half of the month. Winds were generally strong throughout, chiefly from northwest, and westerly gales were recorded on the 18th and 20th. Rains were general for the first 20 days, but none fell during the rest of the month. The total was above normal; 1.61 inches fell on the 11th and 0.84 inch on the 17th. There were three thunderstorms.

MAY. Warm and pleasant with a mean daily temperature each day above normal. There were no extreme maximum readings, 80° being the highest on the 31st. The coolest portion of the month was the 18th to the 19th, when heavy northeast and easterly winds were blowing. There were many clear, bright days with recorded sunshine in excess of normal. Relative humidity was five per cent below normal and an unusual reading of 20 was recorded on the 10th. Rainfall was 1.5 inches below normal, with no excessive falls. Marked dry periods extended from the 1st to 2nd, 9th to 16th, and except on the 25th, when a

thunderstorm occurred, none fell to the end of the month. Prevailing wind direction was northeast, and strong winds were prevalent on four days.

JUNE. The first 11 days were generally fine and very warm; 91° was recorded on the 7th, 87° on the 8th and 85° on the 9th. Much cooler from the 12th to the 16th, temperature falling to 45° on the 13th. From the 17th to the 24th daily means were well above normal, 84° was recorded on the 23rd and 89° on the 24th. A marked change to much cooler weather set in with strong northwest winds on the morning of the 25th, and the following two days were quite cool, temperature falling to 45° on the morning of the 26th. The last three days were much warmer, 83° being recorded on the 29th and 30th. The monthly mean was well above normal. Bright sunshine was slightly in excess. Rainfall was 4.4 inches above normal, the greater portion falling in thunderstorms. Three on the 9th gave 1.37 inches; 10th, 0.47 inches; 11th, 0.60 inches; 16th, 1.45 inches and 17th, 0.63 inches. Wind squalls generally attended the thunderstorms, and barometric changes after noon of the 16th were very rapid, particularly a rise at 2.02 on the 17th of 0.1 inch in a few minutes, regaining its former reading more slowly. This was attended by a severe squall, the wind attaining a velocity of 60 miles, preceded by east and northeast winds 26 to 30 miles.

JULY. There were no extreme temperature departures from the normal daily means. The coolest period was from the 3rd to the 6th, with minimums on the 5th and 6th of 53° and 50°. On 12 days 82° and over were recorded, with maximums of 87° and 85° on the 11th and 30th. The monthly mean was 1.7° above normal. Vapour tension readings were very high on the 1st, 10th, 11th, 16th, 17th. There were many bright, clear days, and recorded sunshine was considerably in excess of normal. Rainfall, fairly well distributed to the 23rd, then none fell until the 31st, and although excessive falls were recorded during eight thunderstorms, the monthly total varied little from normal. The heaviest falls were 1.17 inches during two thunderstorms on the 1st. On the 23rd very heavy showers in the morning totalled 0.58 inches, and half an inch fell on the 17th at 10.40 in ten minutes. Winds were generally light to fresh from southwest, but violent squalls in the evening of the 11th accompanied the rainstorm from 18.05 to 18.15, and some sharp gusts were recorded during a thunderstorm on the following evening.

AUGUST. Temperatures varied little from normal during the first week. The next four days were very cool and like fall, with east and northeast winds, minimum registering 49° on the 9th. A period of very warm weather then continued to the 18th. From the 14th to the 18th maximums over 87° were recorded, touching 93° on the 16th. Night temperatures, however, during this period, excepting the 17th, fell to 63°. Becoming cooler on the 19th, temperature fell to 51° on the 21st, but the next four days were again very warm, 84° was recorded on the 22nd and 85° on the 23rd and 24th. The minimum on the latter day never fell below 69°. From the 25th to the end of the month it was quite cool. Vapour tension readings were over 0.70 inch on the 15th, 17th and 20th. There was a large percentage of clear weather, with only three completely cloudy days. Rainfall was 1.3 inches below the normal, and marked dry periods extended from the 8th to the 15th, 17th to the 22nd, 26th to the 28th, and the last two days of the month. The heaviest, 0.90 inches, fell on the 26th, during a thunderstorm. In fact, all falls, excepting the 29th, fell during thunderstorms.

SEPTEMBER. Warm, with bright sunshine 16 hours above normal. Daily mean temperature during the first ten days ranged from 1° above normal on the 1st to 15° on the 10th. Maximums were over 85° on five days, and 93° was recorded on the 3rd. Minimums, however, were not very high. A series of thunderstorms developed on the night of the 10th and temperature fell rapidly. With the exception of the 17th it continued quite cool to the 18th, with minimums of 46° on the 17th and 18th. It was much warmer from the 19th to the 24th, with 79° recorded on the 22nd and 81° next day. On the 25th and 26th minimums fell to 27° and 35° and white frosts were noted. The four last days of the month were quite warm, 77° being registered during the last two days. Vapour tension readings were 0.75 inch on the 8th, 9th and 10th, which with bright sunshine and very little wind made the weather physically trying. It rained almost every day from the 5th to the 15th, but none from the 19th to the end of the month. The total fall averaged a little less than normal, and the greater portion fell during thunderstorms on five days. That on the 10th at 8.55 p.m. was severe, 1.30 inches of rain falling during the storm and 0.95 inch next day.

OCTOBER. Monthly mean temperature was 3.2° above normal, owing chiefly to the warm weather during the first 16 days (excluding the 12th and 13th, which were quite cool, temperature falling to 29° on the 13th); 81° was recorded on the 4th and 83.4° on the 5th. It became much cooler on the 17th with heavy northwest winds, the temperature falling to 25° on the 20th and 21st. Alternate warm and cold waves then continued to the end of the month. Sharp frosts were noted on the last five days. There was a good percentage of clear weather throughout the month. Rainfall was considerably below normal. A wet period set in on the 7th, continuing to the 12th, with many east and northeast winds. Very little rain fell during the latter part of the month. Fresh to strong winds were prevalent throughout the month, and on seven days 30 miles were exceeded.

NOVEMBER. A mild, cloudy month, only eight days with temperature below the daily normal. There was practically no very cold weather until the 24th. On 13 days 50° was exceeded, 61° was registered on the 11th and 60° on the 17th. The coldest portions of the month were 21st, 22nd and 24th to 26th, with minimums of 22° and 21° on the 25th and 26th. The terrestrial fell to 14° on the latter morning. On the last day of the month the temperature never fell below 38°. Owing to the very warm weather buds on lilac trees were noted on the 18th. Bright sunshine was considerably in defect. Ten days rain gave a total of 1.5 inches below normal. Snowfall was slightly in excess. Light snow commenced on the 22nd, with moderate falls off and on to the 27th. On the 25th the ground was partly covered with snow, this being the first real winter day of the season.

DECEMBER. Comparatively mild. After a maximum temperature of 60.4° on the 1st, the weather became much colder, temperature falling to 17° on the 6th and to 9° and 6° on the 18th and 19th. Warm and cold waves then followed one another to the end of the month; 42° was recorded on the 26th and 31st, and the minimum fell to 8° on the 29th. Although there were 15 cloudy days, monthly sunshine was 21 hours above normal. Total precipitation was 1.1 inch below normal. Light snowfalls were general to the 27th, and five inches fell on the 28th. Gales were recorded on nine days, maximum velocity 51 miles west on the 12th.

J. Y.

Meteorological Report.

January, 1922.

Results of Observations Taken During the Month

			Mean for 70 years.
BAROMETER	— Mean reading, 32 F. inches	29.768	29.647
"	Highest on 25th at 9.25h	30.337	30.271
"	Lowest on 9th at 17h	29.125	28.913
"	Range	1.212	1.358
TEMPERATURE	— Highest (S) (5th)	45.7	44.9
"	Lowest (S) (2nd)	-1.4	-6.8
"	Range for the month (S)	47.1	51.7
"	Mean from max. and min. (S)	23.2	*21.9
"	Mean from 24 hourly observations (P)	22.4	:21.8
"	Mean of highest readings (P)	29.2	
"	Mean of lowest readings (P)	16.3	
"	Mean daily range (P)	12.9	
"	Warmest day (P) (5th)	34.5	
"	Coldest day (P) (2nd)	6.0	
"	Range between warmest and coldest (P)	28.5	
"	Highest solar (black bulb in vacuum (29th)	96.8	
"	Lowest radiation (2nd)	-3.7	
"	Monthly range	100.5	
HUMIDITY	— Mean	73	83
RAINFALL	— Total (inches)	0.48	1.14
"	Heaviest fall (4th) "	0.46	
"	No. of days on which rain fell	2	4.9
SNOWFALL	— Total fall inches	9.0	17.3
"	Heaviest fall (26th) "	2.4	
"	No. of days on which snow fell	11	14.2
CLOUD	— Mean amount of (0-10)	.63	.74

*1840—1898 †1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—January (Continued)

WINDS	— Mean velocity	15.3 miles
"	Highest velocity, 22nd at 8 hrs. from west,	50 "
"	Highest daily average velocity (22nd)	32.1 "
"	Lowest " " " (2nd)	7.3 "
"	Days on which gales occurred	7

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	81	149	59	27	15	134	193	86	0	744

No. of miles registered from each direction.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	648	1659	917	341	147	2505	4036	1099	—	11352

Rain on 4th, 5th. Snow on 1st, 2nd, 3rd, 4th, 11th, 13th, 15th, 18th, 21st, 24th, 26th. Fog on 4th, 19th, 31st. Clear days 2. Cloudy days 9.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1866 (8th)	30.940 inch.
"	Lowest reading, 1870 (2nd)	28.166 "
Temperature	— Highest, 1874 (4th), 1876 (1st)	57.5°
"	Lowest, 1859 (10th)	-26.5°
"	Highest daily mean (during 42 yrs) 1906 (22nd)	49.6°
"	Lowest daily mean, (during 42 yrs) 1914 (13th)	-15.2°
"	Highest monthly mean, 1880	32.7°
"	Lowest monthly mean, 1857	12.8°
Rainfall	— Greatest fall, 1843	4.30 in.
"	Least fall, 1852-56, 1918-20	0 "
"	Greatest fall for 24 hours, 1843 (31st)	2.50 "
"	Greatest number of days rain fell, 1890	14
Snowfall	— Greatest fall, 1871	43.6 in.
"	Least fall, 1916	3.1 "
"	Greatest for 24 hours, 1873 (5th)	15.3 "
"	Greatest No. days snow fell 1861-71-93	23
"	Least No. days snow fell, 1847	5

February, 1922.

