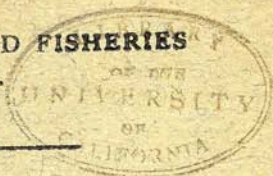


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JUN 20 1919

DEPARTMENT OF MARINE AND FISHERIES
DOMINION OF CANADA.



TORONTO OBSERVATORY

**Results of Meteorological, Magnetical
and Seismological Observations,
1918.**

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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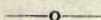
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TORONTO OBSERVATORY.

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 the 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 maximum and minimum 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.

In tables on pages 33 and 34, the means are derived chiefly from six-hour observations, omitting Sundays.

On January 1st, 1899, the thermometers were removed from the old shed and placed in a shelter entirely clear of the building. This shed had a double back and roof with louvre sides. The height of the thermometers varied little from the old position. Observations were taken at the same hours but at 75th meridian time. The thermometers in January 1907 were placed in the Stevenson shed and subsequent observations are from this shed. There is a suspicion that the mean temperature from 1899 onwards may show a higher value than from the old shed, where a steady wall four feet away from the thermometers may have been a retarding influence. It is intended to more fully investigate the difference of exposure by using as a standard the Thermograph shed which was in operation some years prior to and after the removal.

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

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

GALE—A velocity of 30 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.

Monthly Weather Synopsis, 1918.

JANUARY. The second coldest on record, 1857 being colder. There were some rapid temperature changes, notably on the 12th, when the mercury fell from 33° to -4°.0 in 12 hours. Readings below zero were recorded on 10 days, and above the freezing point on only two. Mean daily temperatures on the 3rd, 4th, 26th and 27th ranged from 19° to 25° below the normals, with minimums of -7°.4, -4°.4, -2°.2 and -8°.0 respectively. Heavy winds added to the severity of the weather, notably so on the 12th, when a 50-mile wind was blowing with temperatures below zero. The barometer on this day fell to 28.419 (reduced to 32° inches). There were many bright days, total sunshine exceeding the normal by 35 hours. The 7th and 28th each added almost 4 inches to the snowfall, which was generally light, but due to the severe December weather there was a depth of 24 inches on the ground at the end of the month. Thickness of ice at Hanlan's Point measured 39 inches.

FEBRUARY. The cold weather continued for eight days, the 1st, 4th and 5th being the coldest of the month, with daily means 22° to 28° below normals, and minimum temperatures of -8°, -11°.8 and -20°.2 respectively. A marked rise of temperature occurred on the early morning of the 9th, but at 9 hours fell sharply again. A thaw set in on the 11th, continuing until the morning of the 15th. Cold and warm waves followed one another to the 22nd. The maximum on the 19th rose to 49°, but on the 20th the minimum was -2°.0, and -4°.0 next morning. Milder weather prevailed from the 23rd. Temperatures of over 40° were frequent. During the severe weather many heavy winds made the cold more penetrating. Bright sunshine was slightly below normal. Early thunderstorms were noted on the 14th and 25th, and on the latter night the barometer fell to 28.346 inches, a record February reading. A southwest gale of 54 miles followed. Owing to the heavy rains on the 12th, 19th and 25th total precipitation was one and one-half inches above normal. There were no excessive snowfalls, and the total was below normal. Due to the thaw and heavy rains of the 25th, the Don River overflowed causing much damage. There were 8 inches of snow on the ground at the end of the month. Ice off Polson's Works measured 21 inches in depth.

MARCH. A very mild month with the 9th, 10th and 15th the only cold days. Mostly cloudy to the 14th, many sunny days brightened the remainder of the month. Temperature frequently rose to 55°, and 67° was recorded on the 20th, and 64° on the 31st. A rapidly falling barometer on the night of the 9th was attended by a 56-mile northeast gale, shifting to northwest next morning with continued high velocity. Five inches of snow fell during this storm; other falls were mostly light. Rain fell on four days. Robins were numerous on the 15th, wild geese flying north on the 18th, and the crocus was in bloom on the 30th.

APRIL. Milder than usual. Excepting the 3rd and 4th, temperature on the first eight days was above normal. It was cold from the 9th to the 13th, also on the 18th and 19th; temperature falling to 23° on the 9th and 18th. Maximums of 67° and 69° occurred on the 14th and 15th. Night temperatures during the last five days never fell below 40°. Bright sunshine was above average. Snow fell on two days; rainfall varied little from normal. From the 2nd to the 16th rain was recorded only once but after that was fairly distributed. Vegetation, well advanced by the 12th, was then somewhat retarded by low night temperatures. Some shrubs on lawns were in bud on the 16th. A brilliant aurora was observed on the 5th.

MAY. A fine, warm month. Vegetation two to three weeks ahead of last year. Lilac trees were well out on the 7th, and other trees quite green by the 15th. The weather falling generally warm, turned quite cool on the 10th, temperature falling between 13 and 14 hours. Heavy white frost was noted on the morning of the 11th, when the terrestrial thermometer fell to 24°. It continued quite chilly to the morning of the 12th. Mean temperatures on the 14th and 15th fluctuated considerably. Warmer weather set in after the 15th, and daily means except on the 24th and 25th, were well above normals. Temperatures over 80° were recorded on six days during the month. The range was very large on the 6th, maximum 80°, minimum 47.5°. A low humidity reading of 17 was recorded on the 1st, attended by a strong northwest wind. Predominating winds were northeast. A prolonged thunderstorm which began the afternoon of the 7th, continued considerably to the monthly rainfall, which was well distributed. Large hail also fell during this storm.

JUNE. Cooler than usual. The first three days were the warmest of the month, temperature on the 1st rising to 89°. From the 4th to the 26th, excepting the 6th and 17th, it was quite cool, and daily mean temperatures kept well below normal, the 2nd being 13° below, which is the coolest night and early mornings decidedly chilly. The minimum fell to 40° on the 8th, and to 43° on the 28th. The 27th, 28th and 29th were much warmer with a maximum of 84° on the 29th, but the 30th was cooler again. Winds were northeast and northwest during the very cool period, and much cloud prevailed. The thunderstorm on the 11th had a vigour that more than made up for its brevity. Accompanied by heavy wind squalls 0.86 inches of rain fell in half an hour, and Hydro and car service were temporarily put out of commission. Two thunderstorms on the 30th gave 1.38 inches of rain. The first, beginning at 14.25, was accompanied by a drop of 16° of temperature in less than an hour, wind shifting from northeast to east. The second began at 18.20 and lasted until 21.30. Monthly rainfall was largely above average. Buds on the Richmond, Mrs. Loring and Paul Neyron rose trees were well formed on the 1st, and in full bloom by the 13th.

JULY. The important feature of the month was the unusually cool weather during the first 12 days, and the excessively warm period from then to the 29th. It was the coolest July yet recorded, being cloudy, misty and like a fall day. Maximum temperature never rose above 64°, and the minimum on the morning of the 2nd fell to 48°. During the warm period 85° and over was recorded on 11 days, thermometer registering 91° on the 20th, 92.4° on the 21st, and 90° on the 24th, 26th, 27th and 28th. Nights were comfortably cool, excepting the 23rd, 25th, 26th and 28th. 27th when minimums never fell below 69°. The 30th and 31st were decidedly cooler, temperature falling to 52° on the latter morning. High humidities on the 27th and 29th made the weather feel oppressive. Bright sunshine was about normal. Rain, without excessive falls, showed a marked deficiency. None fell from the 18th to the 26th.

AUGUST. Unusually warm. During the first four days the nights and mornings were cool, but the succeeding eleven

11

days were very warm, 101° being recorded on the 7th and 102° on the 13th. By midnight of the 14th the temperature had fallen to 66°. From the 16th to the 20th it was cool, but for the balance of the month mean temperature was generally above normal, the 23rd recording 90°. There were many bright days. Most of the rainfall was due to numerous thunderstorms, the severest of which occurred from 16.50 to 19.15 on the 21st, accompanied by a heavy wind which did much damage. During the early part of this storm half an inch of rain fell in five minutes, and after a brief interval seven-tenths of an inch fell in 10 minutes, total precipitation for the storm being 1.95 inches. Another from 10.55 to 12.15 on the 28th, contributed the greater portion of 0.95 inch recorded on that day.

SEPTEMBER. Very cool, wet and cloudy. Late tomatoes and some varieties of potatoes failed to ripen, due to the decided lack of sunshine and continuous wet weather. The mean daily temperature rose above normal to a small extent on only five days. The highest temperatures were 80° and 81° on the 2nd and 3rd, and the coolest periods from the 4th to 11th and from the 16th to 27th, with means varying 2° to 9° below normals. Rain was 1.4 inches above average, falling almost every few days. On three instances 0.50 inch was recorded, and 1.49 inches was registered on the morning of the 5th. September is usually a pleasant month.

OCTOBER. Mean temperature was considerably above normal. Excepting the 5th, the first nine days were cool, especially the morning and night hours. Light frost was noted on five days. From the 10th to the 22nd mean daily temperatures varied from 9° above to 4° below normals. Much milder weather prevailed from the 23rd, temperature frequently rising to 60°, and touching 64° on the 27th. There was a large percentage of cloud, chiefly during the day, consequently bright sunshine was 15 hours below the usual. Nights were much clearer. Rainfall varied little from average and was fairly well distributed. The heaviest falls were on the 6th, 20th and 28th, each of which was over half an inch.

NOVEMBER. The fourth warmest on record. Temperatures were slightly below normal on the first two days, otherwise for three weeks it was unusually mild. On nine days readings of 55° and over were recorded, and 66° was noted on the 7th. Owing to the warm weather, varieties of the Hybrid rose: Mrs. Laing, Richmond and Killarney, were in full bloom. The 22nd, 23rd, 25th and 26th were much colder, temperature falling to 18° on the latter morning, and a slight coating of ice forming on the Don River. This disappeared in a few days. The last three days were much warmer; temperature however fell rapidly on the night of the 30th, 22° being registered at midnight. Bright sunshine totalled about average. The first 21 days show the greatest aggregate rainfall. Winds were strong from the northeast and southwest during the last week. A southwest blizzard prevailed from 19.20h to 21.55h on the 30th, when three inches of snow fell, which was practically the total for the month.

DECEMBER. A very mild, cloudy month; in striking contrast to the very cold December of last year. There were only five cold days. From the 11th to the 24th very mild conditions prevailed, temperature frequently rising over 45°; 51° was recorded on the 14th and 50° on the 22nd. Lilac trees commenced to sprout fresh leaves, and ploughing was carried on up to the 23rd. It was much colder during the latter part of the month, and temperature fell to 15° on the night of the 26th. Northeast winds predominated, and although the usual number of gales occurred, total monthly mileage was below normal. The heaviest gale occurred on the night of the 10th and morning of the 11th, accompanied by rain and sleet. With five days rain the fall exceeded normal. On the 13th, 0.76 inch fell. Snowfall, which also exceeded average, was confined chiefly to the early and latter parts of the month; 4 inches fell on the 5th and 5.7 inches on the 24th, otherwise the falls were light. At the end of the month five inches of snow remained on the ground.

J. Y.

MARCH, 1918.

Results of Observations.

		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.630	29.609
Highest " " on 10th at 23.43h	30.149	30.129
Lowest " " on 14th at 14.42h	29.016	28.919
Range of barometer readings,	1.133	1.210
Highest temperature on the 20th	67.2	52.1
Lowest temperature on the 11th	6.0	-2.6
Range for the month,	61.2	54.7
Mean of the highest readings,	42.4	36.3
Mean of the lowest readings,	24.7	21.9
Mean daily range,	17.7	14.4
Mean from max. and min. (1840-1898)*	33.6	28.7
Mean from 24 hourly observations (1881-1908)*	32.3	29.1
Mean humidity,	73	78
Highest solar (black bulb in vacuum) on 1st	118.0	
Lowest (radiation) on the 11th	-1.0	
Monthly range	119.0	
Total fall of rain	inches 0.99	1.50
Heaviest fall, (14th)	" 0.47	
Number of days on which rain fell,	4	6.7
Total fall of snow	inches 10.4	11.5
Heaviest fall (9th)	" 5.0	
Number of days on which snow fell	10	10.4
Mean amount of cloud (0-10)	.43	.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.
	40	209	24	23	17	160	73	195	3

Total miles registered	9,384
Mean velocity	12.6
Highest velocity (9th) at 22hrs. from northeast	56
Highest daily average velocity (9th)	27.5
Lowest " " (20th)	3.7
Days on which gales occurred	6

MARCH, 1918.

Differences.

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

Mean barometric pressure	+0.021 inches
Monthly range	-0.077 inches
Mean temperature	+4.9°
Mean of highest temperatures	+6.1°
Mean of lowest " "	+2.8°
Mean daily range	+3.3°
Total rainfall	-0.51 in.
Total snowfall	-1.1 in.
Mean amount of cloud	-.24

Snow on 1st, 4th, 5th, 6th, 7th, 9th, 10th, 13th, 14th and 25th.
Rain on 4th, 5th, 13th and 14th. Fog on 5th, 21st, 29th and 31st.
Aurora class III. on 7th. Hail on 9th. Clear days 11. Cloudy days 7.

Extreme Readings

DURING 79 YEARS.

Barometer—Highest reading, 1906 (24th)	30.058	inch.
" " Lowest reading, 1859 (19th)	28.286	"
Temperature—Highest, 1910 (23th)	75.2°	
" " Lowest, 1868 (3rd)	-15.6°	
" " Highest monthly mean, 1903	38.9°	
" " Lowest monthly mean, 1885	18.5°	
Rainfall—Greatest fall, 1895	4.05	in.
" " Least fall, 1856	0.00	"
" " Greatest for 24 hours, 1881 (19th)	1.72	"
" " Greatest number of days rain fell, 1878	17	
" " Least number of days, in 1856 and 1889	0	
Snowfall—Greatest fall, 1870	62.4	in.
" " Least fall, 1858 and 1903	0.2	"
" " Greatest for 24 hours, 1876 (28th)	16.2	"
" " Greatest number days snow fell, 1877	21	
" " Least " " 1895 and 1898	1	

APRIL, 1918.

Results of Observations.

