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DEPARTMENT OF MARINE AND FISHERIES
DOMINION OF CANADA.

Toronto Observatory

Results of Meteorological, Magnetical and Seismological Observations,

1914.

COMPILED BY JAS. YOUNG.

Published under the Direction of
R. F. STUPART, F.R.S.C.,
Director of the Meteorological Service, Toronto.

PRINTED BY THE OBSERVATORY PRESS,
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Lat. $43^{\circ} 40' 0''.8$ 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.

The barometric readings given in the following tables are taken from the photographic barograph, and are the means of the twenty-four readings of each day. A correction has been applied to reduce these readings to the original height of the standard barometer in the old Observatory building, so as to make the readings comparable with previous Toronto registers. Capillarity and gravity corrections have been omitted. The adopted mean temperatures are the means of the max. and min. of the thermometers in the Stevenson Screen. The extremes are also from the same screen. Humidity means are derived from the 6h, 8h, 14h, 16h, 22h, and 24h observations. During the winter months the 6h, 22h, and 24h entries are taken from a Julien Friez hygrometer. The direction and wind velocity are from the anemometer at the Esstern Gap on the Island, where the cups revolve at a height of fifty feet above the lake level. A velocity of 30 miles and over is called a gale. Auroral light observations have been rendered doubtful, owing to the large number of electric lights in the city.

The mean yearly temperature was 46° , which is 1.6 warmer than the average of 70 years. The rainfall was 19,745 inches, and the snowfall 74.3 inches, the rainfall showing a deficiency of 7.11 from the average fall, and an excess in the snowfall of 8.3 inches, the total precipitation being in defect to the amount of 6.38 inches. Bright sunshine was slightly below average.

JANUARY. The weather was quite mild for the first nine days, but turned rapidly colder on the 10th, and from this date until the morning of the 14th very low temperatures were experienced. The minimum fell to 22 below zero on the 13th, and the mean temperature for this day was $-15^{\circ}.2$, which is $36^{\circ}.8$ below the normal for the day. From the 15th onwards the temperature remained generally above the average, and the month closed with very mild weather. The temperature on the 29th rose to $54^{\circ}.3$. We may state that the 13th was the coldest day ever recorded. The only days with a mean temperature at all approaching it were February 6th, 1855, and January 22nd, 1857, when the mean in both instances was $-14^{\circ}.4$. The winds throughout the month were high, particularly so during the extreme cold, which made it more penetrating. The general wind direction was north and west, and on eight days velocities of over 30 miles per hour were recorded. The snowfall was 30.2 inches, which is 13 inches above the average. We had a good deal of cloudy weather throughout the month. Snow on the ground 3.5 inches.

FEBRUARY. A decidedly cold month. The first week the mean temperature was ranging from 5° to 17° above the average, and considerably below from the 8th to the 26th. During this interval intensely cold weather prevailed, the mean temperature ranging from 5° to 30° below the daily normal. On the 11th, 12th and 13th the minimum temperature fell to $-12^{\circ}.4$, $-18^{\circ}.2$ and $-7^{\circ}.8$ respectively, and to -8° and $-6^{\circ}.8$ on the 23rd and 24th. The maximum temperature on the 12th never rose above $-2^{\circ}.8$. More moderate weather set in on the 25th, the temperature rising to 42° , and the month closed with a monthly mean temperature of $6^{\circ}.2$ below the average. The winds were strong during the greater portion of the month, and exceeded the force of 30 miles per hour on nine days. The highest hourly velocity was 47 miles west on the 7th. The prevailing winds were north and west. The total rainfall was 0.590 inches, and of this quantity 0.530 fell on the 7th. The snowfall was three inches below average. The heaviest fall, 4.0 inches, occurred on the 13th. Snow fell on nine days, and there was none from the 23rd to the end of the month. Bright sunshine was considerably above the average. At 13h 32m of the 10th an earthquake shock was felt. Tall buildings are said to have slightly swayed, also pictures on walls. No damage was done.

MARCH. The month was notable for the heavy north and northwest gale of wind on the 1st and 2nd. The highest hourly velocity was 60 miles northwest at 4h on the 2nd, although some gusts were computed at a rate of 96 miles per hour on the morning of the 2nd. Towers of some churches were blown down and many fences levelled by this storm. The total mileage for the month was 11,291 miles. The prevailing wind was from the west. The monthly temperature was $1^{\circ}.7$ above average; highest $55^{\circ}.3$ on the 26th, lowest $4^{\circ}.5$ on the 2nd. On the 1st the temperature fell rapidly to $4^{\circ}.5$ and on the 2nd was generally below the average up to the 13th, and on the 11th it was 13° below the average for that day. The weather then continued quite mild from the 13th to the 18th, the temperature reaching $55^{\circ}.2$ on the 16th, then turning cooler. On the 20th the mean temperature was 16° below average for the day. A steady rise of temperature set in on the morning of the 21st, and mild conditions continued to the end of the month. The sky was generally clouded during the latter portion. Bright sunshine totalled about average. Snowfall was about average, and the rainfall slightly below average. The first thunderstorm of the year occurred from 23h to midnight of the 1st, and a very thick fog prevailed during the evening of that day.

APRIL. There was an absence of any warm weather up to the 13th, and a good deal of cloud. From the 14th to the 20th the temperature was considerably above the average and about normal then to the end of the month. The highest temperature was 67° on the 18th and the lowest $21^{\circ}.5$ on the 9th. Bright sunshine was considerably below the normal. The rainfall was not quite up to the average. The heaviest fall was a little over half an inch on the 1st, and we had eleven rainy days. The predominant winds were easterly. Highest velocity for the month was 37 miles west on the 12th, and on three days the velocity exceeded 30 miles per hour.

MAY. A fine warm month, mean temperature $5^{\circ}.9$ above average. The temperature during the first ten days was in excess of the average from 2° to 13° , and slightly below the following six days. After the 17th warmer weather set in, the temperature exceeding 80° on a number of days and touching 87° on the 21st and 26th. The lowest temperature for the month was $34^{\circ}.8$ on the 1st. Bright sunshine was 11 per cent above the average. There was a marked deficiency in the rainfall amounting to nearly an inch and a half, and up to the 22nd there were only six days on which rain fell, the quantity being small. After the 21st showers were more frequent, and during a heavy thunderstorm on the 27th the gauge registered a fall of 0,490 inches in an interval of about an hour. The prevailing wind for the month was from the west.

JUNE. The weather was generally warm up to the 13th, the temperature frequently rising to 87°. After the 13th it came much cooler and unsummerlike, continuing so up to the 21st, the temperature on the morning of the 20th falling to a white frost being noticed on this morning. The average daily temperature for the 20th was 10° below the normal. Summerlike temperatures were recorded from the 23rd to the 26th, the maximum reaching 91°.3 on the 24th. The last four days of the month were much cooler, the temperature showing a tendency to rise on the 30th. The monthly mean was 1°.8 above the normal. Like the previous month the rainfall shows a deficiency, but not to such an extent as May. There was no rain from the 7th to the 19th, but from that date to the end of the month moderate falls were frequent. During a thunderstorm on the 8th 0.889 inch fell in about one hour. Bright sunshine was somewhat in excess of the usual amount. The prevailing winds during the month were northeast. Highest hourly velocity was 33 miles west on the 24th.

JULY. The mean temperature was 2°.6 above the average. The readings were high from the 7th to the 12th, exceeding 88° and touching 93° on the 11th, and 89° on the 16th, 17th and 21st. The 25th and 26th were also very warm days, the maximum thermometer registering 86° and 85°. The monthly minimum occurred on the 20th as a reading of 47°.9. The daily range on this day was unusually large, being 31°.9. The rainfall for the month was only 1.000 inch, indicating a deficit of 2.000 inches from the usual July fall. The fall was fairly distributed with the exception of a marked dry period lasting from the 4th to the 11th, when rain was much required. Bright sunshine was slightly below the average.

AUGUST. The monthly rainfall was 2.415 inches in excess of the average, and we had rain on 16 days. None fell between the 3rd and the 8th. After this date it rained almost every day up to the 21st. A dry period then followed continuing for a week and during the last four days of the month the fall was 1.345 inches. In six instances during the month the fall was over half an inch and 0.685 fell on the 29th. The mean temperature was 1°.5 above average. The warmest periods were from the 6th to the 11th and from the 21st to the 23rd. Maximum readings of 92° and 91° were recorded on the 7th and 9th, and 87° on the 23rd. The minimum reading was 48°.1 on the 26th. The relative humidity was higher than we generally get for August, and was particularly so on some days during the very warm periods. Thunderstorms were frequent, three of them being particularly severe, occurring during the night of the 9th, morning of the 18th and afternoon of the 31st, attended by heavy rain. We had less cloudy weather than usual. Bright sunshine slightly below average. Prevailing winds were northeast. Highest velocity 29 miles west on the 3rd.

SEPTEMBER. A fine month with average temperature. We had very warm weather from the 16th to the 22nd, the temperature reaching a maximum of 86° on the 21st and 87° on the 22nd, when much cooler conditions set in continuing up to the 28th, the temperature falling to 38° on the 26th and 37° on the 28th, attended by ground frosts. The last two days of the month were fairly warm. The rainfall was 1.637 inches below the usual September fall, and there was no rain from the 7th to the 21st. The heaviest fall was 0.450 inches on the 1st. Bright sunshine was 27 hours above the average. A thunderstorm on the night of the 22nd at 17h was attended by a severe squall from the north and northwest, with heavy rain.

OCTOBER. A fine warm month with a mean temperature of 6°.5 above the average. The weather was quite warm up to the 12th, the temperature reaching 75° on the 5th and 76°.5 on the 9th. On the latter day the mean temperature was 14° above the normal for this day and 16° on the following day. Much cooler weather with northeast and east winds set in on the 11th, the temperature falling to 39° on the 13th and 14th. From the 14th to the 23rd it was summerlike, the temperature attaining a maximum of 79°.2 on the 23rd. After this date more seasonable temperatures were recorded until the 25th, when it became much cooler, a minimum of 26° being recorded on the 27th. This marked the first heavy frost of the season. Temperature during the last three days of the month was slightly below average. Bright sunshine varied slightly from the usual number of hours. There was a deficiency in the rainfall amounting to 0.867 inches, and none fell from the 1st to the 8th, and then for the remainder of the month the fall was fairly distributed.