<i>Results of Observations Taken During the Month</i>		Mean for 70 years.	
BAROMETER	— Mean reading, 32 F. inches	29.696	29.638
"	Highest on 28th at 23.48h	30.259	30.226
"	Lowest on 2nd at 12.03h	28.922	28.945
"	Range	1.337	1.281
TEMPERATURE	— Highest (S) (23rd)	47.6	44.3
"	Lowest (S) (17th)	-7.0	-7.1
"	Range for the month (S)	54.6	51.4
"	Mean from max. and min. (S)	26.5	*22.5
"	Mean from 24 hourly observations (P)	25.5	‡21.0
"	Mean of highest readings (P)	32.3	
"	Mean of lowest readings (P)	18.5	
"	Mean daily range (P)	13.8	
"	Warmest day (P) (19th)	37.1	
"	Coldest day (P) 16th	3.5	
"	Range between warmest and coldest (P)	33.6	
"	Highest solar (black bulb in vacuum (15th)‡)	97.4	
"	Lowest radiation (17th)	-11.0	
"	Monthly range	108.4	
HUMIDITY	— Mean	76	81
RAINFALL	— Total (inches)	1.70	0.93
"	Heaviest fall (22nd)	0.69	
"	No. of days on which rain fell	7	4.7
SNOWFALL	— Total fall (inches)	12.5	16.5
"	Heaviest fall (22nd)	6.1	
"	No. of days on which snow fell	14	12.4
CLOUD	— Mean amount of (0-10)	.63	.76

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—February (Continued)

WINDS	— Mean velocity	15.0 miles
"	Highest velocity, 23rd at 19 hrs. from west,	49 "
"	Highest daily average velocity (3rd)	25.3 "
"	Lowest " " " (24th)	10.0 "
"	Days on which gales occurred	3

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	29	35	103	31	15	126	217	112	4	672
No. of miles registered from each direction.	331	529	1848	373	143	1680	3299	1874	—	10077

Rain on 1st, 2nd, 5th, 11th, 19th, 22nd, 23rd. Snow on 2nd, 3rd, 4th, 6th, 7th, 9th, 12th, 13th, 17th, 18th, 19th, 21st, 22nd, 27th. Thunderstorms on 19th. Fog on 1st, 6th, 10th, 11th, 19th, 23rd. Lunar halo 11th. Clear days 4. Cloudy days 12.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1887 (4th)	30.522 inch.
"	Lowest reading, 1918 (25th)	28.346 "
Temperature	— Highest, 1890 (4th)	53.8°
"	Lowest, 1855 (5th)	-25.4°
"	Highest daily mean (during 42 yrs) 1906 (24th)	44.1°
"	Lowest daily mean, (during 42 yrs) 1895 (6th)	-11.9°
"	Highest monthly mean, 1882	30.3°
"	Lowest monthly mean, 1875	10.2°
Rainfall	— Greatest fall, 1842	3.63 in.
"	Least fall, 1841-46-56-73-77, 1901-16	0 "
"	Greatest fall for 24 hours, 1855 (13th)	1.71 "
"	Greatest number of days rain fell, 1857	11
Snowfall	— Greatest fall, 1846	46.1 in.
"	Least fall, 1851	2.4
"	Greatest for 24 hours, 1863 (5th)	16.0 "
"	Greatest No. days snow fell 1843	21
"	Least No. days snow fell, 1851	4

March, 1922.

Results of Observations Taken During the Month		Mean for 70 years.	
BAROMETER	— Mean reading, 32 F. inches	29.703	29.609
"	Highest on 1st at 9.05 h	30.270	30.129
"	Lowest on 20th at 8.09h	28.946	28.919
"	Range	1.324	1.210
TEMPERATURE	— Highest (S) (14th)	58.2	52.1
"	Lowest (S) (18th)	13.2	-2.6
"	Range for the month (S)	45.0	54.7
"	Mean from max. and min. (S)	34.2	*28.7
"	Mean from 24 hourly observations (P)	33.3	±29.1
"	Mean of highest readings (P)	40.4	
"	Mean of lowest readings (P)	26.6	
"	Mean daily range (P)	13.8	
"	Warmest day (P) (14th)	45.8	
"	Coldest day (P) 17th	20.1	
"	Range between warmest and coldest (P)	25.7	
"	Highest solar (black bulb in vacuum (22nd)	111.7	
"	Lowest radiation (3rd)	8.8	
"	Monthly range	102.9	
HUMIDITY	— Mean	73	78
RAINFALL	— Total (inches)	2.05	1.50
"	Heaviest fall (30th)	0.55	
"	No. of days on which rain fell	10	6.7
SNOWFALL	— Total fall (inches)	11.6	11.5
"	Heaviest fall (30th)	8.5	
"	No. of days on which snow fell	4	10.4
CLOUD	— Mean amount of (0-10)	.51	.67

*1840—1898 †1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—March (Continued)

WINDS	Mean velocity	13.8 miles
"	Highest velocity, 31st at 19 hrs. from east,	50 "
"	Highest daily average velocity (30th)	34.3 "
"	Lowest " " " (24th)	5.0 "
"	Days on which gales occurred	3

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.	Totals.
	68	119	158	26	31	103	93	145	1	744

No. of miles registered from each direction.	699	1697	3110	185	257	898	972	2415	—	10233
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Rain on 6th, 7th, 19th, 20th, 25th, 26th, 27th, 28th, 30th, 31st. Snow on 1st, 2nd, 21st, 30th. Fog on 7th, 28th. Lunar halo on 9th. Solar halo on 18th. Clear days 4. Cloudy days 7.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1906 (24th)	30.508	inch.
"	Lowest reading, 1859 (19th)	28.286	"
Temperature	— Highest, 1910 (28th)	75.2°	
"	Lowest, 1868 (3rd)	-15.6°	
"	Highest daily mean (during 42 yrs) 1910 (30th)	58.1°	
"	Lowest daily mean, (during 42 yrs) 1885 (17th)	-0.4°	
"	Highest monthly mean, 1903	38.9°	
"	Lowest monthly mean, 1885	18.5°	
Rainfall	— Greatest fall, 1859	4.05	in.
"	Least fall, 1856, 1889	0	"
"	Greatest fall for 24 hours, 1881 (19th)	1.72	"
"	Greatest number of days rain fell, 1878 and 1921	17	
"	Least number days rain fell, 1856-89	0	
Snowfall	— Greatest fall, 1870	62.4	in.
"	Least fall, 1858, 1903	0.2	
"	Greatest for 24 hours, 1876 (28th)	16.2	"
"	Greatest No. days snow fell 1877	21	
"	Least No. days snow fell, 1895-1898	1	

April, 1922.

<i>Results of Observations Taken During the Month</i>		Mean for 70 years.
BAROMETER — Mean reading, 32 F. inches	29.654	29.600
“ Highest on 24th at 10 h	30.110	30.073
“ Lowest on 11th at 12.04h	28.757	29.040
“ Range	1.353	1.033
TEMPERATURE—Highest (S) (10th)	77.8	68.3
“ Lowest (S) (21st)	24.6	19.6
“ Range for the month (S)	53.2	48.7
“ Mean from max. and min. (S)	45.4	*41.2
“ Mean from 24 hourly observations (P)	44.0	‡42.1
“ Mean of highest readings (P)	54.0	
“ Mean of lowest readings (P)	35.9	
“ Mean daily range (P)	18.1	
“ Warmest day (P) (10th)	60.6	
“ Coldest day (P) 20th	32.4	
“ Range between warmest and coldest (P)	28.2	
“ Highest solar (black bulb in vacuum (10th)	126.0	
“ Lowest radiation (21st)	19.0	
“ Monthly range	107.0	
HUMIDITY — Mean	70	70
RAINFALL — Total (inches)	3.60	2.15
“ Heaviest fall (11th)	1.61	
“ No. of days on which rain fell	13	9.9
SNOWFALL — Total fall (inches)	0.2	2.5
“ Heaviest fall 20th,	0.2	
“ No. of days on which snow fell	1	3.5
CLOUD — Mean amount of (0-10)	.55	.58

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—April (Continued)

WINDS — Mean velocity	13.1 mile
“ Highest velocity, 18th, at 5 hrs. from west,	42 “
“ Highest daily average velocity (20th)	29.4 “
“ Lowest “ “ “ (25th)	5.3 “
“ Days on which gales occurred	2

No. of hours in the month in which the wind was	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	C.	Totals.
	60	84	127	37	38	113	97	161	3	720

No. of miles registered from each direction.	575	1136	1519	219	278	1406	1701	2607	—	9,441
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Rain on 3rd, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 14th, 15th, 17th, 19th, 20th. Snow on 20th. Fog on 4th, 7th. Thunderstorm on 11th, 17th, 19th. Clear days 6. Cloudy days 7.