		Mean for 70 years
Mean reading of barometer, 32 F. inches,	29.665	29.600
Highest " " on 9th at 9.00h	30.166	30.073
Lowest " " on 17th at 19.32h	29.127	29.040
Range of barometer readings,	1.039	1.033
Highest temperature on the 15th	69.0	68.3
Lowest temperature on the 19th	22.7	19.6
Range for the month,	46.3	48.7
Mean of the highest readings,	53.0	49.6
Mean of the lowest readings,	34.3	33.3
Mean daily range,	18.7	16.3
Mean from max. and min. (1840-1898)*	43.6	41.2
Mean from 24 hourly observations (1881-1908)*	42.5	42.1
Mean humidity,	63	70
Highest solar (black bulb in vacuum) on 27th	117.6	
Lowest (radiation) on the 25th	19.0	
Monthly range	98.6	
Total fall of rain	1.33	2.15
Heaviest fall, (17th)	0.45	
Number of days on which rain fell,	8	9.9
Total fall of snow	0.8	2.5
Heaviest fall (18th)	0.7	
Number of days on which snow fell	2	3.5
Mean amount of cloud (0-10)	.46	.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.
	43	224	86	27	57	133	45	104	1

Total miles registered	9,241
Mean velocity	12.8
Highest velocity (18th) at 7 hrs. from east	32
Highest daily average velocity (9th)	22.2
Lowest " " (14th)	4.8
Days on which gales occurred	3

APRIL, 1918.

Differences.

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

Mean barometric pressure	+0.065 inches
Monthly range	+0.006 inches
Mean temperature	+2.4°
Mean of highest temperatures	+3.4°
Mean of lowest " "	+1.0°
Mean daily range	+2.4°
Total rainfall	-0.82 in.
Total snowfall	-1.7 in.
Mean amount of cloud	-.12

Rain fell on 1st, 12th, 17th, 18th, 21st, 23rd, 28th and 29th. Snow on 12th and 18th. Fog on 17th. Aurora II. with streamers on 5th; IV. on 25th. Hoar frost on 13th and 25th. Heavy Dew on 30th. Lunar Halo on 19th. Clear days 10. Cloudy days 7.

Extreme Readings

DURING 70 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 monthly mean, 1878	48.8°	
" Lowest monthly mean, 1874	34.2°	
Rainfall—Greatest fall, 1910	4.90	in.
" Least fall, 1881	0.08	"
" Greatest for 24 hours, 1850 (3rd)	2.35	"
" Greatest number of days rain fell, 1871	17	
" Least number of days, in 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 number days snow fell, 1857	11	
" Least " 1878-95-1900	0	

MAY, 1918.

Results of Observations.		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.633	29.577
Highest " " on 15th at 8.57h	30.134	29.907
Lowest " " on 10th at 7.14h	28.906	29.153
Range of barometer readings,	1.228	0.814
Highest temperature on the 22nd	82.0	77.9
Lowest temperature on the 11th	30.0	30.9
Range for the month,	52.0	47.0
Mean of the highest readings,	68.6	62.0
Mean of the lowest readings,	45.7	43.3
Mean daily range,	22.9	18.7
Mean from max. and min. (1840-1898)*	57.2	*52.4
Mean from 24 hourly observations (1881-1908)*	56.0	*53.4
Mean temperature of dew point	46	
Mean humidity,	71	70
Mean force of vapour	0.331	0.280
Highest solar (black bulb in vacuum) on 20th	132.8	
Lowest (radiation) on the 11th	24.3	
Monthly range	108.5	
Total fall of rain inches	2.65	2.97
Heaviest fall, (7th) "	0.85	
Number of days on which rain fell,	13	12.4
Total fall of snow inches	0	0.1
Number of days on which snow fell	0	0.4
Mean amount of cloud (0-10)	.48	.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.
	43	251	38	48	24	147	50	139	4

Total miles registered	7,605
Mean velocity	10.2
Highest velocity (10th) from northwest	36
Highest daily average velocity (1st)	19.8
Lowest " " " (30th)	4.5
Days on which gales occurred	1

MAY, 1918.

Differences.

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

Mean barometric pressure	+ 0.056 inches
Monthly range	+ 0.414 inches
Mean temperature	+ 4.8°
Mean of highest temperatures	+ 6.6°
Mean of lowest "	+ 2.4°
Mean daily range	+ 4.2°
Total rainfall	- 0.32 in.
Total snowfall	- 0.1 in.
Mean amount of cloud	- .09

Rain fell on 3rd, 7th, 9th, 10th, 12th, 13th, 20th, 22nd, 24th, 25th, 26th, 27th and 29th. Hail on 7th. Thunderstorms on 7th, 10th, 20th, 22nd, 25th, 26th and 27th. Rainbow on 9th. Hoar frost on 11th. Fog on 12th, 18th, 24th, 26th and 30th. Dew on 14th, 17th and 18th. Aurora II. on 16th. Clear days 7. Cloudy days 6.

Extreme Readings

DURING 79 YEARS.

Barometer—Highest reading, 1849 (2nd)	30.241	inches
" " Lowest reading, 1861 (6th)	28.644	"
Temperature—Highest, 1895 (30th)	93.4°	
" " Lowest, 1867 (3rd)	24.6°	
" " Highest monthly mean, 1911	61.3°	
" " Lowest monthly mean, 1867	46.6°	
Rainfall—Greatest fall, 1894	9.40	in.
" " Least fall, 1891	0.50	"
" " Greatest for 24 hours, 1894 (21st)	2.70	"
" " Greatest number of days rain fell, 1890	23	
" " Least number of days, in 1843	5	
Snowfall—Greatest fall, 1875	3.1	in.
" " Least fall, 1910-13-14-15-16-17-18	0	"
" " Greatest for 24 hours, 1875 (1st)	3.0	"
" " Greatest number days snow fell, 1905	5	

JUNE, 1918.

Results of Observations.

		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.553	29.572
Highest " " on 20th at 7h	29.892	29.900
Lowest " " on 11th at 21.07h	28.926	29.165
Range of barometer readings,	0.966	0.744
Highest temperature on the 1st	88.8	86.4
Lowest temperature on the 8th	39.0	40.1
Range for the month,	49.8	46.3
Mean of the highest readings,	71.6	72.4
Mean of the lowest readings,	51.4	52.9
Mean daily range,	20.2	19.5
Mean from max. and min. (1840-1898)*	61.5	*62.4
Mean from 24 hourly observations (1881-1908)*	61.0	*64.0
Mean temperature of dew point	49	
Mean humidity,	67	73
Mean force of vapour	0.359	0.418
Highest solar (black bulb in vacuum) on 2nd	140.0	
Lowest (radiation) on the 8th	34.0	
Monthly range	106.0	
Total fall of rain	inches 3.93	2.76
Heaviest fall, (30th)	" 1.38	
Number of days on which rain fell,	12	11.7
Mean amount of cloud (0-10)	.44	.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.
	34	214	51	40	28	143	57	153	0

Total miles registered	8,217
Mean velocity	11.4
Highest velocity (7th) from northwest	30
Highest daily average velocity (7th)	20.5
Lowest " " " (10th)	4.8
Days on which gales occurred	1

JUNE, 1918.

Differences.

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

Mean barometric pressure	- 0.019 inches
Monthly range	+ 0.222 inches
Mean temperature	- 0.9°
Mean of highest temperatures	- 0.8°
Mean of lowest " "	- 1.5°
Mean daily range	+ 0.7°
Total rainfall	+ 1.17 in.
Mean amount of cloud	- .09

Rain fell on 4th, 6th, 8th, 9th, 11th, 14th, 16th, 21st, 24th, 28th, 29th and 30th. Thunderstorms on 6th, 11th, 21st, 28th, 29th and 30th. Lightning on 16th. Solar Corona on 17th. Aurora IV. on 23th. Dew on 1st, 5th, 11th, 29th and 30th. Clear days 6. Cloudy days 5.

Extreme Readings

DURING 79 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 monthly mean, 1895	67.9°
" Lowest monthly mean, 1842	56.5°
Rainfall—Greatest fall, 1870	8.09 in.
" Least fall, 1864	0.57 "
" Greatest for 24 hours, 1892 (19th)	2.42 "
" Greatest number of days rain fell, 1869	22
" Least number of days, in 1864	5
Snowfall—Flurries on two days, 1859	

JULY, 1918.

Results of Observations.		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.611	29.585
Highest " " on 4th at 9h	29.924	29.889
Lowest " " on 1st at 0.04h	29.226	29.420
Range of barometer readings,	0.698	0.469
Highest temperature on the 21st	92.4	89.8
Lowest temperature on the 2nd	48.0	47.5
Range for the month,	44.4	42.3
Mean of the highest readings,	80.6	77.9
Mean of the lowest readings,	58.8	58.2
Mean daily range,	21.8	19.7
Mean from max. and min. (1840-1898)*	69.7	*67.8
Mean from 24 hourly observations (1881-1908)*	68.7	*68.9
Mean temperature of dew point	58	
Mean humidity,	72	72
Mean force of vapour	0.502	0.488
Highest solar (black bulb in vacuum) on 14th	144.8	
Lowest (radiation) on the 2nd	45.0	
Monthly range	99.8	
Total fall of rain inches	1.74	3.04
Heaviest fall, (12th) "	0.46	
Number of days on which rain fell,	9	11.2
Mean amount of cloud (0-10)	.44	.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.
	67	109	37	32	49	240	56	151	3

Total miles registered	6,880
Mean velocity	9.4
Highest velocity (1st) from southwest	30
Highest daily average velocity (1st)	20.7
Lowest " " " (3rd)	4.9
Days on which gales occurred	1

JULY, 1918.

Differences.

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

Mean barometric pressure	+0.026 inches
Monthly range	+0.229 inches
Mean temperature	-0.2°
Mean of highest temperatures	+2.7°
Mean of lowest "	+0.6°
Mean daily range	+2.1°
Total rainfall	-1.30 in.
Mean amount of cloud	-.05
Rain fell on 1st, 3rd, 8th, 9th, 10th, 12th, 16th, 17th, 23rd, 27th, and 29th. Thunderstorms on 3rd, 10th, 12th, 16th, 27th and 29th. Dew on 4th, 5th, 11th, 12th, 19th, 21st and 31st. Thunder on 15th and 24th. Fog on 21st, 24th and 28th. Solar Halo on 22nd. Aurora streamers IV. on 26th. Clear days 7. Cloudy days 4.	

Extreme Readings

DURING 79 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 monthly mean, 1916	76.0°	
" Lowest monthly mean, 1884	64.0°	
Rainfall—Greatest fall, 1841	8.15	in.
" Least fall, 1916	0.36	"
" Greatest for 24 hours, 1897 (27th)	3.88	"
" Greatest number of days rain fell, 1861-66-70 1880-1902-17	16	
" Least number of days, in 1849	4	

AUGUST, 1918.

Results of Observations.		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.641	29.617
Highest " " on 19th at 9.58h	30.104	29.909
Lowest " " on 31st at 9.32h	29.329	29.257
Range of barometer readings,	0.775	0.652
Highest temperature on the 13th	102.2	87.0
Lowest temperature on the 1st	47.8	45.7
Range for the month,	54.4	41.3
Mean of the highest readings,	82.3	76.1
Mean of the lowest readings,	59.6	57.1
Mean daily range,	22.7	19.0
Mean from max. and min. (1840-1898)*	71.0	*66.3
Mean from 24 hourly observations (1881-1908)*	69.3	*66.9
Mean temperature of dew point	60	
Mean humidity,	74	74
Mean force of vapour	0.533	0.483
Highest solar (black bulb in vacuum) on 13th	160.0	
Lowest (radiation) on the 1st	42.5	
Monthly range	117.5	
Total fall of rain	4.15	2.77
Heaviest fall, (21st)	1.95	
Number of days on which rain fell,	11	10.9
Mean amount of cloud (0-10)	.39	.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.
	55	214	93	47	45	135	27	123	5

Total miles registered	6,907
Mean velocity	9.3
Highest velocity (18th) from northeast	24
Highest daily average velocity (18th)	15.1
Lowest " " " (22nd) and (25th)	4.2
Days on which gales occurred	0

AUGUST, 1918.

Differences.

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

Mean barometric pressure	+0.024 inches
Monthly range	+0.072 inches
Mean temperature	+4.7°
Mean of highest temperatures	+6.2°
Mean of lowest " "	+2.5°
Mean daily range	+3.7°
Total rainfall	+1.38 in.
Mean amount of cloud	-.10

Rain fell on 2nd, 6th, 8th, 9th, 11th, 13th, 14th, 21st, 22nd, 23rd, 24th, 28th, 29th and 31st. Thunderstorms on 6th, 8th, 11th, 13th, 21st, 28th, 29th and 31st. Fog on 1st, 5th, 11th, 21st, 22nd and 25th. Heavy dew on 1st, 5th, 11th, 13th, 21st, 25th, 26th, 28th, and 30th. Aurora II. on 2nd. IV. on 18th and 31st. Clear days 8. Cloudy days 1.

Extreme Readings

DURING 79 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 monthly mean, 1900	72.5°	
" Lowest monthly mean, 1866	60.8°	
Rainfall—Greatest fall, 1915	8.14	in.
" Least fall, 1874 and 1894	0.39	"
" Greatest for 24 hours, 1905 (15th)	3.68	"
" Greatest number of days rain fell, 1872	19	
" Least number of days, in 1876	0	

SEPTEMBER, 1918.

Results of Observations.		Mean for 70 years.	
Mean reading of barometer, 32 F. inches,	29.638	29.667	
Highest " " on 10th at 10.28h	30.094	30.037	
Lowest " " on 18th at 21.23h	29.257	29.187	
Range of barometer readings,	0.837	0.850	
Highest temperature on the 3rd	80.6	82.7	
Lowest temperature on the 29th	38.9	35.7	
Range for the month,	41.7	47.0	
Mean of the highest readings,	65.6	68.2	
Mean of the lowest readings,	47.3	50.2	
Mean daily range,	18.3	18.0	
Mean from max. and min. (1840-1898)*	56.5	58.8	
Mean from 24 hourly observations (1881-1908)*	55.0	60.5	
Mean temperature of dew point	49		
Mean humidity,	79	78	
Mean force of vapour	0.344	0.393	
Highest solar (black bulb in vacuum) on 1st	131.2		
Lowest (radiation) on the 29th	34.0		
Monthly range	97.2		
Total fall of rain	4.64	3.18	
Heaviest fall, (5th)	1.49		
Number of days on which rain fell,	17	11.4	
Mean amount of cloud (0-10)	.57	.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.
	33	46	36	71	62	210	72	189	1

Total miles registered	8,071
Mean velocity	11.2
Highest velocity (5th) from northeast	34
Highest daily average velocity (11th)	19.8
Lowest " " " (2nd)	6.3
Days on which gales occurred	1

SEPTEMBER, 1918.