NOVEMBER. Fairly high temperatures were registered on the first eight days, and average then to the 16th, when much cooler weather set in, continuing to the morning of the 24th, the temperature falling to 12°.8 on the 23rd and 18°.2 on the 24th. The last five days of the month, with the exception of the 28th, were quite mild, 57° being recorded on the 26th and 54° on the 27th. The monthly mean was 2°.9 above the average. The highest temperature was 62° on the 3rd. Rainfall was slightly in excess of the normal quantity, and bright sunshine about average. Winds were strong throughout the month, and velocities of over 30 miles per hour were recorded on eight days. The highest velocity was 45 miles west at 14h and 15h of the 13th.

DECEMBER. The mean temperature was about average. The first three days were quite warm, the temperature rising to 53°.8 on the 2nd. It was about average then to the 13th. From the 14th to the 18th the weather was cold and wintry, and much more so from the 22nd to the 27th, the minimum falling to -2°.0 on the 25th and -7°.2 on the 26th. The last four days of the month were about average with a tendency to lower temperature on the 31st. Bright sunshine was up to the usual amount. The rainfall was 1.3 inches below average, and snowfall 2.2 inches above. At the end of the month there was about seven and a quarter inches of snow on the ground.

JANUARY, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.526	29.647
Highest " " on 14th at 4h	30.188	30.271
Lowest " " on 9th at 44.30h	28.753	28.913
Range of barometer readings,	1.435	1.358
Highest temperature on the 29th	54.3	44.9
Lowest temperature on the 13th	-22.0	-6.8
Range for the month,	76.3	51.7
Mean of the highest readings,	33.3	29.1
Mean of the lowest readings,	17.8	15.2
Mean daily range,	15.5	13.9
Mean from max. and min.,	25.6	22.1
Mean from 24 hourly observations	25.0	
Mean humidity,	80	83
Mean force of vapour	0.112	0.108
Mean wt. of vapour in a cu. ft. of air, grains,	1.2	1.2
Mean additional wt. required for sat'n, grains	0.5	
Mean weight of a cubic foot of air, grains,	564.6	571.2
Highest solar (black bulb in vacuum) on 5th	109.8	
Lowest (radiation) on 13th	-23.3	
Monthly range	133.1	
Fall of snow inches	30.2	17.3
Number of days on which snow fell	14	14.2
Fall of rain inches	0.420	1.141
Number of days on which rain fell,	4	4.9
Mean amount of cloud (1.0 indicating overcast sky), .83		.74

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.
	224	11	80	3	87	86	168	85	0

Total number of miles registered during the month was	11,064
Mean velocity	14.9
Highest velocity at 10h on the 31st from the west	49
Highest daily average velocity on the 31st	32.4
Lowest " " " " " 18th	6.9
Number of days during the month on which gales occurred	8

JANUARY, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 8th in 1866	30.940
Lowest " " " " on 2nd in 1870	28.166
Highest temperature on the 4th in 1874 and 1st in 1876	57.5
Lowest " " " " 10th in 1859	-26.5
Highest monthly mean temperature 1880	32.7
Lowest " " " " 1857	12.8
Greatest rainfall for month in 1843 (inches)	4.295
Least " " " " in 1852 and 1856	0.000
Greatest number of days on which rain fell, in 1890	14
Greatest snowfall for the month in 1871 (inches)	43.6
Least " " " " in 1876 (inches)	3.2
Greatest number of days on which snow fell, in 1861-71-93	23

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	-0.121 inches
Monthly range	+0.077 inches
Mean temperature	+3.5
Mean of highest temperatures	+4.2
Mean of lowest " "	+2.6
Mean daily range	+1.6
Total snowfall	+12.9
Total rainfall	-0.721 inches
Mean amount of cloud	+0.09
Rain fell on the 9th, 23rd, 24th and 27th.	
Heaviest fall from 0.0h to 9.30h on the 24th	0.250 inches
Snow fell on the 3rd, 7th, 8th, 9th, 12th, 14th, 15th, 16th, 19th, 20th, 21st, 24th, 26th, 31st.	
Heaviest fall at intervals from 0.0h to midnight on the 24th	5.3 inches
Number of days completely clouded	12
Number of clear days	3
Fog on the 8th, 9th and 27th.	

FEBRUARY, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.768	29.638
Highest " " on 12th at 11.25h	30.426	30.226
Lowest " " on 7th at 6.10h	28.743	28.945
Range of barometer readings,	1.683	1.281
Highest temperature on the 3rd	44.7	44.3
Lowest temperature on the 12th	-18.2	-7.1
Range for the month,	62.9	51.4
Mean of the highest readings,	23.3	29.2
Mean of the lowest readings,	7.7	14.1
Mean daily range,	15.6	15.1
Mean from max. and min.,	15.5	21.7
Mean from 24 hourly observations	15.3	
Mean humidity,	73	81
Mean force of vapour	0.063	0.109
Mean wt. of vapour in a cu. ft. of air, grains,	0.7	1.0
Mean additional wt. required for sat'n, grains	0.4	
Mean weight of a cubic foot of air, grains,	581.7	572.0
Highest solar (black bulb in vacuum) on 3rd	79.6	
Lowest (radiation) on 12th	-20.2	
Monthly range	99.8	
Fall of snow inches	12.8	16.5
Number of days on which snow fell	9	12.4
Fall of rain inches	0.590	0.931
Number of days on which rain fell,	3	4.7
Mean amount of cloud (1.0 indicating overcast sky), .47		.76

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	230	0	32	6	22	75	227	80	0

Total number of miles registered during the month was	10,627
Mean velocity	15.8
Highest velocity at 20h on the 7th from the west	47
Highest daily average velocity on the 7th	30.5
Lowest " " " " " 18th	5.5
Number of days during the month on which gales occurred	9

FEBRUARY, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 4th in 1887	30.522
Lowest " " " " on 22nd in 1912	28.413
Highest temperature on the 4th in 1890	53.8
Lowest " " " 5th in 1855	-25.4
Highest monthly mean temperature 1882	30.3
Lowest " " " 1875	10.2
Greatest rainfall for month in 1842 (inches)	3.625
Least " " " in 1841-46-56-73-77, 1901 "	0.000
Greatest number of days on which rain fell, in 1857	11
Greatest snowfall for the month in 1846 (inches)	46.1
Least " " " " in 1851 (inches)	2.4
Greatest number of days on which snow fell, in 1843	21

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.130 inches
Monthly range	+0.502 inches
Mean temperature	-6.2
Mean of highest temperatures	-5.9
Mean of lowest " "	-6.4
Mean daily range	+0.5
Total snowfall	-3.7
Total rainfall	-0.341 inches
Mean amount of cloud	-0.29
Rain fell on the 3rd, 4th and 7th.	
Heaviest fall from 0.30h to 5.45h on the 27th	0.530 inches
Snow fell on the 1st, 6th, 10th, 13th, 14th, 15th, 16th, 17th, 22nd.	
Heaviest fall from 4.50h to midnight on the 13th	4.2 inches
Number of days completely clouded	3
Number of clear days	6
Earthquake felt in Toronto on February 10th at 13h 32m. High buildings slightly swayed.	

MARCH, 1914.

RESULTS OF OBSERVATIONS.	Mean for the past 70 years.	
Mean reading of barometer, 32 F. inches,	29.641	29.609
Highest " " on 31st at 9h	30.127	30.129
Lowest " " on 1st at 4h	29.101	28.919
Range of barometer readings,	1.026	1.210
Highest temperature on the 16th	55.2	52.1
Lowest temperature on the 2nd	4.5	-2.6
Range for the month,	50.7	54.7
Mean of the highest readings,	37.6	36.3
Mean of the lowest readings,	23.9	21.9
Mean daily range,	13.7	14.4
Mean from max. and min.,	30.7	29.0
Mean from 24 hourly observations	29.8	
Mean humidity,	78	78
Mean force of vapour	0.128	0.136
Mean wt. of vapour in a cu. ft. of air, grains,	1.4	1.4
Mean additional wt. required for sat'u, grains	0.6	
Mean weight of a cubic foot of air, grains,	560.6	561.9
Highest solar (black bulb in vacuum) on 26th	67.1	
Lowest (radiation) on 12th	1.6	
Monthly range	65.5	
Fall of snow inches	11.8	11.5
Number of days on which snow fell	8	10.4
Fall of rain inches	1.240	1.498
Number of days on which rain fell,	4	6.7
Mean amount of cloud (1.0 indicating overcast sky), .66		.67

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	95	4	173	4	29	58	226	155	0

Total number of miles registered during the month was	11,291
Mean velocity	15.2
Highest velocity at 4h on the 2nd from the northwest	60
Highest daily average velocity on the 2nd	39.7
Lowest " " " " " 15th	8.7
Number of days during the month on which gales occurred	3

NOTE—Some gusts on the 2nd blew at the rate of 80 to 96 miles per hour.

MARCH, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 24th in 1906	30.508
Lowest " " " " on 19th in 1859	28.286
Highest temperature on the 28th in 1910	75.2
Lowest " " " 3rd in 1868	-15.6
Highest monthly mean temperature 1903	38.9
Lowest " " " 1885	18.5
Greatest rainfall for month in 1859 (inches)	4.054
Least " " " in 1856 "	0.000
Greatest number of days on which rain fell, in 1878	17
Greatest snowfall for the month in 1870 (inches)	62.4
Least " " " " in 1858 and 1903 (inches)	0.2
Greatest number of days on which snow fell, in 1877	21

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.032 inches
Monthly range	-0.184 inches
Mean temperature	+1.7
Mean of highest temperatures	+1.3
Mean of lowest " "	+2.0
Mean daily range	-0.7
Total rainfall	-0.258 inches
Total snowfall	+0.3
Mean amount of cloud	-0.01
Rain fell on the 25th, 26th, 27th and 30th.	
Heaviest fall from 0.0h to 6.25h and from 6.25h to 23.30h on the 27th	0.530 inches
Snow fell on the 2nd, 4th, 6th, 7th, 8th, 9th, 18th, 22nd.	
Heaviest fall from 7.23h to midnight on the 6th	3.5 inches
Number of days completely clouded	4
Number of clear days	5
Fog on the 16th and 26th.	
Thunderstorm on the 26th.	
Lunar halo on the 7th.	