Extreme Readings

DURING 83 YEARS.

Barometer — Highest reading, 1897 (20th)	30.308 inch.
“ Lowest reading, 1863 (2nd), 1887 (28th)	28.704 “
Temperature— Highest, 1842 (22nd)	89.8°
“ Lowest, 1857 (2nd)	5.9°
“ Highest daily mean (during 42 yrs) 1915 (25th)	70.4°
“ Lowest daily mean, (during 42 yrs) 1919 (1st)	19.6°
“ Highest monthly mean, 1921	49.3°
“ Lowest monthly mean, 1874	34.2°
Rainfall — Greatest fall, 1910	4.90 in.
“ Least fall, 1881,	0.08 “
“ Greatest fall for 24 hours, 1850 (3rd)	2.35 “
“ Greatest number of days rain fell, 1871	17
“ Least number days rain fell, 1841-81	3
Snowfall — Greatest fall, 1857	12.9 in.
“ Least fall, 1843-56-58-70-87-88-90-91	0.1
“ Greatest for 24 hours, 1901 (20th)	8.3 “
“ Greatest No. days snow fell 1857	11
“ Least No. days snow fell, 1878-95-1900	0

May, 1922.

<i>Results of Observations Taken During the Month</i>		Mean for 70 years.
BAROMETER — Mean reading, 32 F. inches	29.597	29.577
“ Highest on 1st at 8.h	30.053	29.967
“ Lowest on 19th at 3.35h	28.822	29.153
“ Range	1.231	0.814
TEMPERATURE—Highest (S) (31st)	80.4	77.9
“ Lowest (S) (1st)	35.0	30.9
“ Range for the month (S)	45.4	47.0
“ Mean from max. and min. (S)	59.7	*52.4
“ Mean from 24 hourly observations (P)	59.2	‡53.4
“ Mean of highest readings (P)	70.0	
“ Mean of lowest readings (P)	49.0	
“ Mean daily range (P)	21.0	
“ Warmest day (P) (31st)	67.8	
“ Coldest day (P) 5th	50.8	
“ Range between warmest and coldest (P)	17.0	
“ Mean of dew point	45	
“ Highest solar (black bulb in vacuum (15th and 26th)	137.0	
“ Lowest radiation (8th)	29.0	
“ Monthly range	108.0	
FORCE OF VAPOUR—Mean	0.322	0.280
HUMIDITY — Mean	66	70
RAINFALL — Total (inches)	1.46	2.97
“ Heaviest fall (18th)	0.35	
“ No. of days on which rain fell	8	12.4
SNOWFALL — Total fall inches	0	0.1
“ No. of days on which snow fell	0	0.4
CLOUD — Mean amount of (0-10)	.38	.57

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—May (Continued)

WINDS — Mean velocity									9.5 miles
“ Highest velocity, 7th, at 13 hrs. from west, 18th at 23 hrs. from east									31 “
“ Highest daily average velocity (18th)									25.0 “
“ Lowest “ “ “ (22nd)									4.0 “
“ Days on which gales occurred									0

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	67	170	163	30	56	127	86	43	2	744

No. of miles registered from each direction.	440	2131	1624	199	478	1190	521	475	—	7,058
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Rain on 3rd 4th, 6th, 17th, 18th, 19th, 20th, 25th. Thunderstorm on 6th, 25th. Fog on 4th, 5th, 6th, 19th. Heavy dew on 6th, 23rd, 29th. Lunar halo 8th. Clear days 14. Cloudy days 6.

Extreme Readings

DURING 83 YEARS.

Barometer — Highest reading, 1849 (2nd)	30.241	inc 1.
“ Lowest reading, 1861 (6th)	28.644	“
Temperature—Highest, 1895 (30th)	93.4°	
“ Lowest, 1867 (3rd)	24.6°	
“ Highest daily mean (during 42 yrs) 1895 (30th)	80.9°	
“ Lowest daily mean, (during 42 yrs) 1911 (2nd)	34.1°	
“ Highest monthly mean, 1911	61.3°	
“ Lowest monthly mean, 1867	46.6°	
Rainfall — Greatest fall, 1894	0.37	in.
“ Least fall, 1920,	0.39	“
“ Greatest fall for 24 hours, 1894 (21st)	2.70	“
“ Greatest number of days rain fell, 1890	23	
“ Least number days rain fell, 1920	4	
Snowfall — Greatest fall, 1875	3.1	in.
“ Least fall, 1910 and 1913 to 1922	0	
“ Greatest for 24 hours, 1875 (1st)	3.0	“
“ Greatest No. days snow fell 1905	5	

June, 1922.

Results of Observations Taken During the Month		Mean for 70 years.	
BAROMETER	— Mean reading, 32 F. inches	29.585	29.572
	“ Highest on 26th at 8.h	29.860	29.909
	“ Lowest on 11th at 5.38h	29.061	29.165
	“ Range	0.799	0.744
TEMPERATURE	— Highest (S) (7th)	91.0	86.4
	“ Lowest (S) (13th)	44.8	40.1
	“ Range for the month (S)	46.2	46.3
	“ Mean from max. and min. (S)	66.7	*62.4
	“ Mean from 24 hourly observations (P)	65.7	‡64.0
	“ Mean of highest readings (P)	76.2	
	“ Mean of lowest readings (P)	56.2	
	“ Mean daily range (P)	20.0	
	“ Warmest day (P) (24th)	76.0	
	“ Coldest day (P) 13th	55.1	
	“ Range between warmest and coldest (P)	20.9	
“ Mean of dew point	55		
“ Highest solar (black bulb in vacuum (21st)	148.2		
“ Lowest radiation (26th)	40.0		
“ Monthly range	108.2		
FORCE OF VAPOUR	— Mean	0.452	0.418
HUMIDITY	— Mean	73	73
RAINFALL	— Total (inches)	4.92	2.76
	“ Heaviest fall (16th)	1.45	
	“ No. of days on which rain fell	10	11.7
CLOUD	— Mean amount of (0-10)	.51	.53

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—June (Continued)

WINDS	— Mean velocity	9.9 miles
“	Highest velocity, 11th, at 14 hrs. from northwest	33 “
“	Highest daily average velocity (11th)	23.3 “
“	Lowest “ “ “ (6th)	4.7 “
“	Days on which gales occurred	1

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.	Totals.
	69	133	105	41	46	119	83	122	2	720

No. of miles registered from each direction.	694	1273	862	239	332	1091	706	1949	—	7146

Rain on 1st, 2nd, 9th, 10th, 11th, 16th, 17th, 22nd, 27th, 30th.
Fog on 6th, 17th, 28th. Thunderstorm on 9th, 10th, 11th, 16th, 17th, 21st, 25th. Hail on 10th. Heavy dew on 13th, 20th, 30th.
Clear days 6. Cloudy days 8.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1913 (10th)	30.160	inch.
“	Lowest reading, 1902 (25th)	28.875	“
Temperature	— Highest, 1901 (27th)	97.1°	
“	Lowest, 1842 (10th)	28.1°	
“	Highest daily mean (during 42 yrs) 1901 (27th)	82.0°	
“	Lowest daily mean, (during 42 yrs) 1910 (5th)	44.8°	
“	Highest monthly mean, 1919	72.4°	
“	Lowest monthly mean, 1842	56.5°	
Rainfall	— Greatest fall, 1870	8.09	in.
“	Least fall, 1864	0.57	“
“	Greatest fall for 24 hours, 1892 (19th)	2.42	“
“	Greatest number of days rain fell, 1869	22	
“	Least number days rain fell, 1864	5	

Snowfall — Flurries on two days, 1859.

July, 1922.