Differences.

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

Mean barometric pressure	- 0.029 inches
Monthly range	- 0.013 inches
Mean temperature	- 2.3°
Mean of highest temperatures	- 2.6°
Mean of lowest " "	- 2.9°
Mean daily range	+ 0.3°
Total rainfall	+ 1.46 in.
Mean amount of cloud	+ .07

Rain fell on 3rd, 4th, 5th, 7th, 10th, 11th, 12th, 13th, 15th, 16th, 17th, 18th, 19th, 22nd, 23rd, 24th, 25th, 26th, 29th. Snowflurries on 26th. Thunderstorms on 12th and 15th. Lightning alone on 7th. Heavy dew on 1st, 2nd, 6th, 7th, 8th, 9th, 18th and 29th. Fog on 15th, 20th and 25th. Aurora 11L with streamers on 30th. Clear days 2. Cloudy days 9.

Extreme Readings

DURING 79 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 monthly mean, 1865	64.5°
" " Lowest monthly mean, 1848	53.4°
Rainfall—Greatest fall, 1843	9.76 in.
" " Least fall, 1897,	0.40 "
" " Greatest for 24 hours, 1843 (14th)	3.46 "
" " Greatest number of days rain fell, 1907	19
" " Least number of days, in 1840, 1844	4

OCTOBER, 1918.

Results of Observations.		Mean for 70 years.	
Mean reading of barometer, 32 F. inches,	29.684	29.651	
Highest " " on 19th at 5.58h	30.145	30.112	
Lowest " " on 6th at 4.23h	29.143	29.066	
Range of barometer readings,	1.002	1.046	
Highest temperature on the 10th	73.3	70.3	
Lowest temperature on the 15th	30.0	25.5	
Range for the month,	43.3	44.8	
Mean of the highest readings,	60.0	54.9	
Mean of the lowest readings,	42.8	39.1	
Mean daily range,	17.2	15.8	
Mean from max. and min. (1840-1898)*	51.4	*46.6	
Mean from 24 hourly observations (1881-1908)*	49.9	*48.1	
Mean temperature of dew point	45		
Mean humidity,	83	79	
Mean force of vapour	0.306	0.258	
Highest solar (black bulb in vacuum) on 10th	122.6		
Lowest (radiation) on the 15th	25.0		
Monthly range	97.6		
Total fall of rain	inches 2.85	2.40	
Heaviest fall, (20th)	" 0.78		
Number of days on which rain fell,	12	12.4	
Total fall of snow	inches 0	0.6	
Number of days on which snow fell	0	1.6	
Mean amount of cloud (0-10)	.55	.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.
	49	216	52	56	47	147	78	97	2

Total miles registered	7,110
Mean velocity	9.5
Highest velocity (13th) at 14 hrs from northwest	29
Highest daily average velocity (13th)	15.8
Lowest " " " (9th)	4.7
Days on which gales occurred	0

OCTOBER, 1918.

Differences.

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

Mean barometric pressure	+0.033 inches
Monthly range	-0.044 inches
Mean temperature	+4.8°
Mean of highest temperatures	+5.1°
Mean of lowest " "	+3.7°
Mean daily range	+1.4°
Total rainfall	+0.45 in.
Total snowfall	-0.6 in.
Mean amount of cloud	-.06

Rain fell on 2nd, 4th, 5th, 6th, 12th, 13th, 14th, 15th, 17th, 20th, 24th, 25th, 27th, 28th, 30th and 31st. Thunderstorms on 5th and 28th. Hoar frost on 1st, 4th, 8th, 10th, 15th, 16th, 22nd. Fog on 2nd, 5th, 9th, 10th, 12th, 15th, 16th, 20th, 21st, 27th and 29th. Lightning alone on the 6th. Heavy dew on 6th, 9th, 11th, 21st, 29th and 30th. Aurora IV on 8th. Sky of strong yellowish tinge caused by smoke on 13th. Lunar halo on 19th. Clear days 4. Cloudy days 6.

Extreme Readings

DURING 79 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 monthly mean, 1900	55.7°
" Lowest monthly mean, 1841	41.8°
Rainfall—Greatest fall, 1849	5.97 in.
" Least fall, 1901	0.56 "
" Greatest for 24 hours, 1849 (6th)	3.16 "
" Greatest number of days rain fell, 1864	22
" Least number of days, in 1841	6
Snowfall—Greatest fall, 1844	12.0 in.
" Least fall, 1916 and 1918	0.0 "
" Greatest for 24 hours, 1875 (17th)	3.3 "
" Greatest number days snow fell, 1869	7

NOVEMBER, 1918.

Results of Observations.		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.604	29.627
Highest " " on 11th at 10.30h	30.126	30.160
Lowest " " on 18th at 14.32h	28.804	28.975
Range of barometer readings,	1.322	1.194
Highest temperature on the 7th	65.7	57.9
Lowest temperature on the 26th	17.8	13.5
Range for the month,	47.9	44.4
Mean of the highest readings,	48.4	42.5
Mean of the lowest readings,	35.5	30.1
Mean daily range,	12.9	12.4
Mean from max. and min. (1840-1898)*	42.0	*36.0
Mean from 24 hourly observations (1881-1908)*	40.8	*37.1
Mean humidity,	78	80
Highest solar (black bulb in vacuum) on 5th	116.9	
Lowest (radiation) on the 26th	14.0	
Monthly range	102.9	
Total fall of rain inches	1.16	2.40
Heaviest fall, showers on 28th "	0.28	
Number of days on which rain fell,	13	10.3
Total fall of snow inches	2.9	4.6
Heaviest fall on 30th "	2.8	
Number of days on which snow fell	2	7.3
Mean amount of cloud (0-10)	.69	.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.
	14	113	30	51	21	266	105	117	3

Total miles registered	9,957
Mean velocity	13.8
Highest velocity (30th) at 22 hrs. from southwest	43
Highest daily average velocity (30th)	27.4
Lowest " " " (11th)	4.6
Days on which gales occurred	

NOVEMBER, 1918.

Differences.

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

Mean barometric pressure	- 0.023 inches
Monthly range	+ 0.128 inches
Mean temperature	+ 6.0°
Mean of highest temperatures	+ 5.9°
Mean of lowest " "	+ 5.4°
Mean daily range	+ 0.5°
Total rainfall	- 1.33 in.
Total snowfall	- 1.7 in.
Mean amount of cloud	- .05

Rain fell on 1st, 3rd, 4th, 7th, 8th, 9th, 10th, 17th, 18th, 20th, 21st, 28th, 29th. Snow on 25th and 30th. Fog on 3rd, 5th, 16th, 17th, 28th. Blizzard on 30th. Coating of ice on Don River on 26th. Clear days 4. Cloudy days 15.

Extreme Readings

DURING 79 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 monthly mean, 1902	42.9°
" Lowest monthly mean, 1873	27.6°
Rainfall—Greatest fall, 1846	5.80 in.
" Least fall, 1904	0.08 "
" Greatest for 24 hours, 1861 (2nd)	3.13 "
" Greatest number of days rain fell, 1877	16
" Least number of days, in 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 number days snow fell, 1869-73-92	18
" Least " 1850-99	1

DECEMBER, 1918.

Results of Observations.		Mean for 70 years.
Mean reading of barometer, 32 F. inches,	29.690	29.644
Highest " " on 18th at 10.03h	30.305	30.228
Lowest " " on 3rd at 22.27h	29.129	28.938
Range of barometer readings,	1.176	1.290
Highest temperature on the 14th	50.8	47.5
Lowest temperature on the 1st	13.7	-2.3
Range for the month,	37.1	49.8
Mean of the highest readings,	37.2	32.5
Mean of the lowest readings,	25.4	20.0
Mean daily range,	11.8	12.5
Mean from max. and min. (1840-1898)*	31.3	*26.2
Mean from 24 hourly observations (1881-1908)*	31.0	*27.6
Mean humidity,	82	82
Highest solar (black bulb in vacuum) on 1st	91.0°	
Lowest (radiation) on the 6th	4.8	
Monthly range	99.6	
Total fall of rain inches	1.70	1.53
Heaviest fall, (13th) "	0.76	
Number of days on which rain fell,	4	6.3
Total fall of snow inches	15.0	13.0
Heaviest fall on 24th "	5.7	
Number of days on which snow fell	8	13.1
Mean amount of cloud (0-10)	.72	.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.
	69	237	56	37	11	137	71	124	2

Total miles registered	9,231
Mean velocity	12.4
Highest velocity (10th) from northeast	47
Highest daily average velocity (10th)	31.2
Lowest " " " (20th)	2.5
Days on which gales occurred	6

DECEMBER, 1918.

Differences.

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

Mean barometric pressure	+0.046 inches
Monthly range	-0.114 inches
Mean temperature	+5.1°
Mean of highest temperatures	+4.7°
Mean of lowest "	+5.4°
Mean daily range	-0.7°
Total rainfall	+0.17 in.
Total snowfall	+2.0 in.
Mean amount of cloud	-.05

Rain fell on 11th, 13th, 14th, 22nd. Snow on 2nd, 3rd, 5th, 6th, 11th, 13th, 14th, 22nd, 24th, 25th and 31st. Fog on 8th, 11th, 13th, 14th, 20th, 21st, 22nd, 31st. Aurora III. on 8th. Lilac trees sprouting on 23rd. Clear days 2. Cloudy days 13.

Extreme Readings

DURING 79 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 monthly mean, 1889	34.3°	
" Lowest monthly mean, 1876	17.2°	
Rainfall—Greatest fall, 1841	6.60	in.
" Least fall, 1840, 1845	0.00	"
" Greatest for 24 hours, 1870 (6th)	1.95	"
" Greatest number of days rain fell, 1889, 1911	14	
" Least number of days, in 1876	0	
Snowfall—Greatest fall, 1872	38.0	in.
" Least fall, 1877	0.3	"
" Greatest for 24 hours, 1898 (4-5)	16.0	"
" Greatest number days snow fell, 1872	24	
" Least " 1895	3	

Summary of Observations, 1918.

READINGS OF BAROMETER IN INCHES.		Mean for 70 years
Mean of the year	29.621	29.619
Highest monthly mean, October	29.684	
Lowest " January	29.496	
Highest reading, February 21st	30.354	30.371
Lowest " February 25th	28.346	28.707
Range	2.008	1.064

THERMOMETER, FAHRENHEIT.		
Highest monthly mean temperature, August	71.0	
Lowest " " " January	13.2	
Highest temperature, August 13th	102.2	91.2
Lowest " February 5th	-20.2	-12.0
Range for the year	122.4	103.2
Mean from max. and min. (1840-1898)*	46.0	*44.2
Mean from 24 hourly obs. (1881-1908)*	45.0	*45.0
Mean humidity	75	77
Highest solar (black bulb in vacuum) Aug. 13th	160.0	
Lowest (radiation) on February 5th	-26.2	
Yearly range	186.2	
Total fall of rain	inches 28.03	26.86
Greatest monthly rainfall, September	" 4.64	
Least " " January	" 0.00	
Greatest rainfall in 24 hrs. Aug. 21st	" 1.95	
Number of days rain fell	111	112.9
Total fall of snow	inches 64.1	66.1
Greatest monthly snowfall, January	" 23.0	
Greatest snowfall in 24 hrs., Dec. 24th	" 5.7	
Number of days on which snow fell	43	62.9
Mean amount of cloud (0-10)	.53	.62

Wind Summary.

NUMBER OF MILES REGISTERED FROM EACH DIRECTION

Month	Total Miles	Total Hours	Calms.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
Jan.	12,344	744	2	717	2243	596	338	30	5016	2740	664
Feb.	10,017	672	0	248	1058	494	443	299	3230	2981	1264
Mar.	9,384	744	3	421	2586	207	133	102	2001	867	3067
April	9,241	720	1	420	3690	1243	190	589	1276	468	1365
May	7,605	744	4	355	2588	320	203	191	1478	469	2001
June	8,217	720	0	289	2560	351	237	185	1297	659	2639
July	6,986	744	3	607	943	213	167	374	2163	493	2026
Aug.	6,907	744	5	473	2190	808	353	341	1212	182	1348
Sept.	8,071	720	1	260	577	423	450	359	1267	660	1196
Oct.	7,110	744	2	314	2436	428	460	273	4328	1339	1475
Nov.	9,957	720	3	107	1583	392	460	166	1410	806	1381
Dec.	9,231	744	2	420	3528	1016	504				
Year	105,070	8,760	26	4631	25982	6491	4219	3611	26945	12517	20674

Number of hours from each direction will be found in monthly results.

Total mileage for year 105,070

Greatest mileage in 24 hours (Jan. 12th) 1,002

Greatest mileage in 1 hour (March 9th) 56

Number of gales 34

Average velocity for year 12.0

Prevailing direction, southwest. Mileage, 26,945. Total hours, 2,177.

Absolute Extremes

DURING 79 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 " " March, 1859,	29.412
Greatest monthly range 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 reading on July 3rd, 1911	103.2
Lowest reading on January 10th, 1859,	-23.5
Highest daily mean temperature, July 3rd, 1911,	90.8
Lowest " " " Jan. 13th, 1914,	-16.5
Highest monthly mean, July, 1916,	76.0
Lowest " " February, 1875,	10.2
Highest yearly " 1913,	48.0
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,	17.57
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

DURING 79 YEARS—(Continued)

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 " " " " " " 1899,	31.8
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	1918
Latest snow.....	June 4, 1859	April 18th
Earliest snow.....	Sept. 25, 1860	*Sept. 26th
Latest hoar frost.....	June 20, 1862	May 11th
Earliest hoar frost.....	Aug. 26, 1863	Oct. 1st
Earliest thunder & lightning	Jan. 12, 1898	Feb. 14th
Latest thunder and lightning	Dec. 23, 1871	Oct. 28th
*Flurries.		

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY—1918.