APRIL, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.	
Mean reading of barometer, 32 F. inches,	29.639	29.600	
Highest " " on 23rd at 9h	30.173	30.073	
Lowest " " on 1st at 10.15h	29.199	29.040	
Range of barometer readings,	0.974	1.033	
Highest temperature on the 18th	67.0	68.3	
Lowest temperature on the 9th,	21.5	19.6	
Range for the month,	45.5	48.7	
Mean of the highest readings,	48.9	49.6	
Mean of the lowest readings,	34.1	33.3	
Mean daily range,	14.8	16.3	
Mean from max. and min.,	41.5	41.4	
Mean from 24 hourly observations	40.6		
Mean humidity,	76	70	
Mean force of vapour	0.194	0.186	
Mean wt. of vapour in a cu. ft. of air, grains,	2.3	2.1	
Mean additional wt. required for sat'n, grains	0.8		
Mean weight of a cubic foot of air, grains,	548.1	546.8	
Highest solar (black bulb in vacuum) on 17th	78.2		
Lowest (radiation) on 13th	18.8		
Monthly range	59.4		
Fall of snow inches	1.0	2.5	
Number of days on which snow fell	2	3.5	
Fall of rain inches	1.820	2.148	
Number of days on which rain fell,	11	9.9	
Mean amount of cloud (1.0 indicating overcast sky), .63		.58	

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	95	8	234	3	66	61	192	56	5

Total number of miles registered during the month was	9,714
Mean velocity	13.5
Highest velocity at 10h on the 12th from the west	37
Highest daily average velocity on the 12th	22.1
Lowest " " " " 27th	6.0
Number of days during the month on which gales occurred	3

APRIL, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 20th in 1897	30.308
Lowest " " " " on 2nd in 1863, 28th in 1887	28.704
Highest temperature on the 22nd in 1842	89.8
Lowest " " " 2nd in 1857	5.9
Highest monthly mean temperature 1878	48.8
Lowest " " " 1874	34.2
Greatest rainfall for month in 1910 (inches)	4.900
Least " " " in 1881	0.075
Greatest number of days on which rain fell, in 1871	17
Greatest snowfall for the month in 1857 (inches)	12.9
Least " " " " in 1843-56-58-70-87-88-90-91 (inches)	0.1
Greatest number of days on which snow fell, in 1857	11

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+ 0.039 inches
Monthly range	- 0.059 inches
Mean temperature	+ 0.1
Mean of highest temperatures	- 0.7
Mean of lowest " "	+ 0.8
Mean daily range	- 1.5
Total rainfall	- 0.328 inches
Total snowfall	- 1.5
Mean amount of cloud	+ 0.05
Rain fell on the 1st, 2nd, 15th, 16th, 19th, 20th, 21st, 24th, 25th, 28th, 29th.	
Heaviest fall from 17.30h to 20.30h on the 25th	0.600 inches
Snow fell on the 2nd and 3rd.	
Heaviest fall from 6.10h to 13.15h and from 19.35h to midnight on the 2nd	0.8 inches
Number of days completely clouded	8
Number of clear days	6
Fog on the 26th.	
Thunderstorm on the 25th.	

MAY, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.699	29.577
Highest " " on 19th at 9h	30.157	29.967
Lowest " " on 5th at 14h	29.195	29.153
Range of barometer readings,	0.962	0.814
Highest temperature on the 21st	87.0	77.9
Lowest temperature on the 1st,	34.8	30.9
Range for the month,	52.2	47.0
Mean of the highest readings,	69.7	62.0
Mean of the lowest readings,	47.4	43.3
Mean daily range,	22.3	18.7
Mean from max. and min.,	58.6	52.7
Mean from 24 hourly observations	58.3	
Mean humidity,	68	70
Mean force of vapour	0.330	0.280
Mean wt. of vapour in a cu. ft. of air, grains,	3.6	3.1
Mean additional wt. required for sat'n, grains	1.9	
Mean weight of a cubic foot of air, grains,	530.3	533.7
Highest solar (black bulb in vacuum) on 26th	103.8	
Lowest (radiation) on 1st	32.6	
Monthly range	71.2	
Fall of snow inches	0.0	0.1
Number of days on which snow fell		0.4
Fall of rain inches	1.495	2.971
Number of days on which rain fell,	12	12.4
Mean amount of cloud (1.0 indicating overcast sky), .42		.57

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	46	4	184	2	51	9	428	10	10

Total number of miles registered during the month was	7,257
Mean velocity	9.8
Highest velocity at 27h on the 22nd from the west	25
Highest daily average velocity on the 26th	15.3
Lowest " " " " " 19th	3.5
Number of days during the month on which gales occurred	0

MAY, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 2nd in 1849	30.214
Lowest " " " " on 6th in 1861,	28.644
Highest temperature on the 30th in 1895	93.4
Lowest " " " 3rd in 1867	24.6
Highest monthly mean temperature 1911	61.3
Lowest " " " 1867	46.6
Greatest rainfall for month in 1894 (inches)	9.395
Least " " " in 1891 " "	0.495
Greatest number of days on which rain fell, in 1890	23
Greatest snowfall for the month in 1875 (inches)	3.1
Least " " " " in 1910-13-14 (inches)	0.0
Greatest number of days on which snow fell 1905	5

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	- 0.122 inches
Monthly range	+ 0.148 inches
Mean temperature	+ 5.9
Mean of highest temperatures	+ 7.7
Mean of lowest " "	+ 4.1
Mean daily range	+ 3.6
Total rainfall	- 1.476 inches
Mean amount of cloud	- 0.15
Rain fell on the 4th, 5th, 6th, 10th, 12th, 13th, 22nd, 24th, 25th, 26th, 27th, 29th.	
Heaviest fall from 10.40h to 11.15h on the 27th	0.490 inches
Number of days completely clouded	3
Number of clear days	11
Fog on the 8th.	
Thunderstorms on the 4th, 26th, 27th, 29th.	
Hail on the 27th.	

JUNE, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.610	29.572
Highest " " on 6th at 10h	29.992	29.909
Lowest " " on 19th at 11h	29.290	29.165
Range of barometer readings,	0.702	0.744
Highest temperature on the 24th	91.3	86.4
Lowest temperature on the 20th,	38.0	40.1
Range for the month,	53.3	46.3
Mean of the highest readings,	74.8	72.4
Mean of the lowest readings,	54.0	52.9
Mean daily range,	20.8	19.5
Mean from max. and min.,	64.4	62.6
Mean from 24 hourly observations	63.8	
Mean temperature of dew point	50.4	
Mean humidity,	64	73
Mean force of vapour	0.392	0.418
Mean wt. of vapour in a cu. ft. of air, grains,	4.1	4.8
Mean additional wt. required for sat'n, grains	2.6	
Mean weight of a cubic foot of air, grains,	522.5	521.8
Highest solar (black bulb in vacuum) on 8th	107.5	
Lowest (radiation) on 20th	35.0	
Monthly range	72.5	
Fall of rain inches	2.170	2.764
Number of days on which rain fell,	11	11.7
Mean amount of cloud (1.0 indicating overcast sky), .42		.53

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	44	175	25	32	34	165	75	163	7

Total number of miles registered during the month was	7,466
Mean velocity	10.4
Highest velocity at 18h on the 24th from the west	33
Highest daily average velocity on the 16th	15.9
Lowest " " " " " 23rd	3.1
Number of days during the month on which gales occurred	1

JUNE, 1914.

EXTREME READINGS DURING 75 YEARS.	
Highest reading of barometer on 10th in 1913	30.160
Lowest " " " " on 25th in 1902,	28.875
Highest temperature on the 27th in 1901	97.1
Lowest " " " 10th in 1842	28.1
Highest monthly mean temperature 1885	67.9
Lowest " " " 1842	56.5
Greatest rainfall for month in 1870 (inches)	8.090
Least " " " in 1864 " "	0.570
Greatest number of days on which rain fell, in 1869	22
Flurries of snow on two days in 1859.	

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.038 inches
Monthly range	-0.042 inches
Mean temperature	+1.8
Mean of highest temperatures	+2.4
Mean of lowest " "	+1.1
Mean daily range	+1.3
Total rainfall	-0.594 inches
Mean amount of cloud	-0.11
Rain fell on the 3rd, 4th, 7th, 19th, 21st, 22nd, 24th, 26th, 27th, 28th, 29th.	
Heaviest fall from 14.35h to 15.30h on the 7th	0.880 inches
Number of days completely clouded	2
Number of clear days	12
Fog on the 3rd, 7th, 4th, 23rd.	
Thunderstorms on the 7th, 24th, 27th, 28th.	
Hoar frost on the 20th.	

JULY, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.614	29.585
Highest " " on 30th at 9h	29.892	29.889
Lowest " " on 17th at 3h	29.298	29.420
Range of barometer readings,	0.594	0.469
Highest temperature on the 11th	92.6	89.8
Lowest temperature on the 20th,	47.9	47.5
Range for the month,	44.7	42.3
Mean of the highest readings,	80.5	77.9
Mean of the lowest readings,	60.4	58.2
Mean daily range,	20.1	19.7
Mean from max. and min.,	70.4	68.1
Mean from 24 hourly observations	70.1	
Mean temperature of dew point	59.3	
Mean humidity,	71	72
Mean force of vapour	0.519	0.488
Mean wt. of vapour in a cu. ft. of air, grains,	5.4	5.7
Mean additional wt. required for sat'n, grains	2.7	
Mean weight of a cubic foot of air, grains,	515.7	517.0
Highest solar (black bulb in vacuum) on 29th	143.0	
Lowest (radiation) on 20th	44.0	
Monthly range	99.0	
Fall of rain inches	1.000	3.039
Number of days on which rain fell,	11	11.2
Mean amount of cloud (1.0 indicating overcast sky), .36		.49

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	77	268	30	55	37	84	29	162	2

Total number of miles registered during the month was	6,701
Mean velocity	9.0
Highest velocity at 18h on the 27th from the northeast	24
Highest daily average velocity on the 14th	17.0
Lowest " " " " " 8th	4.0
Number of days during the month on which gales occurred	0

JULY, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 7th in 1892	30.192
Lowest " " " " on 24th at 9.20h in 1911,	29.006
Highest temperature on the 3rd in 1911	103.2
Lowest " " " 12th in 1843	38.7
Highest monthly mean temperature 1868	75.8
Lowest " " " 1891	63.7
Greatest rainfall for month in 1841 (inches)	8.150
Least " " " in 1868 "	0.510
Greatest number of days on which rain fell, 1861-66-70-80, 1902	16

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.029 inches
Monthly range	+0.125 inches
Mean temperature	+2.3
Mean of highest temperatures	+2.6
Mean of lowest "	+2.2
Mean daily range	+0.4
Total rainfall	-2.039 inches
Mean amount of cloud	-0.13
Rain fell on the 1st, 2nd, 4th, 12th, 13th, 14th, 17th, 23rd, 24th, 27th, 28th.	
Heaviest fall from 8.15h to 17.30h on the 23rd	0.340 inches
Number of days completely clouded	1
Number of clear days	14
Thunderstorms on the 13th, 21st, 27th.	
Lightning alone on the 17th.	
Rainbow on the 27th.	