<i>Results of Observations Taken During the Month</i>		Mean for 70 years.	
BAROMETER	— Mean reading, 32 F. inches	29.634	29.585
"	Highest on 14th at 10h	29.880	29.889
"	Lowest on 7th at 18.08h	29.287	29.420
"	Range	0.593	0.469
TEMPERATURE	— Highest (S) (11th)	87.2	89.8
"	Lowest (S) (6th)	50.3	47.5
"	Range for the month (S)	36.9	42.3
"	Mean from max. and min. (S)	69.5	*67.8
"	Mean from 24 hourly observations (P)	69.1	68.9
"	Mean of highest readings (P)	79.4	77.9
"	Mean of lowest readings (P)	59.3	58.2
"	Mean daily range (P)	20.1	19.7
"	Warmest day (P) (11th)	75.5	
"	Coldest day (P) 4th	62.1	
"	Range between warmest and coldest (P)	13.4	
"	Mean of dew point	58	
"	Highest solar (black bulb in vacuum (30th)	147.0	
"	Lowest radiation (6th)	47.0	
"	Monthly range	100.0	
FORCE OF VAPOUR	— Mean	0.508	0.488
HUMIDITY	— Mean	72	72
RAINFALL	— Total (inches)	2.97	3.04
"	Heaviest fall (1st)	1.17	
"	No. of days on which rain fell	10	11.2
CLOUD	— Mean amount of (0-10)	.34	.49

*1840—1898 †1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—July (Continued)

WINDS	— Mean velocity	8.3 miles
"	Highest velocity, 7th, at 20 hrs. from southwest	25 "
"	Highest daily average velocity (13th)	14.8 "
"	Lowest " " " (16th)	4.9 "
"	Days on which gales occurred	0

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	110	101	120	50	80	121	54	106	2	744

No. of miles registered from each direction.	872	771	1001	284	631	1034	456	1098	—	6147

Rain on the 1st, 3rd, 7th, 11th, 12th, 17th, 18th, 22nd, 23rd, 31st. Thunderstorm on 1st, 7th, 12th, 17th, 18th, 22nd, 30th. Aurora Class II. on 27th, Class IV. on 14th. Fog on 1st. Heavy dew on 5th, 6th, 7th 9th, 16th. 20th. Clear days 12. Cloudy days 2.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1892 (7th)	30.192 inch.
"	Lowest reading, 1911 (24th)	29.006 "
Temperature	— Highest, 1911 (3rd)	103.2°
"	Lowest, 1843 (12th)	38.7°
"	Highest daily mean (during 42 yrs) 1911 (3rd)	91.3°
"	Lowest daily mean, (during 42 yrs) 1891 (7th)	56.4°
"	Highest monthly mean, 1921	77.9°
"	Lowest monthly mean, 1884	64.0°
Rainfall	— Greatest fall, 1841	8.15 in.
"	Least fall, 1916	0.36 "
"	Greatest fall for 24 hours, 1897 (27th)	3.88 "
"	Greatest number of days rain fell, 1861, 1866-70-80, 1902, 1917	16
"	Least number days rain fell, 1849	4

August, 1922.

<i>Results of Observations Taken During the Month</i>		Mean for 70 years.		
BAROMETER	— Mean reading, 32 I ⁿ . inches	29.609	29.617	
	“ Highest on 14th at 9.48h	29.935	29.909	
	“ Lowest on 25th at 9.48h	29.051	29.257	
	“ Range	0.884	0.652	
TEMPERATURE	— Highest (S) (16th)	93.0	87.0	
	“ Lowest (S) (28th)	48.4	45.7	
	“ Range for the month (S)	44.6	41.3	
	“ Mean from max. and min. (S)	69.0	*66.3	
	“ Mean from 24 hourly observations (P)	67.7	†66.9	
	“ Mean of highest readings (P)	78.6	76.1	
	“ Mean of lowest readings (P)	57.8	57.1	
	“ Mean daily range (P)	20.8	19.0	
	“ Warmest day (P) (24th)	76.2		
	“ Coldest day (P) 8th	59.7		
	“ Range between warmest and coldest (P)	16.5		
	“ Mean of dew point	58		
	“ Highest solar (black bulb in vacuum (5th)	138.2		
“ Lowest radiation (28th)	44.0			
“ Monthly range	94.2			
FORCE OF VAPOUR	— Mean	0.493	0.483	
HUMIDITY	— Mean	74	74	
	RAINFALL	— Total (inches)	1.47	2.77
	“ Heaviest fall (6th)	“	0.96	
“ No. of days on which rain fell	8	10.9		
CLOUD	— Mean amount of (0-10)	.34	.49	

*1840—1898 †1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—August (Continued)

WINDS	— Mean velocity	8.0 miles
“	Highest velocity, 25th, at 10 hrs. from south and at 17 hrs from northwest	30 “
“	Highest daily average velocity (25th)	15.8 “
“	Lowest “ “ “ (2nd & 14th)	4.3 “
“	Days on which gales occurred	0

No. of hours in the month in which the wind was	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	C.	Totals.
	179	69	64	64	63	166	60	76	3	744
No. of miles registered from each direction.	1337	453	452	460	553	1294	490	882	—	5921

Rain on the 2nd, 3rd, 6th, 7th, 16th, 23rd, 25th, 29th. Thunderstorms on 2nd, 3rd, 6th, 7th, 16th, 23rd, 24th, 25th. Fog on 29th. Heavy dew on 1st, 2nd, 3rd, 9th, 10th, 11th, 12th, 13th, 14th, 16th, 17th, 18th, 26th, 28th, 30th, 31st. Thunder alone on 17th. Clear days 12. Cloudy days 3.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1918 (19th)	30.104 inch
“	Lowest reading, 1912 (22nd)	29.028 “
Temperature	— Highest, 1918 (13th)	102.2°
“	Lowest, 1855 (18th) 1870 (27th)	40.0°
“	Highest daily mean (during 42 yrs) 1900 (8th) 1916 (21st)	84.8°
“	Lowest daily mean, (during 42 yrs) 1912 (30th),	52.4°
“	Highest monthly mean, 1900	72.5°
“	Lowest monthly mean, 1866	60.8°
Rainfall	— Greatest fall, 1915	8.14 in.
“	Least fall, 1876	0 “
“	Greatest fall for 24 hours, 1905 (15th)	3.68 “
“	Greatest number of days rain fell, 1872	19
“	Least number days rain fell, 1876	0

September, 1922.

Results of Observations Taken During the Month		Mean for 70 years.	
BAROMETER	— Mean reading, 32 F. inches	29.724	29.667
"	Highest on 26th at 10.02h	30.052	30.037
"	Lowest on 24th at 3.28h	29.433	29.187
"	Range	0.619	0.850
TEMPERATURE	— Highest (S) (5th)	92.6	82.7
"	Lowest (S) (26th)	35.0	35.7
"	Range for the month (S)	57.6	47.0
"	Mean from max. and min. (S)	63.5	*58.8
"	Mean from 24 hourly observations (P)	62.7	‡60.5
"	Mean of highest readings (P)	73.1	68.2
"	Mean of lowest readings (P)	53.5	50.2
"	Mean daily range (P)	19.6	18.0
"	Warmest day (P) (5th)	76.0	
"	Coldest day (P) (25th)	46.7	
"	Range between warmest and coldest (P)	29.3	
"	Mean of dew point	54	
"	Highest solar (black bulb in vacuum (6th)	155.0	
"	Lowest radiation (26th)	30.8	
"	Monthly range	124.2	
FORCE OF VAPOUR	— Mean	0.443	0.393
HUMIDITY	— Mean	77	78
RAINFALL	— Total (inches)	2.99	3.18
"	Heaviest fall (10th)	1.30	
"	No. of days on which rain fell	9	11.4
CLOUD	— Mean amount of (0-10)	38	.50

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—September (Continued)

WINDS	— Mean velocity	8.9 miles
"	Highest velocity, 13th, at 17 hrs. from west	28 "
"	Highest daily average velocity (6th)	14.2 "
"	Lowest " " " (30th)	3.1 "
"	Days on which gales occurred	0

No. of hours in the month in which the wind was	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	C.	Totals.
	139	82	106	65	37	100	87	96	8	720
No. of miles registered from each direction.	1042	638	1134	542	281	962	698	1095	—	6392

Rain on the 5th, 6th, 8th, 10th, 11th, 13th, 14th, 15th, 19th. Thunderstorm on 5th, 6th, 10th, 11th, 14th. Fog on 19th. Heavy dew on 1st, 3rd, 9th, 12th, 16th, 17th, 18th, 21st, 22nd, 23rd, 24th, 27th, 28th, 29th, 30th. Hoar frost on 25th, 26th. Clear days 13. Cloudy days 4.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1904 (22nd)	30.243	inch
"	Lowest reading, 1848 (29th)	28.863	"
Temperature	— Highest, 1898 (2nd)	97.1°	
"	Lowest, 1896 (23rd)	27.6°	
"	Highest daily mean (during 42 yrs) 1881 (6th)	81.3°	
"	Lowest daily mean, (during 42 yrs) 1883 (30th), 1888 (30th)	41.4°	
"	Highest monthly mean, 1921	67.7°	
"	Lowest monthly mean, 1848	53.4°	
Rainfall	— Greatest fall, 1843	9.76	in.
"	Least fall, 1897	0.40	"
"	Greatest fall for 24 hours, 1843 (14th)	3.46	"
"	Greatest number of days rain fell, 1907	19	
"	Least number days rain fell, 1840, 1844	4	

October, 1922.