Month.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
January.	2.3	7.5	7.9	3.1	7.1	4.0	0	0.4	1.5	1.8	0	0	1.2	6.5	1.1	4.0	5.6
February.	8.6	7.0	0.2	4.9	4.7	0	0	3.6	3.9	0	0.9	0	3.8	1.2	3.2	2.2	9.5
March.	7.0	2.5	10.1	2.3	0	0	3.3	9.6	0	6.7	0.3	7.8	6.3	0	10.3	9.8	8.6
April.	0	11.0	9.5	12.1	11.8	11.4	0.4	5.5	11.6	11.1	1.4	0	12.5	11.9	11.2	3.5	2.6
May.	9.6	7.2	4.8	6.5	12.7	2.3	3.1	9.5	1.1	1.6	5.9	0.8	0	13.1	13.2	12.1	12.0
June.	13.5	10.7	12.7	0	10.6	1.5	14.5	11.5	0	13.3	8.0	0	14.5	14.3	14.6	5.2	12.5
July.	1.6	13.5	7.6	13.5	5.7	12.6	12.7	13.3	0.4	5.5	6.9	9.0	13.4	13.8	9.5	2.6	5.7
August.	12.7	8.5	9.9	7.4	11.8	10.3	8.8	5.1	6.7	5.3	8.0	12.1	10.7	7.4	13.1	10.6	13.0
September.	12.2	7.6	2.2	1.3	0.1	11.3	10.0	9.7	11.4	9.7	2.7	0	0.4	7.1	0	0	9.5
October.	10.3	1.3	9.7	6.3	0.7	0	9.5	9.1	4.9	8.3	8.7	0.6	2.3	7.4	4.2	6.3	3.3
November.	4.6	1.4	0.9	0	8.2	7.8	2.6	0	0	2.5	0.6	6.2	7.4	0	5.7	0.1	0
December.	6.0	0.9	0.4	0	0	5.6	0	5.0	5.8	0	0	0.9	0	0	3.7	4.0	7.7

TOTAL AMOUNT OF SUNSHINE RECORDED ON EACH DAY—1918. (Continued).

Month.	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Monthly Total	Monthly Percentage.
January.	0	2.7	7.7	7.7	3.1	5.5	0	0	1.5	7.6	0	8.1	7.5	7.8	113.2	39
February.	4.3	0	7.4	4.7	1.9	4.7	5.9	2.5	7.7	4.8	0				97.6	33
March.	5.7	8.9	8.4	7.3	11.0	10.8	9.7	5.8	6.9	9.9	11.2	10.4	4.8	6.5	201.9	55
April.	0	11.9	3.4	0.6	4.5	8.2	3.0	12.5	9.0	3.4	5.6	11.4	4.5		205.5	51
May.	8.8	12.6	7.1	9.9	7.7	13.5	7.8	0	0.2	7.5	9.7	0	5.2	8.0	213.5	47
June.	14.5	14.0	14.6	0	1.1	10.0	10.8	9.1	10.9	8.8	6.2	9.9	4.8		272.1	58
July.	12.5	14.2	11.0	9.5	4.8	1.6	10.5	6.3	10.3	8.8	12.4	7.5	11.4	13.7	281.8	60
August.	13.2	12.7	10.5	5.8	6.8	8.7	2.6	11.8	7.1	11.3	0.4	11.4	3.8	1.9	269.4	63
September.	1.3	1.2	8.2	7.6	0	0.2	9.4	7.3	5.5	8.0	7.3	9.0	3.6		163.8	44
October.	5.6	8.4	0.3	8.2	8.5	2.7	0.1	0	0	1.3	1.3	5.0	0	0	134.3	38
November.	0.1	2.3	1.8	0	0	8.4	7.5	0.3	8.5	6.7	0	0.4	0		84.0	29
December.	6.6	0	0	1.1	0	0	0	0	0	1.6	2.0	1.0	0	0	52.3	19

MONTHLY TABLES FOR EACH HOUR OF RECORDED SUNSHINE—1918

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	7.0	13.4	14.1	15.5	15.2	16.6	15.2	13.5	2.7	0	0	0	
February.	0	0	0	0	1.0	6.9	10.2	10.5	12.5	13.1	13.6	12.8	11.0	5.7	0.3	0	0	
March.	0	0	0	1.4	13.1	19.5	20.5	22.3	21.7	21.0	21.0	20.4	18.0	15.5	7.5	0	0	
April.	0	0	0.9	10.3	16.3	17.5	19.6	19.5	18.3	17.6	17.4	17.8	17.0	16.6	14.0	2.7	0	
May.	0	0	3.5	11.4	11.7	15.2	17.0	18.8	19.0	20.8	18.8	15.7	17.9	17.4	15.2	10.6	0.5	
June.	0	0.6	12.4	19.9	20.2	19.5	20.3	21.0	20.7	20.3	20.8	21.4	20.5	19.4	16.0	14.1	5.0	
July.	0	0	9.1	16.6	19.7	22.0	23.5	23.7	24.2	24.8	22.5	21.9	17.1	18.2	19.5	14.0	4.2	
August.	0	0	1.9	13.8	21.0	21.6	22.2	21.3	22.5	25.2	24.2	22.5	23.5	20.1	18.0	11.3	0.3	
September.	0	0	0	4.3	11.2	14.6	17.2	15.7	16.0	16.5	15.7	15.1	16.2	13.2	7.3	0.7	0	
October.	0	0	0	0.4	7.2	13.0	14.6	15.3	13.9	16.3	16.1	14.4	12.6	10.0	0.5	0	0	
November.	0	0	0	0	1.2	8.4	10.4	12.0	10.5	12.4	10.7	9.1	7.5	1.8	0	0	0	
December.	0	0	0	0	0.4	4.9	5.6	7.4	8.3	9.1	7.2	5.7	3.6	0.1	0	0	0	
					78.1	123.0	170.1	194.5	201.6	203.1	212.3	204.6	192.0	178.4	140.7	98.3	53.4	10.0

SUMMARY OF SUNSHINE.

BRIGHT SUNSHINE RECORDED.

	1918			Mean from 1882 to 1910.		
	Number of days.	Number of hours	Percentage of sunshine.	Number of days.	Number of hours.	Percentage of sunshine.
January	25	113.2	39	20	77.9	27
February	22	97.6	33	22	108.1	37
March	27	201.9	55	25	150.0	40
April	27	205.5	51	25	190.7	47
May	28	213.5	47	29	218.9	48
June	26	272.1	58	29	260.0	56
July	31	281.8	60	30	282.2	60
August	31	269.4	63	30	252.7	60
September	26	163.8	44	28	207.8	55
October	26	134.3	38	28	149.3	44
November	21	84.0	29	22	85.3	29
December	15	52.3	19	20	65.2	24
Year	305	2089.4	47	308	2048.1	46

Monthly and Annual Means of Temperature of the air from 1841 to 1871, with the Monthly and Annual Means for the whole period; also the corresponding approximate means from observations by the late Rev. Charles Dade, prior to the establishment of the Observatory, and embracing the greater portion of the years 1831 to 1841.

YEAR	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	Mean Annual Temp.	Difference from Average
1841	25.6	22.4	27.7	39.2	50.5	65.6	65.0	64.4	61.3	41.6	35.0	28.7	43.9	-0.2
1842	27.9	26.9	35.8	43.1	49.1	55.6	64.7	65.7	55.7	45.1	33.3	24.7	44.0	-0.2
1843	28.7	14.5	21.3	40.9	49.1	58.4	64.5	66.4	59.1	41.8	33.5	30.0	42.4	-1.8
1844	20.2	26.0	31.3	47.5	53.6	59.9	66.0	64.3	58.6	43.3	34.9	28.2	44.5	+0.3
1845	26.5	26.0	35.4	42.1	49.6	61.0	66.2	67.9	56.0	46.4	36.8	21.1	44.6	+0.4
1846	26.7	20.4	33.1	44.0	55.5	63.3	68.0	68.4	63.6	44.6	41.3	27.5	46.4	+2.2
1847	23.3	21.5	26.2	39.2	54.4	58.4	68.0	65.1	55.6	44.0	38.6	30.1	43.7	-0.5
1848	28.7	26.6	28.6	41.3	54.1	62.9	65.5	69.2	54.2	46.3	34.5	29.1	45.1	+0.9
1849	18.5	19.5	33.5	39.0	48.0	63.2	68.4	66.3	58.2	45.3	42.6	26.5	44.1	-0.1
1850	29.7	26.0	29.8	37.9	47.6	64.3	68.9	66.8	56.5	45.4	38.8	21.7	44.5	+0.3
1851	25.5	27.6	32.4	41.3	51.3	59.2	65.0	63.6	60.0	47.4	32.9	21.5	44.0	-0.2
1852	18.4	23.4	27.7	38.2	51.4	60.8	66.8	65.9	57.5	48.0	36.0	31.9	43.8	-0.3
1853	22.9	24.2	30.8	41.9	50.8	65.4	65.5	68.7	58.9	44.5	38.7	25.4	44.8	+0.6
1854	23.5	21.2	30.8	41.1	52.1	64.1	72.4	68.1	61.1	49.5	36.9	21.9	45.2	+1.1
1855	25.9	15.6	28.6	42.5	53.0	59.9	67.9	64.1	59.6	45.4	38.6	26.9	44.0	-0.2
1856	16.0	15.8	23.2	42.3	50.4	62.1	69.8	63.6	57.2	45.4	37.4	22.9	42.2	-2.0
1857	12.7	28.7	28.0	35.4	48.8	56.9	67.7	65.4	58.7	45.5	33.6	31.9	42.8	-1.4
1858	30.0	17.1	28.6	41.5	48.8	66.1	67.8	67.7	59.2	48.8	34.2	27.4	44.8	+0.6
1859	26.4	26.2	36.5	39.6	55.1	58.2	66.8	66.7	55.2	43.0	38.9	17.9	44.2	0.0
1860	23.3	23.0	34.6	39.6	55.5	63.1	63.8	64.5	55.4	47.3	38.0	24.0	44.3	+0.2
1861	19.8	26.2	27.1	42.1	47.4	61.2	65.3	65.5	59.1	48.8	37.2	31.2	44.2	+0.1
1862	21.7	22.6	28.9	39.6	52.1	60.5	66.6	67.7	59.7	48.7	35.6	28.8	44.4	+0.2
1863	28.0	22.6	26.0	42.1	54.2	60.1	67.5	66.6	55.9	46.0	39.1	27.0	44.6	+0.4
1864	22.8	24.3	29.1	40.9	54.8	63.0	69.7	68.6	56.4	45.2	36.9	21.7	44.7	+0.5
1865	17.7	22.4	33.5	43.1	52.3	64.5	65.0	65.2	64.5	44.5	38.6	27.7	44.9	+0.7
1866	20.7	22.5	27.5	43.9	48.3	64.5	70.4	60.8	55.2	49.1	38.4	25.1	43.5	-0.7
1867	19.7	22.4	27.5	43.9	48.3	64.5	70.4	60.8	55.2	49.1	38.4	25.1	43.5	-0.7
1868	27.7	25.0	23.1	40.0	50.8	58.4	64.5	63.6	60.7	42.3	32.7	28.7	43.1	-1.0
1869	24.4	21.5	26.3	44.6	56.3	67.3	68.8	67.1	61.8	50.0	36.5	26.5	45.9	+1.8
1871	21.3	24.3	34.6	42.9	54.1	61.4	66.0	67.4	54.8	48.3	30.6	19.9	43.8	-0.4
MEANS														
1831-1841	24.90	21.22	31.40	41.65	52.54	63.08	68.20	65.07	56.05	45.08	35.90	26.07	44.26	
1841-1871	23.26	22.91	29.61	41.11	51.52	61.65	67.30	66.15	58.20	45.93	36.55	25.90	44.17	

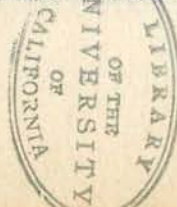
DEPTH OF RAIN IN INCHES IN EACH MONTH AND IN THE YEAR,

FROM 1840 TO 1918 INCLUSIVE.

Months of incomplete years not included in general means. Letter R. denotes that rain fell, but that the amount was inappreciable.

YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1840	1.395	1.475	1.640	3.420	4.150	4.860	5.270	2.905	1.380	1.860	1.220	0.000	29.575
1841	2.150	0.000	1.170	1.370	2.350	1.560	8.150	6.170	3.340	1.360	2.450	6.600	36.670
1842	2.170	3.625	3.150	3.740	1.275	5.755	3.050	2.500	6.160	5.175	5.310	0.880	42.790
1843	4.295	0.475	0.625	3.185	1.570	4.595	4.605	4.850	9.760	3.790	4.765	1.040	43.555
1844	3.005	0.430	2.470	1.515	5.670	3.535	2.815						
1845				3.290	2.300	3.715	2.195	1.725	6.245	1.760	1.105	0.000	
1846	2.335	0.000	1.965	1.300	4.375	1.920	2.895	1.770	4.595	4.180	5.805	1.215	32.355
1847	2.135	0.550	0.850	2.870	2.040	2.625	3.355	2.140	6.665	4.390	3.155	1.185	31.960
1848	2.245	0.775	1.220	1.455	2.520	1.810	1.890	0.855	3.115	1.550	2.020	2.750	22.205
1849	1.175	0.240	1.525	2.655	5.115	2.020	3.415	4.970	1.480	5.965	2.815	0.840	32.215
1850	1.250	1.235	0.745	4.720	0.545	3.345	5.270	4.355	1.735	2.085	2.955	0.190	28.430
1851	1.275	2.600	0.770	2.295	2.950	2.695	3.625	1.360	2.665	1.680	3.885	1.075	26.875
1852	0.000	0.650	3.080	1.990	1.125	3.160	4.025	2.695	3.630	5.280	1.775	3.995	31.405
1853	0.290	1.030	1.080	2.625	4.420	1.550	0.915	2.575	5.140	0.875	2.425	0.625	23.550
1854	1.270	1.460	2.425	2.685	4.630	1.460	4.805	0.455	5.375	1.495	1.115	0.590	27.765
1855	0.525	1.770	1.485	2.030	2.565	4.070	3.245	1.455	5.585	2.485	4.590	1.845	31.650
1856	0.000	0.000	0.000	2.780	4.580	3.200	1.120	1.680	4.105	0.875	1.375	1.790	21.505
1857	R.	3.050	0.335	1.755	4.145	5.060	3.475	5.265	2.640	1.040	3.235	3.205	33.205
1858	1.152	R.	0.917	1.642	6.367	2.943	3.072	3.890	0.735	1.797	3.879	1.657	28.051
1859	1.449	0.455	4.054	2.527	3.410	4.085	2.611	3.990	3.525	0.940	5.193	1.035	33.274
1860	0.740	1.330	0.882	1.282	1.815	2.136	4.336	3.405	1.959	1.618	2.569	1.362	23.434
1861	0.685	0.815	2.125	1.619	3.380	2.329	2.635	2.953	3.607	1.993	4.294	0.560	26.995
1862	0.115	0.180	2.560	2.235	1.427	1.007	5.344	3.483	2.344	2.684	2.205	1.945	25.529
1863	1.122	1.450	0.687	2.210	3.363	1.662	3.408	2.208	1.235	2.522	3.656	2.960	26.483
1864	1.165	0.397	1.620	3.633	4.070	0.570	1.332	5.060	2.508	3.321	3.765	2.045	29.486
1865	0.440	0.810	3.050	3.972	4.005	2.005	2.470	1.990	2.450	2.705	0.975	1.727	26.599