AUGUST, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.620	29.617
Highest " " on 26th at 10h	29.907	29.909
Lowest " " on 23rd at 18h	29.294	29.257
Range of barometer readings,	0.613	0.652
Highest temperature on the 7th	92.0	87.0
Lowest temperature on the 26th,	48.1	45.7
Range for the month,	43.9	41.3
Mean of the highest readings,	77.7	76.1
Mean of the lowest readings,	58.4	57.1
Mean daily range,	19.3	19.0
Mean from max. and min.,	68.1	66.6
Mean from 24 hourly observations	67.8	
Mean temperature of dew point	58.8	
Mean humidity,	77	74
Mean force of vapour	0.513	0.483
Mean wt. of vapour in a cu. ft. of air, grains,	5.8	5.1
Mean additional wt. required for sat'n, grains	1.8	
Mean weight of a cubic foot of air, grains,	518.0	519.6
Highest solar (black bulb in vacuum) on 15th	145.0	
Lowest (radiation) on 28th	46.0	
Monthly range	99.0	
Fall of rain inches	5.195	2.770
Number of days on which rain fell,	16	10.9
Mean amount of cloud (1.0 indicating overcast sky),	.41	.49

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	74	191	27	102	20	109	84	136	1

Total number of miles registered during the month was	7,013
Mean velocity	9.4
Highest velocity at 12h on the 21st from the northwest	23
Highest daily average velocity on the 29th	14.9
Lowest " " " " " 19th	4.9
Number of days during the month on which gales occurred	0

AUGUST, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 16th in 1880	30.042
Lowest " " " " on 22nd at 16.30h in 1912,	29.028
Highest temperature on the 24th in 1864	99.2
Lowest " " " " 18th in 1855 and 27th in 1870	40.0
Highest monthly mean temperature 1900	71.6
Lowest " " " " 1866	60.8
Greatest rainfall for month in 1878 (inches)	7.090
Least " " " in 1874 and 1894	0.380
Greatest number of days on which rain fell, 1872	19

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.003 inches
Monthly range	-0.039 inches
Mean temperature	+1.5
Mean of highest temperatures	+1.6
Mean of lowest " "	+1.3
Mean daily range	+0.3
Total rainfall	+2.425 inches
Mean amount of cloud	-0.08
Rain fell on the 1st, 2nd, 9th, 10th, 11th, 13th, 14th, 16th, 18th, 19th, 20th, 21st, 28th, 29th, 30th, 31st.	
Heaviest fall from 0.0h to 15.25h on the 29th	0.685 inches
Number of days completely clouded	3
Number of clear days	9
Fog on the 9th, 17th, 19th, 21st, 31st.	
Thunderstorms on the 1st, 2nd, 9th, 13th, 14th, 18th, 21st, 31st.	
Heavy dew on the 30th.	

SEPTEMBER, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.760	29.667
Highest " " on 28th at 10h	30.098	30.037
Lowest " " on 6th at 17h	29.323	29.187
Range of barometer readings,	0.775	0.850
Highest temperature on the 22nd	86.8	82.7
Lowest temperature on the 28th,	36.6	35.7
Range for the month,	50.2	17.0
Mean of the highest readings,	71.2	68.2
Mean of the lowest readings,	50.8	50.2
Mean daily range,	20.4	18.0
Mean from max. and min.,	61.0	59.2
Mean from 24 hourly observations	59.5	
Mean temperature of dew point	51.4	
Mean humidity,	76	78
Mean force of vapour	0.408	0.393
Mean wt. of vapour in a cu. ft. of air, grains,	4.6	4.5
Mean additional wt. required for sat'n, grains	1.4	
Mean weight of a cubic foot of air, grains,	528.3	527.3
Highest solar (black bulb in vacuum) on 3rd	132.3	
Lowest (radiation) on 28th	32.8	
Monthly range	99.5	
Fall of rain inches	1.540	3.177
Number of days on which rain fell,	9	11.4
Mean amount of cloud (1.0 indicating overcast sky), .34		.50

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	77	123	17	35	28	172	47	220	1

Total number of miles registered during the month was	6,962
Mean velocity	9.7
Highest velocity at 17h on the 3rd from the west	29
Highest daily average velocity on the 7th	15.7
Least " " " " " 18th	4.4
Number of days during the month on which gales occurred	0

SEPTEMBER, 1914.

EXTREME READINGS DURING 75 YEARS.		
Highest reading of barometer on 22nd in 1904		30.243
Lowest " " " " on 29th in 1848,		28.863
Highest temperature on the 2nd in 1898		97.1
Lowest " " " " 23rd in 1896		27.6
Highest monthly mean temperature 1865		64.5
Lowest " " " " 1848		53.4
Greatest rainfall for month in 1843	(inches)	9.760
Least " " " in 1867	"	0.395
Greatest number of days on which rain fell, 1907		19

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.093 inches
Monthly range	-0.075 inches
Mean temperature	+1.8
Mean of highest temperatures	+3.0
Mean of lowest "	+0.6
Mean daily range	+2.4
Total rainfall	-1.637 inches
Mean amount of cloud	-0.16
Rain fell on the 1st, 2nd, 3rd, 4th, 6th, 22nd, 23rd, 24th, 27th.	
Heaviest fall from 10.15h to 17.15h on the 1st	0.450 inches
Number of days completely clouded	1
Number of clear days	12
Fog on the 13th.	
Thunderstorms on the 3rd, 6th, 22nd, 23rd, 24th.	
Lightning alone on the 20th.	
Heavy dew on the 5th and 14th.	
Hoar frost on the 26th and 28th.	

OCTOBER, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.691	29.651
Highest " " on 14th at 1h	30.092	30.112
Lowest " " on 26th at 5h	29.227	29.066
Range of barometer readings,	0.865	1.046
Highest temperature on the 21st	79.2	70.3
Lowest temperature on the 27th,	26.0	25.5
Range for the month,	53.2	44.8
Mean of the highest readings,	61.4	54.9
Mean of the lowest readings,	44.0	39.1
Mean daily range,	17.4	15.8
Mean from max. and min.,	52.7	47.0
Mean from 24 hourly observations	51.8	
Mean temperature of dew point	45.0	
Mean humidity,	79	79
Mean force of vapour	0.302	0.258
Mean wt. of vapour in a cu. ft. of air, grains,	3.4	3.0
Mean additional wt. required for sat'n, grains	1.1	
Mean weight of a cubic foot of air, grains,	536.5	540.4
Highest solar (black bulb in vacuum) on 11th	126.7	
Lowest (radiation) on 27th	23.9	
Monthly range	102.8	
Fall of snow	not measurable	0.6
Number of days on which snow fell	1	1.6
Fall of rain	inches 1.535	2.402
Number of days on which rain fell,	11	12.4
Mean amount of cloud (1.0 indicating overcast sky), .49		.61

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	93	140	74	27	75	119	141	74	1

Total number of miles registered during the month was	8,287
Mean velocity	11.1
Highest velocity at 12h on the 16th from the northeast	31
Highest daily average velocity on the 28th	21.5
Least " " " " " 9th	3.8
Number of days during the month on which gales occurred	1

OCTOBER, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 23th in 1847	30.396
Lowest " " " " on 14th in 1893,	28.227
Highest temperature on the 15th in 1897	85.7
Lowest " " " " 31st in 1844	15.9
Highest monthly mean temperature 1900	55.7
Lowest " " " " 1841	41.8
Greatest rainfall for month in 1849	(inches) 5.905
Least " " " " in 1901	" 0.560
Greatest number of days on which rain fell, 1864	22
Greatest snowfall for the month in 1814	(inches) 12.0
Least " " " " in 1910-13-14	not measurable
Greatest number of days on which snow fell in 1860	7

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.040 inches
Monthly range	-0.181 inches
Mean temperature	+5.7
Mean of highest temperatures	+6.5
Mean of lowest " "	+4.9
Mean daily range	+1.6
Total rainfall	-0.867 inches
Total snowfall	-0.6
Mean amount of cloud	-0.12
Rain fell on the 9th, 10th, 13th, 15th, 16th, 17th, 20th, 24th, 26th, 29th, 30th.	
Heaviest fall from 0.0h to 4.40h and 16.30h to 18.00h on the 10th	0.690 inches
Snowflurries on the 26th.	
Number of days completely clouded	2
Number of clear days	8
Fog on the 9th, 17th, 19th, 20th, 23rd.	
Thunderstorm on the 10th.	
Heavy dew on the 4th, 22nd.	
Hoar frost on the 2nd, 3rd, 5th, 31st.	

NOVEMBER, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.621	29.627
Highest " " on 28th at 11h	30.183	30.169
Lowest " " on 15th at 23.36h	28.956	28.975
Range of barometer readings,	1.227	1.194
Highest temperature on the 3rd	62.0	57.9
Lowest temperature on the 23rd,	12.8	13.5
Range for the month,	49.2	44.4
Mean of the highest readings,	45.4	42.5
Mean of the lowest readings,	30.8	30.1
Mean daily range,	14.6	12.4
Mean from max. and min.,	38.1	36.3
Mean from 24 hourly observations	37.1	
Mean humidity,	77	80
Mean force of vapour	0.174	0.179
Mean wt. of vapour in a cu. ft. of air, grains,	2.0	2.0
Mean additional wt. required for sat'n, grains	0.7	
Mean weight of a cubic foot of air, grains,	551.7	552.7
Highest solar (black bulb in vacuum) on 4th	105.6	
Lowest (radiation) on 23rd	10.5	
Monthly range	95.1	
Fall of snow inches	3.3	4.6
Number of days on which snow fell	6	7.3
Fall of rain inches	2.510	2.488
Number of days on which rain fell,	9	10.3
Mean amount of cloud (1.0 indicating overcast sky), .62		.74

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	32	92	41	25	115	119	231	64	1

Total number of miles registered during the month was	11,650
Mean velocity	16.2
Highest velocity at 14h 15h on the 13th from the west	45
Highest daily average velocity on the 17th	27.5
Lowest " " " " 6th and 9th	7.0
Number of days during the month on which gales occurred	8

NOVEMBER, 1914.

EXTREME READINGS DURING 75 YEARS.