Results of Observations Taken During the Month		Mean for 70 years.	
BAROMETER	Mean reading, 32 F. inches	29.599	29.651
"	Highest on 13th at 9.58h	30.092	30.112
"	Lowest on 25th at 7.38h	29.094	29.066
"	Range	0.998	1.046
TEMPERATURE	Highest (S) (5th)	83.4	70.3
"	Lowest (S) (21st)	25.0	25.5
"	Range for the month (S)	58.4	44.8
"	Mean from max. and min. (S)	49.8	*46.6
"	Mean from 24 hourly observations (P)	49.0	‡48.1
"	Mean of highest readings (P)	58.1	54.9
"	Mean of lowest readings (P)	41.0	39.1
"	Mean daily range (P)	17.1	15.8
"	Warmest day (P) (5th)	68.1	
"	Coldest day (P) 20th	32.4	
"	Range between warmest and coldest (P)	35.7	
"	Mean of dew point	42	
"	Highest solar (black bulb in vacuum (2nd)	124.5	
"	Lowest radiation (20th)	19.4	
"	Monthly range	105.1	
FORCE OF VAPOUR	Mean	0.280	0.258
HUMIDITY	Mean	77	79
RAINFALL	Total (inches)	0.96	2.40
"	Heaviest fall (7th)	0.28	
"	No. of days on which rain fell	9	12.4
SNOWFALL	Total fall inches	0	0.6
"	No. of days on which snow fell	0	1.6
CLOUD	Mean amount of (0-10)	.45	.61

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic

Results of Observations—October (Continued)

WINDS	Mean velocity	11.6 miles
"	Highest velocity, 12th, at 3 hrs. from west	37 "
"	Highest daily average velocity (17th)	23.3 "
"	Lowest " " " (1st)	3.6 "
"	Days on which gales occurred	4

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	147	83	80	11	31	163	110	118	1	744

No. of miles registered from each direction.	1005	883	1054	103	239	1953	1560	1843	—	8640

Rain on the 7th, 8th, 10th, 11th, 12th, 15th, 23rd, 25th, 26th. Fog on 11th, 16th, 31st. Hail on 12th. Heavy dew on 1st, 2nd, 3rd, 4th, 5th. Hoar frost on 13th, 20th, 21st, 22nd, 28th, 29th, 30th and 31st. Snowfurries 18th. Clear days 10. Cloudy days 7.

Extreme Readings

DURING 83 YEARS.

Barometer	Highest reading, 1847 (28th)	30.396	inch
"	Lowest reading, 1893 (14th)	28.227	"
Temperature	Highest, 1897 (15th)	85.7°	
"	Lowest, 1844 (31st)	15.9°	
"	Highest daily mean (during 42 yrs) 1897 (15th)	71.0°	
"	Lowest daily mean, (during 42 yrs) 1887 (30th)	27.8°	
"	Highest monthly mean, 1900	55.7°	
"	Lowest monthly mean, 1841	41.8°	
Rainfall	Greatest fall, 1849	5.97	in.
"	Least fall, 1901	0.56	"
"	Greatest fall for 24 hours, 1849 (6th)	3.16	"
"	Greatest number of days rain fell, 1864	22	
"	Least number days rain fell, 1841	6	
Snowfall	Greatest fall, 1844	12.0	in.
"	Least fall, 1916-18-19-21-22	0	"
"	Greatest for 24 hours, 1875 (17th)	3.3	"
"	Greatest No. days snow fell 1869	7	

November, 1922.

<i>Results of Observations Taken During the Month</i>		Mean for 70 years.	
BAROMETER	— Mean reading, 32 F. inches	29.644	29.627
"	Highest on 13th at 10h	30.135	30.169
"	Lowest on 23rd at 17.54h	29.115	28.975
"	Range	1.020	1.194
TEMPERATURE	— Highest (S) (11th)	60.6	57.9
"	Lowest (S) (26th)	21.2	13.5
"	Range for the month (S)	39.4	44.4
"	Mean from max. and min. (S)	40.7	*36.0
"	Mean from 24 hourly observations (P)	40.3	‡37.1
"	Mean of highest readings (P)	46.4	42.5
"	Mean of lowest readings (P)	34.6	30.1
"	Mean daily range (P)	11.8	12.4
"	Warmest day (P) (4th)	51.1	
"	Coldest day (P) 25th	24.9	
"	Range between warmest and coldest (P)	26.2	
"	Highest solar (black bulb in vacuum (7th)	104.8	
"	Lowest radiation (26th)	14.0	
"	Monthly range	90.8	
HUMIDITY	— Mean	78	80
RAINFALL	— Total (inches)	0.95	2.49
"	Heaviest fall (18th) "	0.25	
"	No. of days on which rain fell	11	10.3
SNOWFALL	— Total fall (inches)	5.3	4.6
"	Heaviest fall 26th, 27th	2.2	
"	No. of days on which snow fell	5	7.3
CLOUD	— Mean amount of (0-10)	.74	.74

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—November (Continued)

WINDS	— Mean velocity	11.9 miles
"	Highest velocity, 9th, at 5 hrs. from northwest	28 "
"	Highest daily average velocity (24th)	19.3 "
"	Lowest " " " (3rd)	5.1 "
"	Days on which gales occurred	0

No. of hours in the month in which the wind was	N.	N. E.	E.	S. E.	S.	S. W.	W.	N. W.	C.	Totals.
	41	70	35	7	11	214	152	190	0	720

No. of miles registered from each direction.	300	786	447	58	82	2473	1655	2765	—	8566

Rain on the 2nd, 3rd, 6th, 8th, 11th, 14th, 15th, 18th, 19th, 23rd, 30th. Snow on the 22nd, 24th, 25th, 26th, 27th. Lunar halo on the 1st. Fog on 3rd, 4th, 6th, 7th, 13th, 14th and 30th. Dew on 11th, 17th. Clear days 0. Cloudy days 15.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1887 (30th)	30.592	inch.
"	Lowest reading, 1913 (9th)	28.327	"
Temperature	— Highest, 1903 (3rd)	70.2°	
"	Lowest, 1875 (30th)	-5.0°	
"	Highest daily mean (during 42 yrs) 1882 (11th)	58.0°	
"	Lowest daily mean, (during 42 yrs) 1891 (29th)	11.4°	
"	Highest monthly mean, 1902	42.9°	
"	Lowest monthly mean, 1873	27.6°	
Rainfall	— Greatest fall, 1846	5.80	in.
"	Least fall, 1904	0.08	"
"	Greatest fall for 24 hours, 1861 (2nd)	3.13	"
"	Greatest number of days rain fell, 1877,	16	
"	Least number days rain fell, 1904	4	
Snowfall	— Greatest fall, 1873	19.6	in.
"	Least fall, 1847 and 1850	not measurable	
"	Greatest for 24 hours, 1873 (27th)	9.5	"
"	Greatest No. days snow fell 1869, 1873, 1892	18	
"	Least No. days snow fell, 1850, 1899	1	

December, 1922.

Results of Observations Taken During the Month			Mean for 70 years.
BAROMETER	— Mean reading, 32 F. inches	29.697	29.644
"	Highest on 10th at 10.27h	30.185	30.226
"	Lowest on 8th at 12.38h	29.207	28.936
"	Range	0.978	1.290
TEMPERATURE	— Highest (S) (1st)	60.4	47.5
"	Lowest (S) (19th)	6.2	-2.3
"	Range for the month (S)	54.2	49.8
"	Mean from max. and min. (S)	28.4	*26.2
"	Mean from 24 hourly observations (P)	28.2	‡27.6
"	Mean of highest readings (P)	33.8	
"	Mean of lowest readings (P)	22.4	
"	Mean daily range (P)	11.4	
"	Warmest day (P) (1st)	46.9	
"	Coldest day (P) 18th	13.6	
"	Range between warmest and coldest (P)	33.3	
"	Highest solar (black bulb in vacuum (1st)	100.7	
"	Lowest radiation (19th)	3.3	
"	Monthly range	97.4	
HUMIDITY	— Mean	75	82
RAINFALL	— Total (inches)	0.55	1.53
"	Heaviest fall (8th)	0.25	
"	No. of days on which rain fell	6	6.3
SNOWFALL	— Total fall (inches)	11.8	13.0
"	Heaviest fall 28th,	4.8	
"	No. of days on which snow fell	9	13.1
CLOUD	— Mean amount of (0-10)	.69	.77

*1840—1898 ‡1881—1908 (S) Stevenson (P) Photographic.

Results of Observations—December (Continued)

WINDS	— Mean velocity	15.5 miles
"	Highest velocity, 12th, at 15 hrs. from west	51 "
"	Highest daily average velocity (12th)	34.2 "
"	Lowest " " " (24th)	6.2 "
"	Days on which gales occurred	9

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Totals.
	49	104	58	54	37	139	231	69	8	744

No. of miles regis- tered from each direction.	339	1422	1135	654	483	2058	4457	1016	—	11564
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Rain on 1st, 4th, 5th, 8th, 25th, 31st. Snow on 7th, 14th, 15th, 17th, 20th, 22nd, 23rd, 27th, 28th. Fog on 8th. Clear days 3. Cloudy days 13.

Extreme Readings

DURING 83 YEARS.

Barometer	— Highest reading, 1887 (1st)	30.594 inch.
"	Lowest reading, 1855 (9th), 1856 (14th)	28.459 "
Temperature	— Highest, 1875 (31st)	61.0°
"	Lowest, 1871 (21st)	-21.0°
"	Highest daily mean (during 42 yrs) 1911 (11th)	51.9°
"	Lowest daily mean, (during 42 yrs) 1917 (29th)	-9.7°
"	Highest monthly mean, 1889	34.3°
"	Lowest monthly mean, 1876	17.2°
Rainfall	— Greatest fall, 1841	6.60 in.
"	Least fall, 1840, 1845, 1876	0 "
"	Greatest fall for 24 hours, 1870 (6th)	1.95 "
"	Greatest number of days rain fell, 1889 and 1911	14
"	Least number days rain fell, 1876	0
Snowfall	— Greatest fall, 1872	38.0 in.
"	Least fall, 1877	0.3
"	Greatest for 24 hours, 1898 (4-5)	16.0 "
"	Greatest No. days snow fell 1872,	24
"	Least No. days snow fell, 1895	3

Summary of Observations, 1922.