1866	0.522	0.830	1.915	1.675	2.820	2.720	5.390	4.457	5.657	2.470	2.963	2.790	34.209
1867	R.	1.328	0.617	2.147	3.220	0.885	1.965	2.440	1.226	1.970	1.835	1.408	19.041
1868	R.	0.040	2.660	0.990	7.670	2.217	0.510	1.562	4.239	1.365	5.150	0.005	26.408
1869	0.887	0.165	0.985	2.965	2.805	4.373	4.610	4.273	4.027	0.962	2.540	2.590	31.182
1870	3.412	0.520	0.755	2.145	1.150	8.090	1.896	3.422	6.794	2.690	0.594	2.430	33.898
1871	0.864	0.040	2.782	3.318	2.302	3.340	1.255	2.800	1.290	1.185	2.655	0.940	22.771
1872	0.220	0.350	0.700	0.910	1.934	3.148	2.297	2.405	2.526	3.288	0.420	0.390	18.588
1873	1.110	0.000	1.756	3.975	2.205	0.680	1.913	1.913	3.020	2.155	0.510	0.995	20.232
1874	2.820	1.150	1.390	1.240	1.492	1.795	3.350	0.380	1.554	1.418	0.935	0.050	17.574
1875	R.	0.470	0.930	1.230	2.980	1.825	1.810	1.880	2.820	2.415	1.000	1.620	18.980
1876	1.960	2.300	1.250	1.805	3.230	1.590	3.290	R.	2.455	1.435	1.748	0.000	21.063
1877	0.030	0.000	2.450	2.271	1.348	0.900	2.720	3.165	0.415	2.636	5.450	0.500	21.885
1878	1.965	1.475	3.390	2.620	2.595	1.905	5.630	7.090	7.690	3.275	3.405	2.350	43.390
1879	0.050	0.280	1.089	0.690	1.270	4.480	2.610	2.170	2.977	1.110	3.240	2.549	22.515
1880	1.410	0.955	0.960	3.120	4.025	3.560	3.525	4.387	3.010	3.270	2.230	0.470	30.922
1881	0.180	1.580	1.870	0.075	2.220	2.550	1.837	1.510	0.897	3.815	2.564	2.040	21.138
1882	1.225	1.180	1.550	1.005	3.580	2.633	1.065	2.515	2.090	1.147	1.387	1.210	20.587
1883	0.150	1.010	0.050	2.080	4.300	4.964	5.573	1.830	2.377	0.965	2.085	0.350	25.734
1884	0.160	1.155	1.470	0.685	2.250	2.205	2.115	2.125	3.190	1.417	1.790	1.970	20.532
1885	0.910	0.280	0.210	2.190	2.207	4.195	2.101	3.915	3.623	3.728	1.922	1.070	26.351
1886	2.610	2.080	2.401	2.250	2.440	1.922	2.450	2.630	3.830	2.593	2.165	0.355	27.726
1887	0.745	2.125	0.610	1.600	0.805	2.655	0.660	1.995	1.202	1.622	2.035	1.915	17.969
1888	0.690	1.020	1.910	1.360	0.839	3.990	0.860	2.910	3.285	2.645	2.710	0.600	22.819
1889	1.345	0.280	0.000	1.400	3.140	3.555	3.260	0.425	2.080	1.870	2.710	4.510	24.575
1890	2.730	1.925	0.510	2.100	2.615	4.875	4.110	3.025	1.850	4.940	3.400	0.030	32.110
1891	1.915	1.670	1.260	2.295	0.495	3.050	2.160	4.830	1.705	1.705	3.190	2.460	26.735
1892	0.195	0.620	0.530	1.225	3.480	5.810	2.500	3.990	3.120	1.350	1.545	0.920	25.285
1893	0.530	0.740	1.615	4.270	3.860	1.830	2.265	5.755	1.250	3.610	2.690	2.730	31.145
1894	0.960	0.630	1.225	0.620	9.365	1.080	1.610	0.380	5.480	2.350	0.190	1.893	25.785
1895	1.070	R.	0.390	1.455	2.311	0.745	2.490	3.010	2.450	0.865	4.055	3.690	22.531
1896	1.855	0.990	1.345	0.730	2.440	1.105	2.175	1.130	5.085	1.965	2.605	0.345	21.770
1897	0.805	1.570	2.330	1.725	3.018	2.924	5.240	2.260	0.395	1.445	3.695	2.330	27.737
1898	2.420	0.610	2.400	1.645	2.305	1.945	0.690	1.080	2.790	5.770	1.455	0.710	23.820
1899	2.370	1.180	2.795	1.435	3.290	0.655	1.020	0.270	5.150	4.550	0.945	2.135	25.795



YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1900	0.470	2.140	1.620	1.830	0.995	2.425	2.730	2.745	1.425	2.115	3.025	0.610	22.130
1901	0.775	0.000	1.380	3.090	3.475	2.070	3.370	3.870	3.050	0.560	1.330	2.230	25.200
1902	0.060	0.920	2.170	2.145	1.895	3.565	4.350	2.380	3.350	2.780	0.980	1.510	26.105
1903	0.660	1.500	1.805	3.440	1.790	3.335	4.345	3.650	0.410	2.660	1.000	1.036	25.631
1904	0.520	1.090	2.315	2.640	3.795	2.770	5.125	4.555	3.990	2.420	0.080	0.740	30.040
1905	0.625	0.060	0.335	1.075	3.230	3.185	4.715	4.220	1.725	3.485	1.500	1.670	25.825
1906	1.320	0.440	1.315	1.500	2.510	3.870	3.405	1.825	3.670	4.206	1.605	1.540	27.206
1907	2.320	0.150	1.800	1.970	1.770	1.220	2.030	1.085	4.800	1.975	3.430	3.015	25.565
1908	0.610	1.170	0.920	1.725	4.630	2.970	2.930	2.830	1.295	1.010	1.240	0.390	21.720
1909	0.880	1.625	1.180	4.895	3.710	1.205	3.475	1.330	1.960	1.125	3.135	1.490	26.010
1910	1.515	0.800	0.580	4.900	2.730	1.065	3.895	3.045	3.970	2.230	1.585	0.210	26.525
1911	1.195	0.190	1.365	1.435	1.970	1.520	2.615	2.420	2.570	3.450	3.155	2.020	23.905
1912	0.890	0.015	0.110	2.050	5.910	1.750	1.950	3.975	3.280	2.350	2.160	1.220	25.660
1913	3.210	0.470	2.840	3.480	1.040	1.350	2.670	2.270	0.970	2.460	3.755	0.480	24.995
1914	0.420	0.590	1.240	1.820	1.495	2.170	1.000	5.195	1.540	1.535	2.510	0.230	19.745
1915	1.310	1.290	0.100	1.235	1.600	1.335	4.505	8.135	4.240	2.185	1.600	0.770	28.305
1916	2.190	0.000	0.875	3.045	5.585	4.290	0.360	1.565	1.660	3.930	1.000	0.765	25.265
1917	1.180	0.300	1.305	3.135	2.755	4.995	3.580	4.445	0.650	4.755	1.060	0.100	28.260
1918	R.	2.890	0.990	1.325	2.645	3.930	1.740	4.145	4.640	2.845	1.155	1.700	28.005
MEANS													
1840-71	1.228	0.894	1.618	2.439	3.254	2.978	3.248	3.021	3.716	2.389	2.977	1.654	29.416
1872-1918	1.119	0.921	1.332	2.016	2.757	2.587	2.768	2.823	2.713	2.498	2.072	1.317	24.923

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1800 1850 1880 1884
 DEPTH OF SNOW IN INCHES IN EACH MONTH AND IN THE YEAR,
 FROM 1843 TO 1918 INCLUSIVE.
 The letter S. denotes that snow fell, but that the amount was inappreciable.

YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1843	14.2	14.4	25.7	0.1	.....	.....	.....	.....	.....	2.5	1.2	8.1	66.2
1844	24.9	10.0	14.0	S.	0.3	.....	.....	.....	.....	12.0	8.0	4.2	73.1
1845	22.7	19.0	2.8	1.5	.....	.....	.....	.....	.....	S.	5.0	4.7	55.7
1846	6.0	46.1	2.3	1.3	.....	.....	.....	.....	.....	S.	0.4	6.0	62.1
1847	7.5	27.3	4.2	4.0	.....	.....	.....	.....	.....	S.	S.	6.8	49.8
1848	7.1	10.8	9.7	0.5	.....	.....	.....	.....	.....	0.0	1.4	16.5	46.0
1849	9.2	19.2	2.3	1.7	.....	.....	.....	.....	.....	S.	1.0	9.6	43.0
1850	5.2	23.1	11.2	1.1	S.	.....	.....	.....	.....	0.0	S.	29.5	70.1
1851	7.8	2.4	8.8	1.2	0.5	.....	.....	.....	.....	0.3	6.7	10.7	38.4
1852	30.9	13.0	19.5	9.4	S.	.....	.....	.....	.....	0.0	2.0	20.1	94.9
1853	7.5	12.6	7.1	1.0	S.	.....	.....	.....	.....	S.	2.7	22.3	53.2
1854	7.5	18.0	2.8	2.7	.....	.....	.....	.....	.....	S.	1.3	17.2	49.5
1855	23.3	21.8	18.1	1.6	0.9	.....	.....	.....	.....	0.8	3.0	29.5	99.0
1856	13.6	9.7	16.2	0.1	S.	.....	.....	.....	.....	0.1	9.5	16.3	65.5
1857	21.8	11.7	11.3	12.9	S.	.....	.....	.....	.....	0.2	6.9	9.0	73.8
1858	4.0	26.7	0.2	0.1	.....	.....	.....	.....	.....	S.	4.0	10.4	45.4
1859	16.4	8.3	1.0	1.2	.....	S.	.....	.....	.....	S.	0.6	37.4	64.9
1860	8.7	18.8	2.4	0.3	.....	.....	.....	.....	.....	S.	1.9	13.5	45.6
1861	20.6	29.7	7.1	6.9	0.5	.....	.....	.....	.....	S.	3.2	6.8	74.8
1862	27.4	23.1	18.5	0.2	.....	.....	.....	.....	.....	0.5	15.3	10.4	85.5
1863	20.6	22.0	11.4	1.6	0.1	.....	.....	.....	.....	0.0	0.1	37.1	62.9
1864	26.3	9.5	3.7	3.5	.....	.....	.....	.....	.....	S.	4.5	27.1	74.6
1865	14.8	16.8	18.9	2.0	.....	.....	.....	.....	.....	4.5	1.1	15.2	63.3
1866	10.3	16.9	7.2	S.	.....	.....	.....	.....	.....	S.	2.2	15.5	52.1
1867	42.0	13.4	33.4	7.2	S.	0.0	0.9	13.6	110.5
1868	14.6	32.8	4.2	5.3	2.0	4.3	15.5	78.7
1869	9.8	39.7	15.0	0.5	S.	2.3	10.2	7.1	84.6

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DEPTH OF RAIN IN INCHES IN EACH MONTH AND IN THE YEAR,
FROM 1840 TO 1918 INCLUSIVE.

Months of incomplete years not included in general means. Letter R. denotes that rain fell, but that the amount was inappreciable.

YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1840	1.395	1.475	1.640	3.420	4.150	4.860	5.270	2.905	1.380	1.860	1.220	0.000	29.575
1841	2.150	0.000	1.170	1.370	2.350	1.560	8.150	6.170	3.340	1.360	2.450	6.600	36.670
1842	2.170	3.625	3.150	3.740	1.275	5.755	3.050	2.500	6.160	5.175	5.310	0.880	42.790
1843	4.295	0.475	0.625	3.185	1.570	4.595	4.605	4.850	9.760	3.790	4.765	1.040	43.555
1844	3.005	0.430	2.470	1.515	5.670	3.535	2.815	.....	.....	.....	.....	.....	.....
1845	.....	.....	.....	3.290	2.300	3.715	2.195	1.725	6.245	1.760	1.105	0.000	.....
1846	2.335	0.000	1.965	1.300	4.375	1.920	2.895	1.770	4.595	4.180	5.805	1.215	32.355
1847	2.135	0.550	0.850	2.870	2.040	2.625	3.355	2.140	6.665	4.390	3.155	1.185	31.960
1848	2.245	0.775	1.220	1.455	2.520	1.810	1.890	0.855	3.115	1.550	2.020	2.750	22.205
1849	1.175	0.240	1.525	2.655	5.115	2.020	3.415	4.970	1.480	5.965	2.815	0.840	32.215
1850	1.250	1.235	0.745	4.720	0.545	3.345	5.270	4.355	1.735	2.085	2.955	0.190	28.430
1851	1.275	2.600	0.770	2.295	2.950	2.695	3.625	1.360	2.665	1.680	3.885	1.075	26.875
1852	0.000	0.650	3.080	1.990	1.125	3.160	4.025	2.695	3.630	5.280	1.775	3.995	31.405
1853	0.290	1.030	1.080	2.625	4.420	1.550	0.915	2.575	5.140	0.875	2.425	0.625	23.550
1854	1.270	1.460	2.425	2.685	4.630	1.460	4.805	0.455	5.375	1.495	1.115	0.590	27.765
1855	0.525	1.770	1.485	2.030	2.565	4.070	3.245	1.455	5.585	2.485	4.590	1.845	31.650
1856	0.000	0.000	0.000	2.780	4.580	3.200	1.120	1.680	4.105	0.875	1.375	1.790	21.505
1857	R.	3.050	0.335	1.755	4.145	5.060	3.475	5.265	2.640	1.040	3.235	3.205	33.205
1858	1.152	R.	0.917	1.642	6.367	2.943	3.072	3.890	0.735	1.797	3.879	1.657	28.051
1859	1.449	0.455	4.054	2.527	3.410	4.085	2.611	3.990	3.525	0.940	5.193	1.035	33.274
1860	0.740	1.330	0.882	1.282	1.815	2.136	4.336	3.405	1.959	1.618	2.569	1.362	23.434
1861	0.685	0.815	2.125	1.619	3.380	2.329	2.635	2.953	3.607	1.993	4.294	0.560	26.995
1862	0.115	0.180	2.560	2.235	1.427	1.007	5.344	3.483	2.344	2.684	2.205	1.945	25.529
1863	1.122	1.450	0.687	2.210	3.363	1.662	3.408	2.208	1.235	2.522	3.656	2.960	26.483
1864	1.165	0.397	1.620	3.633	4.070	0.570	1.332	5.060	2.508	3.321	3.765	2.045	29.486
1865	0.440	0.810	3.050	3.972	4.005	2.005	2.470	1.990	2.450	2.705	0.975	1.727	26.599