Highest reading of barometer on 30th in 1887	30.592
Lowest " " " " on 9th in 1913,	28.327
Highest temperature on the 3rd in 1903	70.2
Lowest " " " 30th in 1875	5.0
Highest monthly mean temperature 1902	43.0
Lowest " " " 1873	27.5
Greatest rainfall for month in 1846 (inches)	5.805
Least " " " in 1904 "	0.080
Greatest number of days on which rain fell, 1877	16
Greatest snowfall for the month in 1873 (inches)	19.6
Least " " " " in 1847-1850 not measurable	
Greatest number of days on which snow fell 1869-73-92	18

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	- 0.006 inches
Monthly range	+ 0.033 inches
Mean temperature	+ 1.8
Mean of highest temperatures	+ 2.9
Mean of lowest "	+ 0.7
Mean daily range	+ 2.2
Total rainfall	+ 0.022 inches
Total snowfall	- 1.3
Mean amount of cloud	- 0.12
Rain fell on the 1st, 3rd, 7th, 10th, 11th, 13th, 15th, 24th, 30th.	
Heaviest fall from 5.45h to 20.30h on the 15th	1.210 inches
Snow fell on the 10th, 12th, 13th, 17th, 22nd, 24th.	
Heaviest fall from 0.0h to 6.20h and 13.45 to 14.05h on the 13th	1.5 inches
Number of days completely clouded	3
Number of clear days	4
Fog on the 15th, 18th, 26th, 29th, 30th.	
Thunderstorm on the 1st.	
Solar corona on the 12th.	

DECEMBER, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of barometer, 32 F. inches,	29.751	29.644
Highest " " on 4th at 10.57h	30.164	30.226
Lowest " " on 29th at 21.57h	28.918	28.936
Range of barometer readings,	1.276	1.290
Highest temperature on the 2nd	53.8	47.5
Lowest temperature on the 26th,	-7.2	-2.3
Range for the month,	61.0	49.8
Mean of the highest readings,	31.5	32.5
Mean of the lowest readings,	20.0	20.0
Mean daily range,	11.5	12.5
Mean from max. and min.,	25.7	26.3
Mean from 24 hourly observations	25.0	
Mean humidity,	71	82
Mean force of vapour	0.098	0.128
Mean wt. of vapour in a cu. ft. of air, grains,	1.0	1.3
Mean additional wt. required for sat'n, grains	0.7	
Mean weight of a cubic foot of air, grains,	569.0	565.1
Highest solar (black bulb in vacuum) on 20th	93.0	
Lowest (radiation) on 26th	-20.0	
Monthly range	113.0	
Fall of snow inches	15.2	13.0
Number of days on which snow fell	10	13.1
Fall of rain inches	0.230	1.531
Number of days on which rain fell,	2	6.3
Mean amount of cloud (1.0 indicating overcast sky), .69		.77

No. of hours in the month in which the wind was	N.	N.E.	E.	S.E.	S.	S. W.	W.	N. W.	C.
	87	141	16	19	98	172	144	64	3

Total number of miles registered during the month was	12,365
Mean velocity	16.6
Highest velocity at 17h on the 14th from the southwest	40
Highest daily average velocity on the 15th	28.2
Lowest " " " " " 26th	8.8
Number of days during the month on which gales occurred	8

DECEMBER, 1914.

EXTREME READINGS DURING 75 YEARS.	
Highest reading of barometer on 1st in 1887	30.594
Lowest " " " " on 9th in 1886, 14th 1856	28.459
Highest temperature on the 31st in 1875	61.0
Lowest " " " " 21st in 1871	-21.0
Highest monthly mean temperature 1889	34.3
Lowest " " " " 1876	17.2
Greatest rainfall for month in 1841 (inches)	6.600
Least " " " " in 1840 and 1845	0.000
Greatest number of days on which rain fell, in 1889 and 1911	14
Greatest snowfall for the month in 1872 (inches)	38.0
Least " " " " in 1877 (inches)	0.3
Greatest number of days on which snow fell 1872	24

TABLE OF DIFFERENCES.

The signs + and - mean respectively above and below the monthly normal.

Mean barometric pressure	+0.107 inches
Monthly range	-0.044 inches
Mean temperature	-0.6
Mean of highest temperatures	-1.0
Mean of lowest " "	0
Mean daily range	-1.0
Total rainfall	-1.301 inches
Total snowfall	+2.2
Mean amount of cloud	-0.08
Rain fell on the 2nd and 29th.	
Heaviest fall from 0.0h to 8.30h and 12.10h to 12.15h on the 2nd	0.180 inches
Snow fell on the 9th, 10th, 13th, 14th, 19th, 21st, 22nd, 23rd, 24th, 29th.	
Heaviest fall from 1.00h to 10.00h and 11.10 to 17.10h on the 21st	4.2 inches
Number of days completely clouded	7
Number of clear days	4
Fog on the 1st and 2nd.	
Lunar halo on the 3rd.	

SUMMARY OF OBSERVATIONS, 1914.

RESULTS OF OBSERVATIONS.		Mean for the past 70 years.
Mean reading of the barometer, 32° F., inches	29.662	29.619
Highest " " " " on February 12th "	30.426	30.371
Lowest " " " " on February 7th "	28.743	28.707
Range of barometer readings	1.683	1.664
Highest temperature on July 11th,	92.6	91.2
Lowest temperature on January 13th,	-22.0	-12.0
Range for the year	114.6	103.2
Mean of the highest readings	54.6	52.5
Mean of the lowest readings	37.4	36.3
Mean daily range	17.2	16.1
Mean from max. and min.	46.0	44.4
Mean from 24 hourly observations	45.3	
Mean humidity	74	77
Mean force of vapour	0.227	0.264
Mean wt. of vapour in a cu. foot of air, grains	2.6	2.7
Mean additional wt. required for satu'n, grains	1.0	
Mean weight of a cubic foot of air, grains	543.4	543.6
Highest solar (black bulb in vacuum) Aug. 15th	145.0	
Lowest (radiation) on January 13th	-23.3	
Yearly range	168.3	
Fall of snow	inches 74.3	66.0
Number of days on which snow fell	49	62.9
Fall of rain	inches 19.745	26.863
Number of days on which rain fell	103	112.9
Mean amount of cloud (1.0 indicating overcast sky)	.53	.62

No. of hours in the year in which the wind was	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.
	1174	1157	933	313	662	1229	1992	1269	31

Total number of miles registered during the year was	110,397
Mean velocity,	12.6
Highest velocity on March 2nd, from the northwest,	60
Highest daily average velocity on March 2nd	39.7
Least daily average velocity on June 23rd	3.1
Number of days during the year on which gales occurred	41

SUMMARY, 1914.

ABSOLUTE EXTREMES DURING 75 YEARS

Readings of the barometer, in inches.		
Highest monthly mean, February, 1906,		29.819
Lowest " " March, 1859,		29.412
Highest yearly " 1849,		29.668
Lowest " " 1864,		29.560
Greatest monthly range of barometer, January, 1870,		2.046
Least " " " " June, 1841,		0.425
Highest reading, January 8th, 1866,		30.940
Lowest " January 2nd, 1870		28.166
Extreme range		2.774

Temperatures.

Highest monthly mean, July, 1868,		75.8
Lowest " " February, 1875,		10.2
Highest yearly " 1913,		48.0
Lowest " " 1875,		40.8
Highest reading on July 3rd, 1911,		103.2
Lowest reading on January 10th, 1859,		-26.5

Rainfall and snowfall, in inches.

Greatest rainfall in a month, September, 1843,		9.760
Greatest number of rainy days in a month, May, 1890,		23
Greatest rainfall in a year, 1843,		43.555
Least " " " " 1874,		17.574
Greatest number of rainy days in a year, 1890,		145
Least " " " " " " " " 1841,		80
Greatest fall of snow in a month, March, 1870,		62.4
Greatest number of days of snow in a month, December, 1872, and December, 1870,		24
Greatest fall of snow in a year in 1870,		122.9
Least " " " " " " " " 1899,		31.8
Greatest number of days of snow in a year, 1859,		87
Least " " " " " " " " 1848,		33

MONTHLY TABLES FOR EACH HOUR OF RECORDED SUNSHINE—1914

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	0	1.7	4.7	6.3	9.1	9.3	7.1	7.0	6.5	1.6	0	0	0
February.	0	0	0	0	1.8	11.1	16.8	18.3	19.1	18.6	15.4	15.7	12.7	8.8	2.3	0	0
March.	0	0	0	1.0	6.8	11.6	15.4	17.8	17.0	16.6	16.0	14.3	13.0	9.1	4.0	0	0
April.	0	0	0.4	3.9	9.3	11.0	13.2	13.7	13.9	13.5	12.6	10.4	10.6	10.8	7.8	2.9	0
May.	0	0	8.2	20.7	22.1	22.4	22.3	21.1	21.5	22.0	21.2	19.1	18.2	18.5	20.4	10.9	0
June.	0	0.4	12.0	19.3	21.1	20.1	20.2	20.9	21.1	22.2	22.5	21.1	21.4	19.4	17.9	14.3	4.0
July.	0	0	6.7	18.7	20.7	20.9	22.3	22.4	23.5	22.6	22.1	21.3	20.5	18.7	15.5	13.1	2.2
August.	0	0	1.7	13.0	18.7	20.8	21.0	20.7	20.1	22.0	21.9	20.8	20.3	19.0	16.6	7.7	0
September.	0	0	0	8.9	19.6	21.6	20.0	22.4	21.1	22.5	21.1	22.1	22.6	20.6	11.6	0.7	0
October.	0	0	0	0.4	7.0	12.7	15.0	15.2	16.6	16.7	15.7	18.8	18.5	9.8	0.8	0	0
November.	0	0	0	0	1.0	6.9	10.5	12.3	13.0	11.5	11.8	12.1	6.4	1.4	0	0	0
December.	0	0	0	0	0	4.7	7.8	8.3	9.1	8.8	9.4	9.5	6.1	0.5	0	0	0
Total hours.	0	0.4	29.0	85.9	128.1	165.5	189.2	199.4	205.1	206.3	196.8	192.2	176.8	138.2	96.9	49.6	6.2

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY—1914.