<i>Results of Observations Taken During the Year.</i>		Mean for 70 years
READINGS OF BAROMETER IN INCHES.		
Mean of the year	29.659	29.619
Highest monthly mean, January	29.768	
Lowest " June	29.585	
Highest reading, January 25th	30.337	30.371
Lowest " April 11th	28.757	28.707
Range	1.580	1.664
THERMOMETER, FAHRENHEIT.		
Highest monthly mean temperature, July	69.5	
Lowest " " " January	23.2	
Highest daily mean temperature, August 24th	76.2	
Lowest " " " February 16th	3.5	
Highest temperature, August 16th	93.0	91.2
Lowest " February 17th	-7.0	-12.0
Range for the year	100.0	103.2
Mean from max. and min.	48.1	*44.2
Mean from 24 hourly observations	47.3	†45.0
Mean humidity	74	77
Highest solar (black bulb in vacuum) Sept. 6th	155.0	
Lowest (radiation) on February 17th	-11.0	
Yearly range	166.0	
Total fall of rain inches	24.10	26.86
Greatest monthly rainfall, June	4.92	
Least " " " January	0.48	
Greatest rainfall in 24 hrs. April 11th	1.61	
Number of days rain fell	103	112.9
Total fall of snow inches	50.4	66.1
Greatest monthly snowfall, February	12.5	
Greatest snowfall in 24 hrs. March 30th	8.5	
Number of days on which snow fell	44	62.9
Mean amount of cloud (0-10)	.51	.62
*1840-1898		†1881-1908

Wind Summary, 1922.

Total mileage for year	102,537
Greatest monthly mileage, December	11,564
Greatest mileage in 24 hours, March 30th	823
Greatest mileage in 1 hour (December 12th at 15hrs.)	51
Number of gales	29
Average velocity for year	11.7
Prevailing direction, southwest. Mileage, 18,544. Total hours, 1,625	

Harbor Notes.

The following table gives the dates on which the ice formed and left Toronto harbor for the past 25 years.

(This table has been kindly furnished by the Toronto Harbor Master.)

Winter	Frozen over	Clear of ice	No. of days
1897-98	December 24th	March 16th	82
1898-99	" 13th	April 8th	116
1899-00	" 28th	" 8th	101
1900-01	" 14th	" 6th	113
1901-02	" 6th	March 20th	104
1902-03	" 15th	" 15th	90
1903-04	" 14th	April 22nd	130
1904-05	" 11th	" 5th	115
1905-06	January 8th	" 1st	83
1906-07	December 8th	March 28th	110
1907-08	January 28th	" 29th	61
1908-09	" 7th	" 31st	83
1909-10	December 29th	" 20th	81
1910-11	" 10th	" 31st	111
1911-12	January 6th	April 16th	101
1912-13	" 9th	March 20th	70
1913-14	" 14th	April 2nd	78
1914-15	December 15th	" 2nd	108
1915-16	" 27th	" 3rd	98
1916-17	" 11th	March 28th	107
1917-18	" 11th	April 5th	115
1918-19	January 5th	January 9th	4
1919-20	December 17th	March 28th	103
1920-21	" 31st	February 3rd	17*
1921-22	" 22nd	March 10th	52*
Longest time frozen, 1831-32	Nov. 10th to Apr. 15th,		162 days
Shortest " " 1918-19	January 5th to 9th.		4

*Clear at intervals.

Absolute Extremes.

DURING 83 YEARS.

Readings of the barometer, in inches.

Highest yearly mean, 1849,	29.668
Lowest " " 1864,	29.560
Highest monthly mean, February, 1906,	29.819
Lowest " " April, 1920,	29.411
Greatest monthly range January, 1870,	2.046
Least " " June, 1841,	0.425
Highest reading, January 8th, 1866,	30.040
Lowest " January 2nd, 1870,	28.166
Extreme range	2.774

Temperatures.

Highest reading on July 3rd, 1911	103.2
Lowest reading on January 10th, 1859,	-26.5
Highest daily mean temperature, (during 42 years) July 3rd, 1911	91.3
Lowest daily mean temperature (during 42 years) Jan. 13th, 1914	-15.2
Highest monthly mean, July, 1921,	77.9
Lowest " " February, 1875,	10.2
Highest yearly " 1921,	49.9
Lowest " " 1875,	40.8

Rainfall, in inches.

Greatest fall in 24 hours, July 27th, 1897,	3.88
Greatest rainfall in a month, September, 1843,	9.76
Greatest rainfall in a year, 1843,	43.56
Least " " " " 1874,	17.67
Greatest number of rainy days in a month, May, 1890,	23
Greatest number of rainy days in a year, 1890,	145
Least " " " " " " 1841,	80

Absolute Extremes—(Continued.)

DURING 83 YEARS.

Snowfall in Inches.

Greatest fall in 24 hours, March 28th, 1876,	16.2
Greatest fall in a month, March, 1870,	62.4
Greatest fall of snow in a year in 1870,	122.9
Least " " " " " " 1919,	28.7
Greatest fall in any winter, 1869-70,	123.5
Least fall in any winter, 1877-78 and 1905-06,	30.2
Greatest No. of days of snow in a month, Dec. 1870 and December 1872	24
Greatest number of days of snow in a year, 1859,	87
Least " " " " " " " 1848,	33

Dates of Certain Periodic Events.

	EXTREME	1922
Latest snow.....	June 4, 1859	April 20th
Earliest snow.....	Sept. 25, 1860	Oct. 18th
Latest hoar frost.....	June 20, 1862	April 22nd
Earliest hoar frost.....	Aug. 26, 1863	Sept. 25th
Earliest thunder & lightning	Jan. 12, 1898	Feb. 19th
Latest thunder and lightning	Dec. 23, 1871	Sept. 14th

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY—1922.

Month.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
January.	3.2	2.6	2.6	0	0	3.0	5.7	2.7	1.5	6.0	0	6.6	0.1	0	1.3	2.5	7.2
February.	0	1.9	0	3.2	2.3	0.6	6.5	2.2	0.6	0	6.4	0	7.0	9.1	6.9	8.8	2.7
March.	0.3	6.5	9.9	7.4	9.8	5.8	0	9.9	7.2	7.8	5.3	10.1	4.4	4.4	10.0	8.7	10.5
April.	3.3	9.4	7.3	4.7	5.5	0	0.3	6.9	5.4	10.8	2.4	0	2.2	7.4	5.9	11.8	1.7
May.	12.6	12.9	1.7	0	1.4	3.5	0.2	12.7	5.3	10.0	10.3	12.0	10.3	4.3	12.8	12.3	2.2
June.	8.1	3.5	6.4	13.5	3.3	9.4	12.7	12.3	6.8	2.6	9.5	14.6	8.8	11.1	12.7	4.7	6.1
July.	6.1	13.9	4.2	10.8	14.5	13.4	9.7	12.9	11.8	9.8	9.3	10.5	12.0	12.2	14.0	10.9	4.7
August.	4.5	6.5	6.9	12.6	11.6	3.2	3.5	11.0	11.0	13.5	13.3	12.4	7.5	12.0	12.8	8.3	10.1
September.	0	4.7	9.3	11.8	9.8	1.6	7.7	7.7	5.4	8.8	0	9.7	4.4	0	7.8	10.6	11.2
October.	8.6	9.2	9.4	8.6	5.8	7.6	0	0	2.0	0	6.0	4.7	9.7	9.4	8	5.7	7.9
November.	5.6	0	0.1	0	4.3	0	3.0	1.4	7.0	3.6	1.7	0.5	8.2	0.1	0	0.4	7.4
December.	3.7	1.6	7.8	5.5	6.9	2.8	0	0.1	1.6	4.3	3.6	3.8	7.3	0	1.2	7.3	1.2

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY—1922. (Continued).

Month.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Monthly Total	Monthly Percentage.
January.	0	0	6.5	5.4	2.2	6.9	8.3	0	0	2.5	8.2	3.5	8.5	5.1	102.1	35
February.	2.9	0	5.5	8.3	0	1.0	9.8	8.1	2.0	3.7	10.2				109.7	37
March.	8.7	2.0	1.0	0	10.4	5.9	8.2	6.4	2.3	0	0.3	10.7	0	0	173.9	47
April.	8.5	8.9	0.5	13.0	4.3	7.7	12.3	7.2	5.5	11.6	13.3	13.1	12.7		203.6	50
May.	0.8	0	0	5.7	14.0	13.6	9.4	0.9	14.1	14.1	14.4	14.2	14.0	13.0	253.4	56
June.	0.1	7.4	14.4	5.0	12.5	13.1	13.9	10.5	10.4	1.8	9.7	11.8	8.7		265.4	59
July.	7.3	12.5	14.2	14.0	7.4	1.1	9.7	13.9	9.3	9.5	13.3	13.9	9.4	1.1	317.3	68
August.	8.0	9.4	12.0	12.2	7.3	6.9	8.1	6.0	8.1	6.9	12.5	4.4	11.8	11.6	285.9	66
September.	4.8	0	10.7	10.3	10.7	10.3	8.0	10.7	9.8	10.5	8.5	9.7	9.1		223.9	60
October.	6.6	3.9	9.5	6.4	5.9	3.2	4.6	0	9.2	0.5	8.5	8.5	9.7	5.8	175.9	51
November.	0	1.4	0	0.3	3.3	0	2.8	2.9	T	0	4.4	3.2	0		61.6	21
December.	7.1	6.0	0	0	0	3.1	0	0	0	1.3	0	7.1	3.2	0	86.5	31