1866	0.522	0.830	1.915	1.675	2.820	2.720	5.390	4.457	5.657	2.470	2.963	2.790	34.209
1867	R.	1.328	0.617	2.147	3.220	0.885	1.965	2.440	1.226	1.970	1.835	1.408	19.041
1868	R.	0.040	2.660	0.990	7.670	2.217	0.510	1.562	4.239	1.365	5.150	0.005	26.408
1869	0.887	0.165	0.985	2.965	2.805	4.373	4.610	4.273	4.027	0.962	2.540	2.590	31.182
1870	3.412	0.520	0.755	2.145	1.150	8.090	1.896	3.422	6.794	2.690	0.594	2.430	33.898
1871	0.864	0.040	2.782	3.318	2.302	3.340	1.255	2.800	1.290	1.185	2.655	0.940	22.771
1872	0.220	0.350	0.700	0.910	1.934	3.148	2.297	2.405	2.526	3.288	0.420	0.390	18.588
1873	1.110	0.000	1.756	3.975	2.205	0.680	1.913	3.020	2.155	0.510	0.995	20.232	.....
1874	2.820	1.150	1.390	1.240	1.492	1.795	3.350	0.380	1.554	1.418	0.935	0.050	17.574
1875	R.	0.470	0.930	1.230	2.980	1.825	1.810	1.880	2.820	2.415	1.000	1.620	18.980
1876	1.960	2.300	1.250	1.805	3.230	1.590	3.290	R.	2.455	1.435	1.748	0.000	21.063
1877	0.030	0.000	2.450	2.271	1.348	0.900	2.720	3.165	0.415	2.636	5.450	0.500	21.885
1878	1.965	1.475	3.390	2.620	2.595	1.905	5.630	7.090	7.690	3.275	3.405	2.350	43.390
1879	0.050	0.280	1.089	0.690	1.270	4.480	2.610	2.170	2.977	1.110	3.240	2.549	22.515
1880	1.410	0.955	0.960	3.120	4.025	3.560	3.525	4.387	3.010	3.270	2.230	0.470	30.922
1881	0.180	1.580	1.870	0.075	2.220	2.550	1.837	1.510	0.897	3.815	2.564	2.040	21.138
1882	1.225	1.180	1.550	1.005	3.580	2.633	1.065	2.515	2.090	1.147	1.387	1.210	20.587
1883	0.150	1.010	0.050	2.080	4.300	4.964	5.573	1.830	2.377	0.965	2.085	0.350	25.734
1884	0.160	1.155	1.470	0.685	2.250	2.205	2.115	2.125	3.190	1.417	1.790	1.970	20.532
1885	0.910	0.280	0.210	2.190	2.207	4.195	2.101	3.915	3.623	3.728	1.922	1.070	26.351
1886	2.610	2.080	2.401	2.250	2.440	1.922	2.450	2.630	3.830	2.593	2.165	0.355	27.726
1887	0.745	2.125	0.610	1.600	0.805	2.655	0.660	1.995	1.202	1.622	2.035	1.915	17.969
1888	0.690	1.020	1.910	1.360	0.839	3.990	0.860	2.910	3.285	2.645	2.710	0.600	22.819
1889	1.345	0.280	0.000	1.400	3.140	3.555	3.260	0.425	2.080	1.870	2.710	4.510	24.575
1890	2.730	1.925	0.510	2.100	2.615	4.875	4.110	3.025	1.850	4.940	3.400	0.030	32.110
1891	1.915	1.670	1.260	2.295	0.495	3.050	2.160	4.830	1.705	1.705	3.190	2.460	26.735
1892	0.195	0.620	0.530	1.225	3.480	5.810	2.500	3.990	3.120	1.350	1.545	0.920	25.285
1893	0.530	0.740	1.615	4.270	3.860	1.830	2.265	5.755	1.250	3.610	2.690	2.730	31.145
1894	0.960	0.630	1.225	0.620	9.365	1.080	1.610	0.380	5.480	2.350	0.190	1.893	25.785
1895	1.070	R.	0.390	1.455	2.311	0.745	2.490	3.010	2.450	0.865	4.055	3.690	22.531
1896	1.855	0.990	1.345	0.730	2.440	1.105	2.175	1.130	5.085	1.965	2.605	0.345	21.770
1897	0.805	1.570	2.330	1.725	3.018	2.924	5.240	2.260	0.395	1.445	3.695	2.330	27.737
1898	2.420	0.610	2.400	1.645	2.305	1.945	0.690	1.080	2.790	5.770	1.455	0.710	23.820
1899	2.370	1.180	2.795	1.435	3.290	0.655	1.020	0.270	5.150	4.550	0.945	2.135	25.795

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YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1900	0.470	2.140	1.620	1.830	0.995	2.425	2.730	2.745	1.425	2.115	3.025	0.610	22.130
1901	0.775	0.000	1.380	3.090	3.475	2.070	3.370	3.870	3.050	0.560	1.330	2.230	25.200
1902	0.060	0.920	2.170	2.145	1.895	3.565	4.350	2.380	3.350	2.780	0.980	1.510	26.105
1903	0.660	1.500	1.805	3.440	1.790	3.335	4.345	3.650	0.410	2.660	1.000	1.036	25.631
1904	0.520	1.090	2.315	2.640	3.795	2.770	5.125	4.555	3.990	2.420	0.080	0.740	30.040
1905	0.625	0.060	0.335	1.075	3.230	3.185	4.715	4.220	1.725	3.485	1.500	1.670	25.825
1906	1.320	0.440	1.315	1.500	2.510	3.870	3.405	1.825	3.670	4.206	1.605	1.540	27.206
1907	2.320	0.150	1.800	1.970	1.770	1.220	2.030	1.085	4.800	1.975	3.430	3.015	25.565
1908	0.610	1.170	0.920	1.725	4.630	2.970	2.930	2.830	1.295	1.010	1.240	0.390	21.720
1909	0.880	1.625	1.180	4.895	3.710	1.205	3.475	1.330	1.960	1.125	3.135	1.490	26.010
1910	1.515	0.800	0.580	4.900	2.730	1.065	3.895	3.045	3.970	2.230	1.585	0.210	26.525
1911	1.195	0.190	1.365	1.435	1.970	1.520	2.615	2.420	2.570	3.450	3.155	2.020	23.905
1912	0.890	0.015	0.110	2.050	5.910	1.750	1.950	3.975	3.280	2.350	2.160	1.220	25.660
1913	3.210	0.470	2.840	3.480	1.040	1.350	2.670	2.270	0.970	2.460	3.755	0.480	24.995
1914	0.420	0.590	1.240	1.820	1.495	2.170	1.000	5.195	1.540	1.535	2.510	0.230	19.745
1915	1.310	1.290	0.100	1.235	1.600	1.335	4.505	8.135	4.240	2.185	1.600	0.770	28.305
1916	2.190	0.000	0.875	3.045	5.585	4.290	0.360	1.565	1.660	3.930	1.000	0.765	25.265
1917	1.180	0.300	1.305	3.135	2.755	4.995	3.580	4.445	0.650	4.755	1.060	0.100	28.260
1918	R.	2.890	0.990	1.325	2.645	3.930	1.740	4.145	4.640	2.845	1.155	1.700	28.005
MEANS 1840-71	1.228	0.894	1.618	2.439	3.254	2.978	3.248	3.021	3.716	2.389	2.977	1.654	29.416
1872- 1918	1.119	0.921	1.332	2.016	2.757	2.587	2.768	2.823	2.713	2.498	2.072	1.317	24.923

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1800 1808 1808 1803
 DEPTH OF SNOW IN INCHES IN EACH MONTH AND IN THE YEAR,
 FROM 1843 TO 1918 INCLUSIVE.
 The letter S. denotes that snow fell, but that the amount was inappreciable.

YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1843	14.2	14.4	25.7	0.1	.....	.....	.....	.....	.....	2.5	1.2	8.1	66.2
1844	24.9	10.0	14.0	S.	0.3	.....	.....	.....	.....	12.0	8.0	4.2	73.1
1845	22.7	19.0	2.8	1.5	.....	.....	.....	.....	.....	S.	5.0	4.7	55.7
1846	6.0	46.1	2.3	1.3	.....	.....	.....	.....	.....	S.	0.4	6.0	62.1
1847	7.5	27.3	4.2	4.0	.....	.....	.....	.....	.....	S.	.....	6.8	49.8
1848	7.1	10.8	9.7	0.5	.....	.....	.....	.....	.....	0.0	1.4	16.5	46.0
1849	9.2	19.2	2.3	1.7	.....	.....	.....	.....	.....	S.	1.0	9.6	43.0
1850	5.2	23.1	11.2	1.1	S.	.....	.....	.....	.....	0.0	S.	29.5	70.1
1851	7.8	2.4	8.8	1.2	0.5	.....	.....	.....	.....	0.3	6.7	10.7	38.4
1852	30.9	13.0	19.5	9.4	S.	.....	.....	.....	.....	0.0	2.0	20.1	94.9
1853	7.5	12.6	7.1	1.0	S.	.....	.....	.....	.....	S.	2.7	22.3	53.2
1854	7.5	18.0	2.8	2.7	.....	.....	.....	.....	.....	S.	1.3	17.2	49.5
1855	23.3	21.8	18.1	1.6	0.9	.....	.....	.....	.....	0.8	3.0	29.5	99.0
1856	13.6	9.7	16.2	0.1	S.	.....	.....	.....	.....	0.1	19.5	16.3	65.5
1857	21.8	11.7	11.3	12.9	S.	.....	.....	.....	.....	0.2	6.9	9.0	73.8
1858	4.0	26.7	0.2	0.1	.....	.....	.....	.....	.....	S.	4.0	10.4	45.4
1859	16.4	8.3	1.0	1.2	.....	S.	.....	.....	.....	S.	0.6	37.4	64.9
1860	8.7	18.8	2.4	0.3	.....	.....	.....	.....	.....	S.	1.9	13.5	45.6
1861	20.6	29.7	7.1	6.9	0.5	.....	.....	.....	.....	S.	13.2	6.8	74.8
1862	27.4	23.1	18.5	0.2	.....	.....	.....	.....	.....	0.5	15.3	10.4	85.5
1863	20.6	22.0	11.4	1.6	0.1	.....	.....	.....	.....	0.0	0.1	37.1	62.9
1864	26.3	9.5	3.7	3.5	.....	.....	.....	.....	.....	S.	4.5	27.1	74.6
1865	14.8	16.8	18.9	2.0	.....	.....	.....	.....	.....	4.5	1.1	15.2	63.3
1866	10.3	16.9	7.2	S.	.....	.....	.....	.....	.....	S.	2.2	15.5	52.1
1867	42.0	13.4	33.4	7.2	S.	0.0	10.9	13.6	110.5
1868	14.6	32.8	4.2	5.3	2.0	4.3	15.5	78.7
1869	9.8	39.7	15.0	0.5	S.	2.3	10.2	7.1	84.6

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DEPTH OF RAIN IN INCHES IN EACH MONTH AND IN THE YEAR,

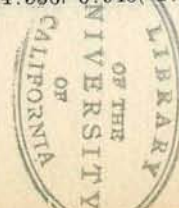
FROM 1840 TO 1918 INCLUSIVE.

Months of incomplete years not included in general means. Letter R. denotes that rain fell, but that the amount was inappreciable.

YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1840	1.395	1.475	1.640	3.420	4.150	4.860	5.270	2.905	1.380	1.860	1.220	0.000	29.575
1841	2.150	0.000	1.170	1.370	2.350	1.560	8.150	6.170	3.340	1.360	2.450	6.600	36.670
1842	2.170	3.625	3.150	3.740	1.275	5.755	3.050	2.500	6.160	5.175	5.310	0.880	42.790
1843	4.295	0.475	0.625	3.185	1.570	4.595	4.605	4.850	9.760	3.790	4.765	1.040	43.555
1844	3.005	0.430	2.470	1.515	5.670	3.535	2.815	.....	.....	.....	.....	.....	.....
1845	.....	.....	.....	3.290	2.300	3.715	2.195	1.725	6.245	1.760	1.105	0.000	.....
1846	2.335	0.000	1.965	1.300	4.375	1.920	2.895	1.770	4.595	4.180	5.805	1.215	32.355
1847	2.135	0.550	0.850	2.870	2.040	2.625	3.355	2.140	6.665	4.390	3.155	1.185	31.960
1848	2.245	0.775	1.220	1.455	2.520	1.810	1.890	0.855	3.115	1.550	2.020	2.750	22.205
1849	1.175	0.240	1.525	2.655	5.115	2.020	3.415	4.970	1.480	5.965	2.815	0.840	32.215
1850	1.250	1.235	0.745	4.720	0.545	3.345	5.270	4.355	1.735	2.085	2.955	0.190	28.430
1851	1.275	2.600	0.770	2.295	2.950	2.695	3.625	1.360	2.665	1.680	3.885	1.075	26.875
1852	0.000	0.650	3.080	1.990	1.125	3.160	4.025	2.695	3.630	5.280	1.775	3.995	31.405
1853	0.290	1.030	1.080	2.625	4.420	1.550	0.915	2.575	5.140	0.875	2.425	0.625	23.550
1854	1.270	1.460	2.425	2.685	4.630	1.460	4.805	0.455	5.375	1.495	1.115	0.590	27.765
1855	0.525	1.770	1.485	2.030	2.565	4.070	3.245	1.455	5.585	2.485	4.590	1.845	31.650
1856	0.000	0.000	0.000	2.780	4.580	3.200	1.120	1.680	4.105	0.875	1.375	1.790	21.505
1857	R.	3.050	0.335	1.755	4.145	5.060	3.475	5.265	2.640	1.040	3.235	3.205	33.205
1858	1.152	R.	0.917	1.642	6.367	2.943	3.072	3.890	0.735	1.797	3.879	1.657	28.051
1859	1.449	0.455	4.054	2.527	3.410	4.085	2.611	3.990	3.525	0.940	5.193	1.035	33.274
1860	0.740	1.330	0.882	1.282	1.815	2.136	4.336	3.405	1.959	1.618	2.569	1.362	23.434
1861	0.685	0.815	2.125	1.619	3.380	2.329	2.635	2.953	3.607	1.993	4.294	0.560	26.995
1862	0.115	0.180	2.560	2.235	1.427	1.007	5.344	3.483	2.344	2.684	2.205	1.945	25.529
1863	1.122	1.450	0.687	2.210	3.363	1.662	3.408	2.208	1.235	2.522	3.656	2.960	26.483
1864	1.165	0.397	1.620	3.633	4.070	0.570	1.332	5.060	2.508	3.321	3.765	2.045	29.486
1865	0.440	0.810	3.050	3.972	4.005	2.005	2.470	1.990	2.450	2.705	0.975	1.727	26.599
1866	0.522	0.830	1.915	1.675	2.820	2.720	5.390	4.457	5.657	2.470	2.963	2.790	34.209
1867	R.	1.328	0.617	2.147	3.220	0.885	1.965	2.440	1.226	1.970	1.835	1.408	19.041
1868	R.	0.040	2.660	0.990	7.670	2.217	0.510	1.562	4.239	1.365	5.150	0.005	26.408
1869	0.887	0.165	0.985	2.965	2.805	4.373	4.610	4.273	4.027	0.962	2.540	2.590	31.182
1870	3.412	0.520	0.755	2.145	1.150	8.090	1.896	3.422	6.794	2.690	0.594	2.430	33.898
1871	0.864	0.040	2.782	3.318	2.302	3.340	1.255	2.800	1.290	1.185	2.655	0.940	22.771
1872	0.220	0.350	0.700	0.910	1.934	3.148	2.297	2.405	2.526	3.288	0.420	0.390	18.588
1873	1.110	0.000	1.756	3.975	2.205	0.680	1.913	1.913	3.020	2.155	0.510	0.995	20.232
1874	2.820	1.150	1.390	1.240	1.492	1.795	3.350	0.380	1.554	1.418	0.935	0.050	17.574
1875	R.	0.470	0.930	1.230	2.980	1.825	1.810	1.880	2.820	2.415	1.000	1.620	18.980
1876	1.960	2.300	1.250	1.805	3.230	1.590	3.290	R.	2.455	1.435	1.748	0.000	21.063
1877	0.030	0.000	2.450	2.271	1.348	0.900	2.720	3.165	0.415	2.636	5.450	0.500	21.885
1878	1.965	1.475	3.390	2.620	2.595	1.905	5.630	7.090	7.690	3.275	3.405	2.350	43.390
1879	0.050	0.280	1.089	0.690	1.270	4.480	2.610	2.170	2.977	1.110	3.240	2.549	22.515
1880	1.410	0.955	0.960	3.120	4.025	3.560	3.525	4.387	3.010	3.270	2.230	0.470	30.922
1881	0.180	1.580	1.870	0.075	2.220	2.550	1.837	1.510	0.897	3.815	2.564	2.040	21.138
1882	1.225	1.180	1.550	1.005	3.580	2.633	1.065	2.515	2.090	1.147	1.387	1.210	20.587
1883	0.150	1.010	0.050	2.080	4.300	4.964	5.573	1.830	2.377	0.965	2.085	0.350	25.734
1884	0.160	1.155	1.470	0.685	2.250	2.205	2.115	2.125	3.190	1.417	1.790	1.970	20.532
1885	0.910	0.280	0.210	2.190	2.207	4.195	2.101	3.915	3.623	3.728	1.922	1.070	26.351
1886	2.610	2.080	2.401	2.250	2.440	1.922	2.450	2.630	3.830	2.593	2.165	0.355	27.726
1887	0.745	2.125	0.610	1.600	0.805	2.655	0.660	1.995	1.202	1.622	2.035	1.915	17.969
1888	0.690	1.020	1.910	1.360	0.839	3.990	0.860	2.910	3.285	2.645	2.710	0.600	22.819
1889	1.345	0.280	0.000	1.400	3.140	3.555	3.260	0.425	2.080	1.870	2.710	4.510	24.575
1890	2.730	1.925	0.510	2.100	2.615	4.875	4.110	3.025	1.850	4.940	3.400	0.030	32.110
1891	1.915	1.670	1.260	2.295	0.495	3.050	2.160	4.830	1.705	1.705	3.190	2.460	26.735
1892	0.195	0.620	0.530	1.225	3.480	5.810	2.500	3.990	3.120	1.350	1.545	0.920	25.285
1893	0.530	0.740	1.615	4.270	3.860	1.830	2.265	5.755	1.250	3.610	2.690	2.730	31.145
1894	0.960	0.630	1.225	0.620	9.365	1.080	1.610	0.380	5.480	2.350	0.190	1.893	25.785
1895	1.070	R.	0.390	1.455	2.311	0.745	2.490	3.010	2.450	0.865	4.055	3.690	22.531
1896	1.855	0.990	1.345	0.730	2.440	1.105	2.175	1.130	5.085	1.965	2.605	0.345	21.770
1897	0.805	1.570	2.330	1.725	3.018	2.924	5.240	2.260	0.395	1.445	3.695	2.330	27.737
1898	2.420	0.610	2.400	1.645	2.305	1.945	0.690	1.080	2.790	5.770	1.455	0.710	23.820
1899	2.370	1.180	2.795	1.435	3.290	0.655	1.020	0.270	5.150	4.550	0.945	2.135	25.795

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YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1900	0.470	2.140	1.620	1.830	0.995	2.425	2.730	2.745	1.425	2.115	3.025	0.610	22.130
1901	0.775	0.000	1.380	3.090	3.475	2.070	3.370	3.870	3.050	0.560	1.330	2.230	25.200
1902	0.060	0.920	2.170	2.145	1.895	3.565	4.350	2.380	3.350	2.780	0.980	1.510	26.105
1903	0.660	1.500	1.805	3.440	1.790	3.335	4.345	3.650	0.410	2.660	1.000	1.036	25.631
1904	0.520	1.090	2.315	2.640	3.795	2.770	5.125	4.555	3.990	2.420	0.080	0.740	30.040
1905	0.625	0.060	0.335	1.075	3.230	3.185	4.715	4.220	1.725	3.485	1.500	1.670	25.825
1906	1.320	0.440	1.315	1.500	2.510	3.870	3.405	1.825	3.670	4.206	1.605	1.540	27.206
1907	2.320	0.150	1.800	1.970	1.770	1.220	2.030	1.085	4.800	1.975	3.430	3.015	25.565
1908	0.610	1.170	0.920	1.725	4.630	2.970	2.930	2.830	1.295	1.010	1.240	0.390	21.720
1909	0.880	1.625	1.180	4.895	3.710	1.205	3.475	1.330	1.960	1.125	3.135	1.490	26.010
1910	1.515	0.800	0.580	4.900	2.730	1.065	3.895	3.045	3.970	2.230	1.585	0.210	26.525
1911	1.195	0.190	1.365	1.435	1.970	1.520	2.615	2.420	2.570	3.450	3.155	2.020	23.905
1912	0.890	0.015	0.110	2.050	5.910	1.750	1.950	3.975	3.280	2.350	2.160	1.220	25.660
1913	3.210	0.470	2.840	3.480	1.040	1.350	2.670	2.270	0.970	2.460	3.755	0.480	24.995
1914	0.420	0.590	1.240	1.820	1.495	2.170	1.000	5.195	1.540	1.535	2.510	0.230	19.745
1915	1.310	1.290	0.100	1.235	1.600	1.335	4.505	8.135	4.240	2.185	1.600	0.770	28.305
1916	2.190	0.000	0.875	3.045	5.585	4.290	0.360	1.565	1.660	3.930	1.000	0.765	25.265
1917	1.180	0.300	1.305	3.135	2.755	4.995	3.580	4.445	0.650	4.755	1.060	0.100	28.260
1918	R.	2.890	0.990	1.325	2.645	3.930	1.740	4.145	4.640	2.845	1.155	1.700	28.005
MEANS													
1840-71	1.228	0.894	1.618	2.439	3.254	2.978	3.248	3.021	3.716	2.389	2.977	1.654	29.416
1872-1918	1.119	0.921	1.332	2.016	2.757	2.587	2.768	2.823	2.713	2.498	2.072	1.317	24.923

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1800 14 DEPTH OF SNOW IN INCHES IN EACH MONTH AND IN THE YEAR.
 1808 9 FROM 1843 TO 1918 INCLUSIVE.
 1802 15 2 54 2 0
 1803 11 1 The letter S. denotes that snow fell, but that the amount was inappreciable.

YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1843	14.2	14.4	25.7	0.1	.....	.....	.....	.....	.....	2.5	1.2	8.1	66.2
1844	24.9	10.0	14.0	S.	.....	.....	.....	.....	.....	12.0	8.0	4.2	73.1
1845	22.7	19.0	2.8	1.5	.....	.....	.....	.....	.....	S.	5.0	4.7	55.7
1846	6.0	46.1	2.3	1.3	.....	.....	.....	.....	.....	S.	0.4	6.0	62.1
1847	7.5	27.3	4.2	4.0	.....	.....	.....	.....	.....	S.	S.	6.8	49.8
1848	7.1	10.8	9.7	0.5	.....	.....	.....	.....	.....	0.0	1.4	16.5	46.0
1849	9.2	19.2	2.3	1.7	.....	.....	.....	.....	.....	S.	1.0	9.6	43.0
1850	5.2	23.1	11.2	1.1	S.	.....	.....	.....	.....	0.0	S.	29.5	70.1
1851	7.8	2.4	8.8	1.2	0.5	.....	.....	.....	.....	0.3	6.7	10.7	38.4
1852	30.9	13.0	19.5	9.4	S.	.....	.....	.....	.....	0.0	2.0	20.1	94.9
1853	7.5	12.6	7.1	1.0	S.	.....	.....	.....	.....	S.	2.7	22.3	53.2
1854	7.5	18.0	2.8	2.7	.....	.....	.....	.....	.....	S.	1.3	17.2	49.5
1855	23.3	21.8	18.1	1.6	0.9	.....	.....	.....	.....	0.8	3.0	29.5	99.0
1856	13.6	9.7	16.2	0.1	S.	.....	.....	.....	.....	0.1	9.5	16.3	65.5
1857	21.8	11.7	11.3	12.9	S.	.....	.....	.....	.....	0.2	6.9	9.0	73.8
1858	4.0	26.7	0.2	0.1	.....	.....	.....	.....	.....	S.	4.0	10.4	45.4
1859	16.4	8.3	1.0	1.2	.....	S.	.....	.....	.....	S.	0.6	37.4	64.9
1860	8.7	18.8	2.4	0.3	.....	.....	.....	.....	.....	S.	1.9	13.5	45.6
1861	20.6	29.7	7.1	6.9	0.5	.....	.....	.....	.....	S.	13.2	6.8	74.8
1862	27.4	23.1	18.5	0.2	.....	.....	.....	.....	.....	0.5	15.3	10.4	85.5
1863	20.6	22.0	11.4	1.6	0.1	.....	.....	.....	.....	0.0	0.1	37.1	62.9
1864	26.3	9.5	3.7	3.5	.....	.....	.....	.....	.....	S.	4.5	27.1	74.6
1865	14.8	16.8	18.9	2.0	.....	.....	.....	.....	.....	4.5	1.1	15.2	63.3
1866	10.3	16.9	7.2	S.	.....	.....	.....	.....	.....	S.	2.2	15.5	52.1
1867	42.0	13.4	33.4	7.2	S.	0.0	0.9	13.6	110.5
1868	14.6	32.8	4.2	5.3	2.0	4.3	15.5	78.7
1869	9.8	39.7	15.0	0.5	S.	2.3	10.2	7.1	84.6

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YEARS	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
1870	21.3	20.1	62.4	0.1						0.0	3.1	15.9	122.9
1871	43.6	23.0	13.0	1.3						0.0	4.5	14.2	99.6
1872	3.9	7.3	16.3	0.7						S.	1.3	38.0	67.5
1873	39.2	10.4	25.2	S.						0.2	19.6	19.2	113.8
1874	12.2	19.1	2.6	11.0						S.	11.7	11.1	67.7
1875	32.3	9.1	30.0	2.7	3.1					3.8	7.8	18.7	107.5
1876	3.2	20.1	44.1	0.3						0.1	9.1	36.5	113.4
1877	13.4	2.9	19.1								1.6	0.3	37.3
1878	11.9	15.4	1.0							S.	5.3	17.4	51.0
1879	11.5	17.1	7.3	1.9						0.1	11.6	19.0	68.5
1880	4.0	10.9	12.3	3.5	S.					2.7	4.2	6.4	44.0
1881	19.5	8.6	18.0	0.2						S.	7.0	4.3	57.6
1882	7.8	5.4	5.7	0.2							7.6	15.8	42.5
1883	23.0	18.4	23.1	4.6						S.	3.8	11.1	84.0
1884	31.4	16.5	10.6	2.7	0.1					0.8	5.2	12.9	80.2
1885	18.8	15.4	10.1	8.6	0.5					0.8	2.3	9.1	65.6
1886	29.1	10.1	6.0	7.1						S.	4.8	16.5	73.5
1887	24.6	21.6	9.0	0.1						0.1	7.6	14.9	77.9
1888	12.4	6.6	8.9	0.1						0.3	3.9	2.3	34.6
1889	21.2	20.9	9.9	1.9						0.2	8.5	3.9	66.5
1890	6.3	15.5	9.7	0.1							1.9	19.1	52.6
1891	12.1	9.8	17.7	0.1	0.3						3.6	4.2	47.8
1892	13.5	16.5	2.4	0.3							6.3	3.2	42.2
1893	24.6	28.8	4.2	6.3						0.1	3.0	18.7	85.7
1894	7.1	16.2	1.0	7.1							4.2	2.2	37.8
1895	35.8	4.0	5.4	0.6	S.					1.7	2.1	5.2	54.8
1896	20.7	29.6	11.4	0.3						1.9	3.4	6.0	73.3
1897	11.1	7.7	6.4	4.1							4.8	13.3	47.4
1898	12.3	24.5	S.	0.5						S.	15.6	18.4	71.3
1899	5.0	5.5	14.8	1.8							0.7	4.0	31.8
1900	14.7	30.7	18.3	S.	S.						8.7	2.2	74.6