Month.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.
January.	0	0	0	3.3	7.9	0	0	0	0	3.2	1.2	7.5	7.7	0	0	0	1.1
February.	0.6	0.5	3.1	3.2	3.8	0	3.5	6.6	7.9	3.3	7.8	9.3	0.2	7.7	8.4	6.3	0
March.	3.9	0	8.8	1.3	4.5	0	0	4.0	3.2	3.9	10.8	9.2	9.4	0.1	7.4	7.2	7.8
April.	0	0	11.6	1.3	4.5	3.1	0	2.5	6.3	8.4	0.3	7.8	11.9	8.6	4.0	0.1	11.1
May.	13.2	12.8	10.6	2.9	0	8.5	7.9	3.3	13.4	0.5	0	0	0.9	11.6	12.2	9.6	12.5
June.	13.9	13.2	4.6	0	14.1	13.5	5.7	11.1	12.6	14.2	9.7	13.9	11.8	12.2	13.1	14.4	14.0
July.	1.3	5.2	12.4	10.5	13.4	14.0	5.9	8.2	12.1	11.0	10.8	2.1	0	2.9	12.8	11.5	8.9
August.	6.7	10.4	10.9	13.3	12.7	8.5	10.2	11.7	9.0	5.8	7.5	12.2	5.5	11.3	12.7	6.4	8.5
September.	1.4	6.2	8.9	4.1	10.4	3.1	6.3	9.1	9.1	10.2	0.8	11.3	11.5	10.5	10.5	11.2	11.2
October.	10.5	10.7	6.8	8.8	5.8	0.9	6.0	4.7	2.3	2.2	7.0	4.5	0	1.2	0	0	6.9
November.	4.8	0.6	1.6	5.9	2.2	2.3	1.5	0	2.5	T	4.0	1.5	0.6	5.4	0	2.7	6.6
December.	0	0	1.3	0	T	0.9	0	0.5	0	0	7.8	0	0	2.7	6.5	6.8	7.2

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY—1914, (Continued).

Month.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	Monthly Total.	Monthly Per-centage
January.	3.7	0	0	1.0	0.7	0.6	0	6.9	3.2	0	2.2	3.1	0	0	53.3	18
February.	0	4.9	6.6	5.4	4.1	10.0	9.8	9.8	5.9	8.8	3.1				140.6	48
March.	0	6.3	11.0	5.8	1.4	6.3	9.3	3.0	2.4	0	3.9	0	0.2	11.5	142.6	39
April.	4.9	1.6	0	1.6	9.5	12.7	6.4	0	1.2	0	3.3	0	11.3		134.0	33
May.	11.8	12.7	12.5	12.7	4.9	11.7	8.8	6.4	9.8	10.1	12.7	12.4	12.8	9.6	268.5	59
June.	10.9	1.9	12.7	0.9	2.6	8.5	8.7	12.9	10.0	1.1	1.5	0	14.2		277.9	60
July.	5.7	13.8	13.5	12.5	10.3	0.1	5.8	13.1	9.2	1.0	13.2	10.6	13.0	6.4	271.2	58
August.	1.4	3.6	0.2	8.5	9.7	4.3	10.9	12.5	8.9	3.4	2.5	0.3	8.1	6.7	244.3	57
September.	10.6	10.2	9.5	9.9	10.1	0	2.4	8.8	5.5	10.0	11.1	3.1	7.8		234.8	63
October.	5.1	0.7	4.7	9.5	9.5	8.9	2.1	6.8	3.4	5.8	2.3	0	1.1	9.0	147.2	42
November.	1.8	0.1	5.5	0.3	2.6	7.8	T	0.9	4.4	7.4	8.3	5.6	0		86.9	30
December.	0.2	0	6.9	0.8	4.8	2.2	0	7.8	3.1	0	0	0	3.9	8.0	64.2	23

SUMMARY OF SUNSHINE.

BRIGHT SUNSHINE RECORDED.

	1914			Mean from 1882 to 1910.		
	Number of days.	Number of hours	Percentage of sunshine.	Number of days.	Number of hours.	Percentage of sunshine.
January	15	53.3	18	20	77.9	27
February	25	140.6	48	22	108.1	37
March	25	142.6	39	25	150.0	40
April	23	134.0	33	25	190.7	47
May	28	268.5	59	29	218.9	48
June	28	277.9	60	29	260.0	56
July	30	271.2	58	30	282.2	60
August	31	244.3	57	30	252.7	60
September	29	234.8	63	28	207.8	55
October	27	147.2	42	28	149.3	44
November	27	86.9	30	22	85.3	29
December	18	64.2	23	20	65.2	24
Year	306	2065.5	44	308	2048.1	46

EARTHQUAKE RECORDS BY MILNE SEISMOGRAPH

P.T.—Preliminary Tremors. 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 1914.	P.T. Commence.		L.W. Commence.		Max		End.		Max. Amplitude. M. M.	Duration.		REMARKS.	
		H.	M.	H.	M.	H.	M.	H.	M.		H.	M.		
1312	Jan. 12	10	14.3	10	27.8	.....	10	48.2	0.2	0	33.9	A.C's going on. Marked thickenings.	
1313	" 15	20	7.1	20	31.3	.....	20	49.6	0.1	0	42.5		
1314	" 20	12	21.4	12	38.0	.....	12	18.5 ²	0.2	0	57.1		
1315	" 30	No P.T's		3	58.3	4	1.0	6	32.0	0.8		2	33.7
							4	48.0			1.3			
1316	" 30	7	58.3	.....	.....	.....	8	34.5	0.5	0	36.2	Panama Earthquake. Earthquake felt in Toronto. Abrupt beginning. Repeat 5h 25m'3.
1317	Feb. 7	23	14.9	23	19.2	23	20.2	23	49.7 ²	0.3	0		34.8	
1318	" 8	5	25.2	.....	.....	.....	5	35.2	0.2	0	10.0	
1319	" 10	11	28.5	11	38.4	.....	11	49.6	0.1	0	21.1		
1320	" 10	16	32.9	16	44.3	16	47.0	Light off	1.8					
1321	" 10	18	32.5	18	32.5	18	32.5	18	45.5	2.3	0		13.0	
1322	" 11	15	29.3	15	31.1	.....	15	34.3	0.1	0	5.0		
1323	" 15	23	56.0	.....	.....	.....	24	32.1 ²	0.1	0	36.1 ²	
1324	" 26	No P.T's		5	17.6	5	18.8	6	41.7	1.8	1		24.1	
1325	" 28	5	12.2	5	16.7	5	17.1	6	15.4	0.8	1		03.2	
1326	Mar. 4	16	24.7 ²	16	47.7	.....	17	39.5	0.2	1	14.8		
		16	28.4	
1327	" 4	.....	.....	19	40.6	.....	20	15.0	0.05	0	34.4	
				19	50.9	
1328	" 6	19	20.7 ²	19	43.8	19	55.6	20	41.4	0.3	1		20.7	
		19	24.3	.....	.....	.....	.....	.....	.....	.....	.....	.....
1329	" 13	.....	.....	15	40.4	15	41.6	15	55.3	0.5	0	14.9
1330	" 14	20	11.1	20	43.4	21	3.0	21	51.1	0.5	1	40.0		
1331	" 16	20	36.2 ²	.....	.....	.....	.....	.....	.....	.....	.....	.....
1332	" 18	4	41.7	5	0.0	5	7.6	5	55.3	0.4	1	13.6		
			
1333	Mar. 18	6	19.7 ²	6	49.2	7	7.4	7	56.3	0.5	1	36.6	Marked swellings, Three mark'd cigarshaped movements. Distant 2725 km. Paper off at 17h 36m. Possibly two separate quakes. 4'440km. Doubtful. Eq. reported from Reno, Nevada. Uniform thickening. Uniform thickening. Marked small disturbance. A.C's going on. L.W. lasted a long time. Eq. at Panama 10.25pm. of 27th lasting 30 seconds, S. W. to N. W. Friendly Islands, S. Pacific. May be merged into 1353. P.T's doubtful. No defined max.	
		6	31.6	.....	.....	.....	.....	.....	.....	.....	.....	.....
1334	" 21	9	18.9	.....	.....	.....	9	52.7	0.05	0	33.8	
		9	30.4	.....	.....	.....	.....	.....	.....	.....	.....	.....
1335	" 21	19	52.7	.....	.....	.....	20	9.4	0.1	0	16.7	
1336	" 24	16	31.4	.....	.....	.....	16	33.8	0.05	0	3.4	
1337	" 24	23	35.9	.....	.....	.....	23	49.7	0.05	0	13.8	
1338	" 27	.....	.....	1	33.2	1	38.9	2	14.1	0.3	0	40.9
1339	" 27	16	23.9	.....	.....	.....	16	42.5	0.05	0	18.6	
1340	" 30	v ₁ 0	47.2	0	55.3	1	1.4	4	0.5 ²	8.0	3	27.0		
		v ₂ 0	51.0	.....	.....	.....	.....	.....	.....	.....	.....	.....
1341	Apr. 9	4	36.2	4	40.7	4	42.3	5	18.5	0.2	0	42.3		
1342	" 11	16	49.1 ²	16	59.9	.....	.....	19	48.4	.....	2	49.3
1343	" 20	13	38.9	13	50.9	13	57.2	15	48.6	2.7	2	09.7		
1344	" 22	21	56.6	.....	.....	.....	.....	22	0.9	0.05	0	4.3
1345	" 24	8	50.3	8	52.9	8	53.4	8	58.3	0.3	0	8.0		
1346	" 24	22	41.2	.....	.....	.....	.....	22	43.2	0.1	0	2.0
1347	" 25	.....	.....	8	36.0	.....	.....	8	58.5	0.1	0	22.5
1348	May 8	12	49.9	13	04.7	.....	.....	13	23.3	0.2	0	33.4
1349	" 19	0	34.9 ²	0	41.1	.....	.....	1	22.1	0.3	0	47.2
		.....	.....	0	49.8	.....	.....	.....	.....	.....	.....	.....
1350	" 19	22	7.9 ²	22	12.1	.....	.....	.....	0.05	.....	.....	.....
1351	" 26	14	45.5	15	10.2	15	20.6	17	57.0	1.6	3	11.5		
		15	29.2	.....	.....	.....	.....	.....	.....	.....	.....	.....
1352	" 28	s3	36.7	3	43.7	3	44.7	4	33.6	1.8	0	56.9		
1353	" 28	.....	.....	18	12.4	18	17.8	18	49.7	0.3	0	37.3
		.....	.....	18	17.4	18	20.2	.....	0.3	.....	.....	.....
1854	" 28	19	3.5 ²	19	11.3	19	12.3	19	36.3	0.2	0	32.8		
1855	" 29	5	57.2 ²	6	8.7	.....	.....	7	15.8	0.2	1	18.6
1356	" 31	.....	.....	14	2.6 ²	.....	.....	14	15.7	0.05	0	13.1
1357	June 21	0	3.2	0	39.7	1	1.6	1	38.9	0.3	1	35.7		