MONTHLY TABLES FOR EACH HOUR OF RECORDED SUNSHINE—1922

HOURS ENDING. Local time	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
January.	0	0	0	0	T	2.0	2.6	4.1	5.0	4.8	4.6	4.5	3.8	1.6	0	0	0
February.	0	0	0	0	0.6	3.0	4.0	4.5	4.1	4.4	5.0	5.4	4.5	3.0	0.6	0	0
March.	0	0	0	0.2	3.0	4.7	5.6	6.1	6.4	5.9	5.7	6.1	5.6	5.0	1.8	0	0
April.	0	0	0.4	2.7	4.6	5.3	5.6	5.5	5.7	6.2	7.2	6.7	5.9	5.8	4.5	1.8	0
May.	0	0	2.9	5.4	5.9	6.0	6.2	5.9	6.2	7.0	7.1	6.1	5.9	5.9	5.9	4.4	0.9
June.	0	0.1	2.9	5.5	6.3	5.9	7.0	7.0	6.9	7.2	7.4	6.9	7.0	6.9	6.2	4.1	1.2
July.	0	0	3.2	6.5	6.9	7.8	8.3	8.2	7.8	8.4	7.8	8.0	7.8	6.9	6.4	6.0	2.2
August.	0	0	1.2	5.8	8.0	7.6	7.7	7.4	7.9	7.6	7.4	7.3	7.1	6.7	7.0	3.4	0.1
September.	0	0	0	1.2	5.2	6.2	7.0	7.1	7.7	7.4	7.3	7.4	7.4	6.1	3.0	0.2	0
October.	0	0	0	0	3.3	5.8	6.4	6.8	7.0	7.5	6.8	5.9	4.9	2.3	0	0	0
November.	0	0	0	0	0.3	1.8	2.4	2.7	3.5	2.6	2.4	2.6	1.8	0.3	0	0	0
December.	0	0	0	0	0.1	2.5	3.5	3.9	3.8	4.1	3.5	3.7	2.7	0	0	0	0
Total hours.	0	0.1	10.6	27.3	44.2	58.6	66.3	69.2	72.0	73.1	72.2	70.6	64.4	50.5	35.4	19.9	4.4

SUMMARY OF SUNSHINE.

BRIGHT SUNSHINE RECORDED.

	1922			Mean from 1882 to 1910.		
	Number of days.	Number of hours	Percentage of sunshine.	Number of days.	Number of hours.	Percentage of sunshine.
January	23	102.1	35	20	77.9	27
February	22	109.7	37	22	108.1	37
March	26	173.9	47	25	150.0	40
April	28	203.6	50	25	190.7	47
May	28	253.4	56	29	218.9	48
June	30	265.4	59	29	260.0	56
July	31	317.3	68	30	282.2	60
August	31	285.9	66	30	252.7	60
September	26	223.9	60	28	207.8	55
October	26	175.9	51	28	149.3	44
November	20	61.6	21	22	85.3	29
December	21	86.5	31	20	65.2	24
Year	312	2259.2	51	308	2048.1	46

Possible hours, 4,452.4.

EARTHQUAKE RECORDS BY MILNE SEISMOGRAPH.

P.T.—Preliminary Tremors. S.—Secondary Waves. L.W.—Large Waves. Time is Greenwich Civil Mean Time, and is given in hours, minutes, and decimals of minutes; 0 or 24h—Mid.

REGISTER FROM TORONTO, ONTARIO.

No.	Date 1921.	P.T.		S		L.W.		Max.		End.		Max Amplitude. MM.	REMARKS.			
		H.	M.	H.	M.	H.	M.	H.	M.	H.	M.					
2340	Jan. 1	Micros				20	43.1	20	51.7	Micros		1.3	e 20 16.5; 20 20.4. Thickening.			
2341	" 5					9	27.4			9 31.6		0.05				
2342	" 6			14	30.5	14	38.1	14	48.9	Micros		1.3				
2343	" 9	5	16.4	5	21.5	5	26.2	5	31.2	6	43.5	2.0	3,330 km. Phases well defined.			
2344	" 17			4	04.1?			4	4.6	6	10.7	13.0	Very abnormal. May be dual earthquake.			
2345	" 19					23	3.5	23	24.0			0.3	} A dual quake.			
2346	" 20					23	12.3			Micros		0.5				
2347	" 22					0	6.2	0	12.5	4	15.4	4	27.9	5 14.3	1.3	P, & S masked by micros.
2348	" 22	e21	18.8			4	19.2			Micros		1.3	E. may be L.			
2349	" 26			9	41.3?	9	50.2	9	53.2	10	20.8	0.3				
2350	" 31	13	24.5	13	30.2	13	35.5?	13	39.9	Micros		16.0	3,910 km. Well defined.			
2351	Feb. 14					13	37.5			Micros		0.7	Distant.			
2352	" 16	e 3	24.2	3	28.0	14	3.6	14	12.7	Micros		1.2				
2353	" 19					14	5.2			Micros		0.2				
2354	" 20					3	32.7	3	40.4	Micros		0.1				
2355	" 28					3	38.2			Micros		0.3				
						22	14.9	22	17.1	Micros		0.2				
2356	Mar 4	e13	17.7			8	40.6	8	44.6	8	48.0	0.1	Micros going on.			
		e13	21.4			21	30.7	21	32.5	Micros		0.3				
2357	" 10	11	31.1?			13	34.4	13	52.7	Micros		0.8	Micros going on.			
2358	" 12	e17	11.2			13	41.1	11	41.0	Micros		0.8				
2359	" 16	i17	15.8			17	24.8	17	34.0	Micros		0.3?	Micros. Gradual thickening. 7,600 km.			
2360	" 26					17	27.8			Micros		0.1				
2361	" 28	e	3.6?	4	17.4	23	20.7	14	44.5	4	20.2	5	32.4	0.5		
		p4	8.4			14	40.8									
2362	Apr. 2							17	20.3	17	40.1?	0.2	2,510? km. e 19 31.4.			
2363	" 2	pr 19	31.4	19	35.5	19	50.6	19	54.4	21	11.5	2.0				
2364	" 5	pr 10	27.7	10	37.6	11	7.5	11	22.0	12	26.6	2.2	8,680 km? P. probably not recorded.			
2365	" 6					11	10.6					0.1	S. amp. 2.0 mm. L. difficult to interpret. Gradual thickening.			
2366	" 8	20	50.9	20	56.8?	4	3.6	4	11.5	21	6.8	22		6.8	9.0	
2367	" 11					21	2.8	1	20.7	2	14.0	1.0	Gradual thickening.			
2368	" 16					1	22.7	14	15.0	14	29.4	0.4				
2369	" 20					14	6.9	14	15.0	14	29.4	0.4	Gradual thickening.			
2370	" 25					14	9.2					0.05				
2371	" 26					6	14.1	6	32.8?				Doubtful as to being seismic.			
2372	" 26					6	32.8?	21	49.7?	22	21.0	1.2				
2373	May 2					21	49.7?	22	21.0				e 4 32.2. Tokyo. Micros going on.			
						1	11.9	1	13.6	4	50.5	0.6				
						4	50.5	4	54.8	5	1.1	0.6				
								13	11.7?			0.2				
								13	16.4			0.2				

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No.	Date 1922	P. T. Commence.	S. Commence.	L. W. Commence	Max.	End	Max. Amplitude.	REMARKS
2374	May 4	e 9 30.8	9 34.5?	9 59.5	10 8.4	12 25.3	1.3	First phases indistinct.
2375	" 9			10 4.3				
2376	" 11			14 7.7		Micros	0.1	
2377	" 11			1 18.9		1 24.3	0.2	
				10 21.0	10 28.9	Micros	0.2	
2378	" 12	i19 5.9		10 26.9				
		e19 9.6		19 41.9	19 49.9		5.0	I 19 21.9.
2379	" 22			19 46.0				
2380	June 2			18 15.8			0.1	Small micros going on.
				20 52.0?			0.3	Heavy micros going on.
2381	" 12	4 54.7	4 59.8	21 6.9				L. 21 27.2 to 21 54.1.
2382	" 12	e10 50.5		5 4.4	5 5.1	6 34.8?	9.0	3,330 km.
				10 55.1	11 2.1	Micros	0.5	Micros interfered with phases.
				11 1.6				do do
2383	" 16			16 11.4	16 17.1	Micros	0.2	
2384	" 27	i14 52.3		15 2.4		Micros	0.2	L. 15 41.6.
		i14 59.1						
2385	July 2	13 46.4	13 52.6	14 3.4	14 7.5	17 20.2?	2.1	4,450 km.
				14 4.5				
2886	" 4			13 46.2	13 47.2		1.2	Doubtful as to being seismic.
2387	Aug 11			8 58.7	9 4.3	9 12.7	0.2	
2388	" 11	13 57.7	14 5.5	14 13.3	14 16.5	14 41.9	0.3	6,230 km.
2389	" 13	e 0 23.4	0 31.1	0 43.9	0 57.7	2 41.0	0.5	Small micros before 0 23.4.
		e 0 26.0		0 57.1				
2390	" 16			7 0.4		7 2.5	00.5	
2391	" 16	16 7.8	16 16.2	16 33.0	16 37.6	17 57.7	0.5	6.910km. M2. 16 44.6, amp. 0.4mm
2392	" 18			5 4.4		5 7.3	00.5	
2393	" 25			12 53.3		13 6.4	0.2	
2394	" 25			22 11.7	22 26.4	22 50.3	0.2	
2395	" 26	e 7 26.4		7 29.7	7 37.2	8 1.0	0.3	
				7 35.0				