No.	Date 1914	P. T. Commence.	L. W. Commence	Max.	End	Max. Amplitude.	Duration:	REMARKS	
158	June 23	3 44.1	4 0.0	0 15.9	Sumatra.	
159	" 25	19 20.0	19 48.4	19 48.8	22 0.0	0.4	2 40.0?		
1360	" 26	19 29.7	20 40.9	0.8	0 10.6	Possibly two quakes.	
1361	" 26	85 20.1	.....	6 18.4	7 48.7	0.05	2 0.8	
1362	" 30	5 47.9	9 20.3	0.05	0 17.6	Marked thickening at beginning. Marked thickening at beginning.	
1363	July 3	.....	5 50.2	.....	21 30.0	0.05	0 22.6
1364	" 5	.....	9 27?	.....	23 34.7	0.05	0 27.9
1365	" 6	.....	21 7.4	.....	0 14.1	0.05	1 10.5
1366	" 6	.....	23 6.8	.....	3 32.9	0.2	0 14.5
1367	" 6	.....	0 3.6	.....	4 45.3	0.1	0 32.2
1368	" 6	.....	3 18.4	.....	4 58.4	0.05	0 21.4
1369	" 14	.....	4 13.1	.....	8 49.1	0.5	1 33.1
1370	" 17	7 16.0?	7 36.2	7 45.8	10 18.2	0.05	0 4.1		Suspicion of A. C. 22h to 22h 23m.
1371	" 21	10 14.1	22 50.2	22 52.9	23 21.0	1.3	1 0.8		
1372	Aug 3	22 22.8	11 42.2	11 43.0	12 4.0	0.8	0 26.0	Increase of movem't at 11h 42m'2.	
1373	" 4	11 38.0	12 56.5	13 22.5?	0.05	0 30.8	Prolonged marked disturbance.	
1374	" 4	12 51.7?	23 16.5	23 35.2	2 11.6?	1.7	3 14.8		
1375	" 6	22 56.8?	23 48.8	19 32.4	20 20.0	0.3	1 1.9	Marked disturbance. Marked disturbance.	
1376	" 8	19 18.1	19 30.4	19 32.4	19 7.0	0.05	0 2.2		
1377	" 8	19 4.8	.....	19 28.1	20 9.5	1.4	0 52.3	
1378	" 8	19 17.2	19 27.4	19 28.1	20 9.5	1.3	1 5.1		
1378	" 22	5 40.9	5 48.1	5 50.3	6 46.0	0.3	1 3.1		
1379	" 22	15 51.3?	16 8.2	16 12.0	16 54.4	0.05	0 48.7		
1380	" 28	9 1.3	9 19.8	.....	9 50.0	0.05	0 48.7	
1381	" 28	9 42.3	18 6.3	.....	18 9.3	0.05	0 9.3	
1382	Sept. 4	18 0.0?	18 27.4	.....	18 42.4	0.1	0 5.0	

1383	Sept. 10	10 10.5	10 14.5	0.05	0 4.0	Extended thickenings. Marked brief thickening.	
1384	" 11	12 5.2	.....	.....	12 34.1	0.05	0 28.9
1285	" 12	16 448?	16 46.6	.....	16 51.4	0.1	0 6.6	
1286	" 15	.....	0 43.9	.....	1 37.9	0.05	0 54.0
1287	" 22	.....	23 58.3	.....	0 11.5	0.2	0 13.2
1388	" 25	10 36.3?	10 44.4	.....	10 56.1	0.05	0 19.8	
1389	Oct. 1	6 26.8	6 40.0	6 52.8	7 13.7	0.2	0 46.9		
1390	" 3	17 30.3	17 35.8	17 43.1	19 41.2	2.0	2 10.9		Paper changed during eq. Earthquake at Martinique. Asia Minor.
1391	" 3	22 29.6?	s22 33.1 L22 47.1	22 59.1	24 0.0	0.9	1 30.4		
1392	" 8	12 30.7?	12 52.1	.....	13 8.1	0.05	0 37.4	
1393	" 9	.....	3 46.0	.....	3 55.6	0.1	0 9.6
1394	" 14	14 24.2	14 27.7	0.05	Doubtful as to being seismic.	
1395	" 14	19 38.4?	19 41.9	.....	19 45.2	0.2	0 6.8	
1396	" 17	7 3.9	7 5.8	.....	7 25.0	0.2	0 21.1	
1397	" 21	16 19.2	16 33.8	.....	16 43.4	0.05	0 24.2	
1398	" 22	6 59.5	.....	.....	7 2.3	0.2	0 2.8
1399	" 22	.....	16 38.0	.....	16 45.2	0.2	0 7.2
1400	" 23	6 40.4	6 51.1	.....	.....	0.2	.....	
1401	" 25	19 33.8	19 38.8	.....	.....	0.1	.....	
1402	" 27	4 9.4	.....	.....	4 56.8	0.3	0 4.74
1403	" 27	16 26.2?	16 30.5	.....	16 55.4	0.05	0 29.2	
1404	" 28	.....	0 42.0	.....	1 44.7	0.05	1 2.7
1405	Nov. 7	7 30.3	8 18.3	0.1	0 48.0	A. C.'s after 7h. A. C.'s going on. Began suddenly.	
1406	" 8	.....	7 27.5	.....	7 39.8	0.2	0 12.3
1407	" 8	8 0.2?	8 5.2	.....	8 13.6	0.2	0 13.4	
1408	" 8	20 47.1?	20 52.2	.....	.....	0.05	.....	
1409	" 10	7 16.8	7 32.8	7 40.5	7 50.3	0.3	0 33.5		
1410	" 10	.....	7 38.3	.....	.....	0.1	.....	

No.	Date 1914.	P.T. Commence.	L.W. Commence.	Max.	End.	Max. Amplitude.	Duration.	REMARKS.
1411	Nov 18	9 48.3	9 58.8	10 1.2	11 31.3	0.8	1 43.0	Marked disturbance.
1412	" 22	8 48.0	9 0.2	9 20.7	9 54.4	0.2	1 6.4	
1413	" 24	8 6.1	8 16.6	8 54.0	0.1	0 47.9	Appears like a double quake.
1414	" 24	12 4.1	12 20.4	12 26.6	15 4.0?	1.4	2 59.9	
		12 9.3		12 47.9		1.5		Ionian Islands.
1415	" 27	15 15.2	15 23.8	.....	15 27.9	0.05	0 12.7
1416	" 28	11 28.6	11 50.9	11 57.4	12 27.6?	0.3	0 59.0	Apparently two quakes.
1417	Dec 3	0 12.1	0 23.4	0 35.5	1 37.4	0.2	1 25.3	
			0 29.8	0 53.0		0.2		A. C. going on. P. T's. doubtful.
1418	" 4	.....	22 24.8	.....	.....	
1419	" 15	9 28.4	9 53.2	9 57.5	10 39.8	0.3	1 11.4	Marked movements.
		9 30.4						
1420	" 20	14 34.1	14 51.4	15 10.8	16 15.2	0.7	1 14.1	
1421	" 20	16 19.0	16 30.7	16 34.8	16 52.5	0.2	0 33.5	
1422	" 25	3 44.4	3 54.8	3 56.7	4 27.4	0.3	0 43.0	
1423	" 27	.....	7 49.4	.....	7 52.7	0.05	0 3.3

Period 18 seconds. Pillar inclination 1 mm. = 0''59.

MAGNETIC SUMMARY.

The horizontal force (C.G.S. units), and declination (west) are from hourly measures of photographic register. 75th Meridian time.

1914	MEANS.						EXTREMES.				
	Inclination		Declination.		Horizontal Force.		Declination.		Horizontal Force.		
	Mean of Month		Mean of Daily Month. range		Mean of Month. range.		Max. of Month.	Min. of Month.	Max. of Month.	Min. of Month.	
January	74	41.0	6	21.3	4.7	.161152	.00016	6 34.4	6 00.5	.16133	.16065
February		40.7		22.0	4.2	1146	10	6 31.2	6 07.8	.16124	.16072
March		41.7		22.3	8.4	1049	23	6 36.1	5 59.8	.16141	.16052
April		41.9		23.0	10.9	0944	33	6 46.7	5 52.6	.16173	.15940
May		40.4		22.9	10.4	0980	31	6 34.0	5 34.9	.16177	.15990
June		40.8		23.1	11.5	0952	36	6 33.5	5 55.0	.16165	.16004
July		41.2		23.9	11.6	0873	41	6 48.3	5 57.2	.16156	.15955
August		41.1		24.9	13.2	0765	42	6 46.1	5 57.6	.16120	.15983
September		41.9		25.4	11.5	0662	39	6 50.5	6 11.0	.16294	.15954
October		42.2		25.6	6.2	0593	24	6 39.7	5 49.8	.16204	.15879
November		42.6		26.0	5.3	0556	23	6 45.7	6 11.5	.16086	.15956
December		42.1		25.9	5.8	0597	23	6 36.9	6 11.9	.16081	.15982
		74	41.5	6	23.9	8.6	.160856	.00028			

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

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

Winter	Frozen over	Clear of ice	No. of days
1822-23	December 29th	April 17th	109
1823-24	" 26th	" 15th	110
1824-25	November 30th	March 9th	99
1825-26	December 2nd	April 5th	124
1826-27	January 4th	" 6th	91
1827-28	February 1st	February 24th	23
1828-29	November 16th	April 9th	144
1829-30	" 23rd	" 2nd	130
1830-31	" 19th	" 1st	133
1831-32	" 10th	" 15th	162
1832-33	" 2nd	" 4th	153
1833-34	December 21st	March 14th	83
1834-35	" 25th	" 29th	94
1835-36	" 14th	April 25th	132
1836-37	January 2nd	" 21st	109
1837-38	December 6th	" 1st	116
1838-39	November 29th	" 6th	128
1839-40	" 30th	March 28th	118
1840-41	January 3rd	April 11th	81
1841-42	December 24th	March 18th	84
1842-43	January 4th	April 20th	106
1843-44	" 6th	" 4th	88
1844-45	December 19th	March 20th	91
1845-46	" 2nd	April 8th	127
1846-47	" 10th	" 11th	122
1847-48	November 28th	March 30th	140
1848-49	" 30th	April 1st	122
1849-50	December 11th	" 4th	114
1850-51	" 2nd	March 28th	116
1851-52	" 14th	April 18th	125
1852-53	November 19th	March 31st	132
1853-54	" 26th	April 8th	133
1854-55	" 24th	" 16th	143
1855-56	" 30th	" 22nd	143
1856-57	" 29th	" 14th	136
1857-58	December 31st	March 27th	117
1858-59	" 1st	January 27th	57
1859-60	" 3rd	March 15th	102
1860-61	January 13th	" 5th	57
1861-62	" 17th	" 3rd	45
1862-63	December 23rd	January 24th	32
1863-64	" 31st	March 2nd	62

1864-65	January 17th	March 22nd	64
1865-66	" 8th	" 18th	69
1866-67	December 15th	April 6th	112
1867-68	" 9th	" 8th	121
1868-69	" 12th	" 1st	110
1869-70	" 8th	" 3rd	116
1870-71	" 24th	March 11th	77
1871-72	" 21st	April 12th	113
1872-73	" 10th	" 4th	125
1873-74	November 26th	March 16th	110
1874-75	December 18th	April 16th	119
1875-76	November 30th	" 11th	133
1876-77	December 18th	March 25th	97
1877-78	" 19th	" 9th	80
1878-79	" 26th	" 25th	81
1879-80	" 19th	February 19th	62
1880-81	November 22nd	April 16th	114
1881-82	January 2nd	February 13th	42
1882-83	December 9th	April 16th	126
1883-84	" 21st	" 8th	109
1884-85	" 19th	" 25th	127
1885-86	January 8th	March 20th	71
1886-87	December 4th	April 12th	128
1887-88	" 24th	" 11th	85
1888-89	" 20th	March 15th	85
1889-90	March 1st	" 15th	14
1890-91	January 4th	" 20th	75
1891-92	" 5th	" 31st	85
1892-93	December 22nd	April 7th	106
1893-94	" 30th	March 11th	70
1894-95	" 23rd	April 7th	105
1895-96	" 9th	March 28th	110
1896-97	" 22nd	" 11th	85
1897-98	" 24th	" 16th	82
1898-99	" 13th	April 8th	106
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	April 5th	115
1905-06	January 8th	April 1st	82
1906-07	December 8th	March 28th	110
1907-08	January 28th	March 29th	61
1908-09	" 7th	March 31st	83
1909-10	December 29th	" 20th	81
1910-11	" 10th	" 31st	111
1911-12	January 6th	April 16th	101
1912-13	" 9th	" 20th	71
1913-14	" 14th	" 2nd	79

The following table shows the hourly velocities and direction of the wind during the storm of March 1st and 2nd, 1914:—

8-9 a.m.	Sunday—West,	28 miles per hour.	
9-10 a.m.	“	North-west,	34 miles per hour.
10-11 a.m.	“	“	37 “
11-12 a.m.	“	“	41 “
12-1 p.m.	“	“	42 “
1-2 p.m.	“	“	44 “
2-3 p.m.	“	“	46 “
3-4 p.m.	“	“	52 “
4-5 p.m.	“	“	50 “
5-6 p.m.	“	“	58 “
6-7 p.m.	“	“	53 “
7-8 p.m.	“	“	50 “
8-9 p.m.	“	“	47 “
9-10 p.m.	“	“	53 “
10-11 p.m.	“	“	53 “
11-12 p.m.	“	“	55 “
12-1 a.m.	Monday	“	59 “
1-2 a.m.	“	“	56 “
2-3 a.m.	“	“	57 “
3-4 a.m.	“	“	60 “
4-5 a.m.	“	“	57 “
5-6 a.m.	“	“	57 “
6-7 a.m.	“	North	56 “
7-8 a.m.	“	North	52 “
8-9 a.m.	“	North	50 “
9-10 a.m.	“	North	43 “
10-11 a.m.	“	North	39 “

Some gusts registered 96 miles per hour on the 2nd.

Monthly and Annual means of temperature of the air in each of the 43 years from 1872 to 1914, with the monthly and annual means and for three groups of 10 years and one of 11 years.

YEAR	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Mean Annual Temp	Difference from Average
1872	22.4	20.7	19.9	40.5	51.9	63.7	70.2	69.5	59.1	45.5	32.9	18.7	42.92	-1.94
1873	17.7	21.5	26.6	38.6	51.9	63.7	68.4	66.6	57.3	45.7	27.5	29.8	42.94	-1.92
1874	24.8	22.8	28.7	34.2	52.5	62.5	67.9	67.1	63.3	47.5	34.6	25.7	44.30	-0.56
1875	16.1	10.2	24.1	36.3	52.3	60.9	66.6	65.2	55.5	43.2	31.7	27.2	40.77	-3.09
1876	29.0	23.8	26.0	38.2	51.5	65.5	68.8	70.2	57.5	42.8	37.3	17.2	43.98	-0.88
1877	17.5	28.8	25.6	43.3	53.9	62.4	69.9	69.2	61.2	49.8	37.5	34.2	46.10	+1.24
1878	24.4	26.9	37.1	48.7	53.0	62.7	72.0	68.4	61.1	49.4	36.6	24.5	47.09	+2.23
1879	20.3	17.9	29.1	39.9	54.4	61.8	68.7	65.4	56.1	54.8	35.4	26.2	44.16	-0.70
1880	32.7	27.4	28.9	41.3	58.0	65.4	67.6	66.9	60.2	45.0	30.3	21.4	45.43	+0.57
1881	16.7	19.9	30.1	39.8	58.1	59.6	70.7	69.9	67.8	49.9	37.5	34.3	46.20	+1.34
1882	23.2	30.3	31.7	40.0	48.9	61.6	66.8	67.4	61.2	51.8	35.9	26.1	45.42	+0.56
1883	17.5	20.1	21.9	38.3	49.3	62.1	65.7	63.7	55.0	45.4	37.9	26.6	41.95	-2.91
1884	16.0	23.2	28.0	40.9	51.2	65.0	64.3	65.5	62.2	49.0	34.1	25.9	43.79	-1.07
1885	18.0	11.1	18.4	37.7	51.7	60.6	68.3	63.5	57.0	45.8	38.6	28.2	41.57	-3.29
1886	19.2	19.0	30.2	44.9	53.2	60.9	66.8	65.7	58.9	48.5	35.6	21.5	43.71	-1.15
1887	18.1	21.7	24.8	39.3	58.5	63.8	73.1	66.2	56.4	44.2	35.1	28.4	44.14	-0.72
1888	15.0	21.9	22.4	38.9	50.6	64.4	66.2	66.0	56.5	43.4	37.4	29.7	42.70	-2.16
1889	28.0	17.7	32.9	43.5	54.0	59.7	68.8	65.0	60.0	42.7	38.6	34.3	45.44	+0.58
1890	29.7	27.8	27.6	42.3	50.0	65.3	67.3	64.5	57.5	48.3	37.0	23.0	45.02	+0.16
1891	24.1	28.0	28.8	43.2	51.5	64.3	63.7	65.6	62.5	47.9	37.0	33.6	45.87	+1.01
1892	20.5	25.2	27.6	41.0	51.3	65.0	68.1	67.4	60.1	47.7	35.3	26.0	44.61	-0.25
1893	14.7	19.2	29.2	39.2	51.9	66.4	68.2	65.7	57.0	48.9	37.3	24.4	43.53	-1.33
1894	28.5	20.7	36.0	44.4	52.6	66.4	69.1	65.3	62.2	50.1	34.4	31.2	46.75	+1.89
1895	21.6	16.8	24.5	43.3	55.4	67.9	66.2	65.1	60.6	43.3	36.7	29.8	44.28	-0.58
1896	22.2	22.6	23.6	45.8	59.8	64.7	68.7	67.5	57.4	44.8	39.4	27.8	45.36	+0.50
1897	23.1	25.0	31.6	42.8	52.5	61.3	72.1	64.7	60.8	50.9	37.9	28.3	45.93	+1.07
1898	25.4	24.6	36.3	43.4	55.0	65.4	70.5	69.7	62.8	50.3	36.0	26.2	47.15	+2.29
1899	22.5	19.3	28.0	44.7	55.1	65.3	68.8	69.4	56.8	50.4	40.6	28.9	45.80	+0.94

1900	26.2	20.6	23.6	45.2	54.9	65.2	68.5	71.6	63.7	55.7	38.3	29.3	46.89	+2.03
1901	23.9	16.9	29.9	45.8	53.9	65.1	72.5	68.2	60.7	48.2	34.6	26.8	45.55	+0.69
1902	23.6	21.6	26.8	43.6	52.8	59.4	68.2	64.7	59.4	48.3	43.0	24.8	45.57	+0.71
1903	23.2	25.9	38.9	43.1	55.4	61.1	61.1	63.3	60.4	50.4	34.4	22.5	45.58	+0.72
1904	16.0	13.2	28.8	38.4	55.0	63.0	67.1	64.1	58.1	45.4	35.3	22.2	42.20	-2.66
1905	17.2	16.7	30.3	41.2	52.2	63.1	69.2	67.1	61.7	48.5	36.0	31.2	44.53	-0.33
1906	30.9	21.8	26.8	44.1	53.2	65.1	69.6	71.0	64.3	48.3	37.1	22.9	46.26	+1.40
1907	22.1	18.5	33.8	38.4	48.1	63.8	69.3	65.3	61.7	45.0	36.9	29.5	44.37	-0.49
1908	24.3	19.3	31.4	41.8	56.2	66.2	70.7	66.9	63.7	51.4	39.6	29.1	46.73	+1.87
1909	26.4	26.7	29.9	40.9	53.7	65.5	67.7	69.1	60.3	46.2	40.6	25.9	46.08	+1.22
1910	25.5	21.0	38.8	46.8	52.5	64.7	71.1	67.6	59.9	51.2	36.0	21.1	46.37	+1.51
1911	25.9	25.5	30.1	43.3	61.2	65.6	71.6	69.2	60.5	49.5	35.9	33.9	47.69	+2.83
1912	13.9	19.0	25.7	41.8	53.3	62.2	69.6	63.9	62.7	50.6	40.4	32.6	44.81	-0.05
1913	31.3	20.3	33.3	46.3	54.3	64.8	70.2	68.6	59.4	51.6	42.2	33.4	47.90	+3.04
1914	25.6	15.5	30.7	41.5	58.6	64.4	70.4	68.1	61.0	52.7	38.1	25.7	46.03	+1.17
MEANS														
1872-81	22.16	21.99	27.61	40.08	53.75	62.82	69.08	67.84	59.91	47.36	34.13	25.92	44.39	
1882-91	20.88	22.08	26.67	40.90	51.89	62.77	67.18	65.31	58.72	46.70	36.72	27.73	43.96	
1892-01	22.86	21.09	29.03	43.56	54.24	65.27	69.27	67.46	60.21	49.03	37.05	27.87	45.48	
1902-12	22.63	20.83	31.02	42.12	54.14	63.60	68.65	66.56	61.16	48.61	37.74	26.88	45.56	
1872-12	22.14	21.48	28.64	41.68	53.52	63.61	68.53	66.78	60.02	47.94	36.44	27.09	44.86	