2396	Aug 29			17 34.1			0.1	Micros at intervals.
				17 47.0			0.2	
2397	" 30			22 56.2	23 0.3	Micros	0.3	
2398	Sept 1	19 34.9	19 44.7	20 2.1	20 33.6		1.5	8,550 km
				20 21.0				
2399	" 12			11 56.6			0.2	
				12 13.2				
2400	" 14			20 36.4				Early L. waves interfered with.
2401	" 16			23 48.2	23 50.5	0 4.5?	0.3	
2402	" 17			8 26.4		9 7.2	0.2	
2403	" 17			11 2.8	11 12.9	11 38.9?	0.2	
2404	" 29			21 16.8	21 45.4		0.3	
				21 43.3				
2405	Oct. 6			0 46.2	0 48.0	0 52.0	0.2	May not be seismic.
2406	" 6			5 53.0	5 54.6?	5 56.5	0.2	Gradual thickening.
2407	" 7	e16 19.0		16 20.0?			0.2	Micros going on.
				16 29.0				
*	*	*	*	*	*	*		
2408	" 17			7 56.6		7 57.9	0.1	7,970 km. May be Kamchatka.
2409	" 24	21 34.3?	21 43.6	21 55.4	22 20.8	23 47.2?	0.4	
				22 2.8				
2410	" 27			15 32.2	15 38.8		0.2	Micros going on.
2411	" 30			1 56.5?			0.1	
				2 0.5				Micros.
2412	" 30			2 58.5			0.05	
				3 5.3				
2413	" 30	e13 12.7?		13 21.2			0.1	
				13 38.4				
2414	Nov. 4			3 40.0		4 1.0	0.3	
2415	" 7	23 10.3?	23 21.9	23 31.2	23 52.6	1 8.6	0.8	
				23 51.4				
2416	" 9			0 23.2		0 32.4	0.05	

*Period of boom 18 seconds. Pillar inclination 1mm. = 0'45".

Instrument dismantled from 9th to 16th; after resetting pillar inclination 1mm = 0.46."

No.	Date 1922	P.T. Commence.	S. Commence.	L.W. Commence.	Max.	End.	Max. Amplitude.	REMARKS.
2417	Nov. 11	4 43.9	4 53.3	5 8.5	5 29.7	9 48.1	9.6	Lat. 28°48' S. Long. 72°40' W. 8,080 km. Chili.
2418	" 11	18 21.0	18 29.3	18 39.5	19 0.6	19 30.5	0.3	P. & S. indistinct.
2419	" 12			8 4.0			0.05	
2420	" 17	11 15.0?	11 23.9	11 33.0	11 57.7	14 6.4	0.5	7,490 km.
2421	" 26			13 51.5		14 8.7	0.05	
2422	Dec. 2			4 52.0	5 1.2	5 19.5	0.2	
2423	" 6			14 34.6			0.1	
				14 53.9				
2424	" 7			15 20.2	15 21.9	15 54.0	0.3	
2425	" 7			16 31.0	16 32.0	16 34.0	0.2	
2426	" 7			17 42.2			0.2	
2427	" 8			8 28.8		8 33.7	0.2	
2428	" 8			23 6.7	23 30.6	0 19.8	0.4	
				23 25.2				
2429	" 14			0 1.6	0 25.5	1 35.5	0.8	P. & S. not recorded.
				0 8.1				
2430	" 17			1 41.0			0.05	
2431	" 18			12 47.0	12 52.5	13 29.1	0.7	P S. not recorded.
2432	" 19			18 28.0	18 29.1	18 43.4	0.2	
2433	" 23			22 51.6	22 59.3	23 43.1	0.4	Long distance quake.
2434	" 25			4 40.6	4 47.8	5 44.9	0.4	Reported from Wellington N. Z.
2435	" 25			12 37.6		12 41.2	0.05	
2436	" 31		7 42.5	7 53.7	8 19.9	9 20.9	0.8	Distant.

Number of Seismic disturbances with amplitude of 5mm. and over, recorded at Toronto in each year from 1899 to 1922 inclusive.

Year.	5 mm. to 10 mm.	10 mm. to 15 mm.	15 mm. to 25 mm.	25 mm. and over.	Total.
1899	4	2	--	3	9
1900	3	-	2	1	6
1901	4	-	-	-	4
1902	4	-	1	1	6
1903	1	-	1	-	2
1904	2	1	1	-	4
1905	1	1	1	-	3
1906	-	-	4	1	5
1907	2	1	2	-	5
1908	2	-	-	-	2
1909	1	-	-	-	1
1910	1	-	2	-	3
1911	3	1	1	-	5
1912	7	-	1	-	8
1913	1	-	-	-	1
1914	1	-	-	-	1
1915	2	2	-	2	6
1916	4	2	-	1	7
1917	3	2	1	3	9
1918	3	3	-	1	7
1919	4	-	-	1	5
1920	1	-	1	1	3
1921	2	-	-	-	2
1922	4	1	1	-	6
Total.	60	16	19	15	110

Number of Seismic disturbances with amplitude of 5 mm. and over recorded at Toronto from 1899 to 1922 inclusive, showing the months in which they occurred.

Month.	5 mm. to 10 mm.	10 mm. to 15 mm.	15 mm. to 25 mm.	25 mm. and over.
January.	9	1	6	2
February.	4	-	-	1
March.	3	-	1	-
April.	3	3	2	3
May.	9	1	-	1
June.	6	4	2	1
July.	5	1	2	-
August.	3	1	2	-
September.	1	1	2	3
October.	3	-	2	3
November.	7	1	-	-
December.	7	3	-	1

MAGNETIC SUMMARY FOR 1922

Toronto (Agincourt) Observatory. Latitude 43° 47' N. Longitude 79° 16' W.
 Mean values are from hourly measures of the photographic D, H and Z curves. H and Z are given in
 C. G. S. units. I is obtained by formula $H \tan I = Z$.

1922	MEANS.							EXTREMES.						
	D. West		H.		Z		I		D West		H		Z	
	Mean	Daily range	Mean	Daily range	Mean	Daily range	Mean		Max.	Min.	Max.	Min.	Max.	Min.
January	6 53.8	5.5	.15821	.00027	.58017	.00008	74 44.8		7 24.2	6 32.7	.15868	.15718	.58090	.57905
February	54.6	6.6	.15817	16	.58000	11	44.8		7 26.9	6 29.5	.15903	.15642	.58020	.57860
March	55.0	9.3	.15810	31	.58000	24	45.1		7 22.2	6 26.9	.15913	.15444	.58047	.57775
April	55.2	10.9	.15816	37	.57990	32	44.7		7 23.3	6 10.2	.16002	.15487	.58146	.57724
May	55.6	11.8	.15816	39	.57972	20	44.4		7 42.4	6 30.8	.15963	.15657	.58133	.57830
June	55.6	11.6	.15820	36	.57966	18	44.1		7 19.8	6 23.1	.15902	.15700	.58031	.57871
July	56.1	12.2	.15813	44	.57953	24	44.3		7 17.8	6 17.9	.15970	.15710	.58054	.57804
August	56.7	12.5	.15806	40	.57932	20	44.3		7 23.2	6 25.5	.15875	.15717	.57972	.57840
September	57.2	9.8	.15798	41	.57932	30	44.8		7 26.7	6 27.7	.15973	.15592	.58154	.57713
October	58.1	6.7	.15794	30	.57927	15	44.9		7 25.8	6 19.1	.15874	.15603	.58084	.57822
November	58.2	6.4	.15800	22	.57929	4	44.6		7 15.4	6 22.1	.15835	.15705	.57954	.57887
December	58.5	4.9	.15801	17	.56916	3	44.4		7 11.0	6 42.0	.15843	.15744	.57940	.57877
Year	6 56.2	9.0	.15809	.00032	.57961	.00017	74 44.6							

Phenological Observations, 1922

DATE WHEN FIRST SEEN.

Alder, shedding pollen.	April 4	Strawberry, wild, "	May 9
Dandelion in bloom	April 23	Strawberry, wild, ripe	June 12
Trailing Arbutus "	April 25	Wild raspberry, in bloom	June 2
Violet, Blue "	May 10	Cultivated currant "	May 12
Violet, White "	May 7	Song Sparrows	March 10
Columbine "	May 26	Robins	March 12
Trees appear green	May 8	Meadow Larks	March 18
White Clover, in bloom	June 1	Blue Birds	March 12
Wild Rose "	June 10	Flickers	April 1
Trillium "	May 7	Swallows	April 28
Anemone "	May 14	Orioles	May 8
Golden Rod "	July 31	King Birds	May 14
Maple "	March 28	Humming birds	May 13
Crocus "	April 7	Frogs Piping	April 8
Lilac "	May 17	Frost out of ground.	March 29
Apple trees, "	May 11	Rivers open	Feb. 23
Plum, cultivated "	May 12	Ploughing	April 24
Cherry, wild "	May 10	Sowing	April 29
Cherry, cultivated "	May 13	Potato Planting	May 15