1901	16.9	14.4	13.6	8.8						S.	3.2	13.8	70.7
1902	25.4	5.8	3.5	0.2						1.2	7.2	7.1	49.2
1903	20.4	13.0	0.2	3.0	0.1					0.6	2.6	9.5	50.0
1904	18.7	19.1	6.0	4.7						S.	0.3	7.1	56.5
1905	26.5	13.7	1.7	3.5						2.8	2.8	6.1	54.3
1906	4.3	3.6	12.3	1.1							0.9	12.8	37.7
1907	18.0	7.1	3.3	1.2	1.6					S.	3.7	19.9	52.0
1908	19.0	26.1	6.2	6.0	0.1					0.1	16.7	11.6	77.8
1909	17.8	15.5	15.9	5.1	0.8					S.	2.3	11.6	69.1
1910	19.9	24.2	0.8	1.3						1.2	9.6	15.3	71.1
1911	8.8	19.3	6.8	1.3	0.2					S.	6.7	8.3	52.6
1912	20.8	16.5	18.6	4.2	0.1					S.	2.2	6.3	68.7
1913	11.5	7.0	12.4	0.2						S.	0.8	5.6	37.5
1914	30.2	12.8	11.8	1.0							3.3	15.2	74.3
1915	27.2	8.6	7.4	0.5							2.9	17.5	64.1
1916	3.1	24.7	18.6	1.9							6.4	12.6	67.3
1917	17.9	6.0	10.2	2.3	S.					0.2	2.1	22.0	60.7
1918	23.0	12.0	10.4	0.8					T.	0.0	2.9	15.0	64.1
MEANS													
1843-71	16.88	19.31	12.22	2.39	0.07					0.87	3.28	14.14	69.16
1872-1918	17.28	14.34	10.86	2.42	0.15					0.40	5.06	12.26	62.77

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 1918.	P.T.		S.		L.W.		Max		End.		Max. Amplitude. MM.	REMARKS.
		H.	M.	H.	M.	H.	M.	H.	M.	H.	M.		
1803	Jan. 4					4	47.6	4	50.7	5	26.3	1.8	May be Guatemala.
1804	" 4					4	49.4						
1805	" 12					16	55.3	17	4.0	17	35.8	0.6	
						23	34.2					0.1	
						23	36.9						
1806	" 13					0	4.6					0.2	A. C. going on.
						0	12.4						
1807	" 16					13	46.5	13	55.8	14	23.2	0.3	May not be seismic.
						13	51.4						
1808	" 21					20	54.1	21	4.8	21	23.0	0.1	
						20	58.1						
1809	" 24					15	42.8	15	54.2	16	30.9	0.2	Gradual thickening.
						15	50.3						
1810	" 25	1	25.6 ²	1	34.0	1	37.2	1	41.9	A.C.		2.4	A. C. at commencement.
		1	29.9			1	37.8						
1811	" 30									A.C.		1.7	Amp. of S. gradually lessened.
1812	Feb. 3			21	41.6	14	58.8	15	5.6	15	31.0 ²	1.3	Marked gradual thickening.
						15	0.9						
1813	" 6					3	59.2	4	12.0	4	33.0 ²	0.4	Gradual thickening.
						4	09.5						
1814	" 7					5	42.3	6	40.2	A.C.		0.4	
						5	58.8						
1815	" 12					1	34.0			A.C.		0.1	
						1	41.3						
1816	" 12					19	33.7	20	33.5	19	40.6	0.05	
1817	" 12					20	32.7	20	33.5	20	38.3	0.1	
1818	Feb 13					3	53.4	4	18.6	4	24.5	0.2	
						4	0.0						
1819	" 13					6	44.9	7	14.8	8	52.4 ²	2.9	* Amoy, China. Doubtful markings at 6h 21m.2 and 6h 32m. 6.
						7	0.1						
1820	" 18					16	58.3			17	6.6	0.1	
1821	" 19					17	21.0	17	30.2	17	47.3 ²	0.8	Marked gradual thickening.
						17	26.1						
1822	" 20					6	54.7	6	56.2	6	59.3 ²	0.3	Gradual thickening.
1823	" 23					19	2.7	19	5.3	19	14.6	0.2	
1824	" 24					23	14.5	23	20.5	23	34.3	0.3	
						23	17.5						
1825	" 25					7	3.2	7	6.2	7	15.2	0.3	
1826	" 27					4	16.5					0.05	
						4	20.8						
1827	Mar 11					16	38.0			16	59.3	0.2	Micros going on.
						16	48.6						
1828	" 16					13	53.1 ²	13	56.7	14	30.6	0.3	
						13	55.8						
1829	" 19					6	57.8	7	2.9	7	32.4	0.8	Marked gradual thickening.
1830	" 19					7	59.7					0.05	
						8	5.9						
1831	" 20					1	48.2			1	52.2	0.05	
1832	" 20					2	6.4			2	11.9	0.05	
1833	" 21					1	11.1	1	12.3	1	16.3	0.2	May not be seismic.
1834	" 21					4	1.6 ²	4	21.4 ²	4	21.4 ²	0.1	May not be seismic.
						4	10.2 ²						
1835	" 21					16	55.8			17	3.1	0.05	
1836	" 21					17	18.6	17	26.7	17	35.8	0.2	Gradual thickening.
						17	20.6						
1837	" 22					6	32.6	6	32.8	6	41.2	0.2	
1838	April 10					2	25.8	2	29.9 ²	2	57.7	0.3	
						2	29.7						
1839	" 13					2	7.3	2	21.3 ²	2	54.8	0.2	

No.	Date 1918	P. T. Commence.	S. Commence.	L. W. Commence.	Max.	End	Max. Amplitude.	REMARKS
1840	April 15			8 47.1		9 4.9	0.05	
1841	" 17			8 53.1		3 30.1	0.2	
1842	" 17	6 47.9?		3 6.9				
				3 9.9				
1843	" 20			6 58.0	7 4.9	7 17.9?	0.3	
				7 4.4				
1844	" 21	22 39.1	22 44.4	6 59.0	7 1.4	7 19.2?	0.2	
			22 45.7	7 0.4				
1845	" 27			22 49.8	22 51.9	1 21.2	10.0	3,520 km. Clear record, but P. not well defined. San Jacinto. [Cal.
1846	May 1			22 51.6				
				15 2.1	15 7.8	15 34.6?	0.3	
1847	" 6			4 45.6?				A. C. going on.
				4 49.6?				Micros at intervals.
1848	" 11			5 12.4	5 12.9	5 22.2	0.3	
1849	" 16			22 3.5		22 15.9	0.05	
1850	" 20			21 47.2	21 50.2	22 6.3	0.2	
1851	" 20	14 45.2	14 53.1	14 23.7		14 26.7	0.1	Thickening.
				15 1.1	15 5.7		7.3	Clear record. S. amp. 4.3mm. 6,340 km. La Serena, Chili.
1852	" 20		18 15.8					S. may be L. May be dual quake
1853	" 22			6 55.4	18 16.5	20 52.6	1.3	
1854	" 23			12 14.5	12 17.0	15 19.9	8.0	Alaska. P. not recorded.
1855	" 25		12 9.6	19 51.5	20 2.8	20 38.7	0.3	
1856	June 2			13 41.3		13 44.0	0.05	
1857	" 3		0 23.7?	0 31.8	0 44.2	1 57.7?	1.3	Micros going on.
				0 39.9				
1858	" 4			4 59.7	5 18.9	Micros	0.8	P. and S. masked by micros.
				5 11.4				
1859	" 4			18 2.3	18 12.7		1.6	Micros before L. waves.
				18 8.0				
1860	" 7	21 34.9	21 40.3	21 48.4	21 53.4	Micros	1.3	3,610 km.

1861	June 11			12 48.3	12 51.8	13 28.5	0.8	
1862	" 12			4 46.3	4 46.8	5 06.8	0.3	
1863	" 13			9 10.8		9 38.2	0.05	
1864	" 16			6 19.0		6 7.5	0.2	
1865	" 16		12 37.3?	12 42.3	12 46.7	13 5.1	0.2	
			12 39.4					
1866	" 17	Light off	at 16h 43m	when	small quake	occurred at		some stations.
				4 45.2?			0.1	
				4 58.2				
1867	" 22			22 21.0	22 25.9	22 43.8	0.6	
				22 24.7				
1868	" 24			15 50.2?	16 2.5	16 34.8	0.1	
1869	" 26			22 32.1	22 39.3	23 15.1?	0.4	Very gradual thickening.
1870	" 27			22 1.3	22 7.4	22 37.7	0.2	Micros going on before L.
1871	July 1			7 2.8		8 0.0	0.2	
				7 17.3				
1872	" 3	7 14.5?	7 21.9	7 30.5	8 4.3	9 23.7	4.3	At 7h 30.5m sudden deflection to east and then a pause.
		7 16.9		7 48.6				9650 km. May be a dual quake.
1873	" 8	10 37.9?	10 48.6	11 14.9	11 35.6	13 41.9	1.0	
			10 56.4					
1874	" 15	Micros going on	after 17h	of 14th.		1 46.7	2.4	? Eureka, Cal.
		Micros	0 35.0	0 41.7	0 44.9			
				0 44.2				
1875	" 16			20 48.1?		20 56.8	0.05	
				20 50.6				
1876	" 16			23 55.3		23 59.2	0.05	
1877	" 21	6 31.3?	6 40.5?	6 55.7	7 22.9	A.C.	2.9	Time doubtful, no cut-offs. A.C. mask phases.
				7 5.3				
1878	" 21				11 1.9?		0.1	
1879	" 23		14 27.4?	14 31.5	14 37.8	14 50.6?	0.3	S. may be L., A. C. mask phases.
1880	" 24			11 56.6	11 59.7	A.C.	0.2	A. C. mask phases.
		Sheet 20	th to 27th	h one ma	ss of A.C.	also 29th.		
1881	" 29				18 3.1		0.2	A. C. going on.
1882	" 31	14 48.6?	14 53.7	14 57.2	15 0.1		1.0	A. C. going on. Times doubtful.
1883	" 31			23 0.8?	23 9.2?		0.1	
	Aug. 4	Light off	at 16h 2	lm when	quake ocured at	some st	ations	

No.	Date 1918	P.T. Commence.	S. Commence.	L.W. Commence.	Max.	End.	Max. Amplitude.	REMARKS
1884	Aug 5			2 42.0?				Micros masked phases.
1885	" 8		10 25.4?	10 48.0	10 59.3	12 59.4?	1.2	
				10 49.1				
1886	" 15	12 37.5?	12 51.4	12 58.0	13 39.6		14.4	Micros at F. merged into next quake.
		12 39.3	12 55.2	13 2.1				
1887	" 15			17 51.9	18 59.1	20 6.1?	0.3	
1888	" 16			9 20.7			0.05	Doubtful as to being seismic.
1889	" 17			7 31.6	7 41.7	Micros.	0.2	
1890	" 21			4 14.4	4 14.6	"		Doubtful as to being seismic.
1891	" 22			8 42.3		8 47.6	0.05	
1892	" 23	7 1.2?	7 12.9	7 17.1	7 47.4	10 10.0?	2.3	Micros at 6h 55.5m.
		7 5.9		7 35.6				
1893	Sept. 2			15 19.7		15 51.0	0.1	Early phases missed, light turned down.
				15 26.1				
1894	" 7	17 23.4?	17 37.0	17 40.8?	18 13.6	22 56.6	over 25	P. doubtful. The phase at 17h 38.8m may suggest a dual quake
		17 29.3	17 38.8	17 49.8	18 15.0			Distant. Gradual thickening.
1895	" 8			0 49.8	1 4.5	1 45.4?	0.3	
				1 1.9				
1896	" 8			6 25.5	6 28.1	6 59.3	0.3	Gradual thickening.
				6 27.9				
1897	" 8	Micros began at 14h 42m, continuing until morning of 9th.						
				18 26.3	18 28.7	19 11.3?	0.2	
				18 28.3				
1898	" 14		17 26.1	17 42.1	17 55.9	19 16.5	0.3	Micros before 17h 21.4 Distant quake.
				17 48.0				
1899	" 16			14 11.2				
				14 16.7	14 18.5	14 41.9	0.3	
1900	" 22			10 34.7	11 19.7	11 48.9?	0.2	Micros going on.
				11 18.6				

1901	Sept. 29		12 30.2?	12 44.1	12 57.5	13 30.4?	0.3	Distant.
				12 56.9				
1902	" 30	13 45.0?	13 53.7	14 2.0	14 16.5	Micros.	0.6	Time of P. doubtful, micros.
				18 52.8	19 2.4	21 13.5?	2.0	May be dual earthquake.
1903	" 30			18 56.6				
				1 38.4	1 45.1	2 10.1	0.2	
1904	Oct. 1			11 42.0				
				1 37.1?			0.05	Micros masked phases.
1905	" 2							2,990 km. Clear record. Porto Rico quake. Tidal wave.
1906	" 11	14 20.7	14 25.4	14 26.2	14 34.6	18 2.0?	over 25	
		14 21.2			14 36.6			
1907	" 13			5 8.3	5 10.6	5 15.5	0.2	Marked gradual thickening.
1908	" 13			13 52.4		14 0.6	0.05	
1909	" 13			0 34.5	0 41.3	1 16.9?	0.3	
1910	" 14			0 40.2				
				12 54.4	13 0.9	13 48.7	0.8	
1911	" 14			12 56.4				
				23 49.0	23 50.9	Micros	0.1	
1912	" 15			21 46.4?	21 53.5	22 6.5	0.6	
1913	" 18		21 44.5?	21 49.5				
				2 18.8	2 20.1	3 13.2	0.2	
1914	" 19		3 34.4	3 41.1	3 49.4	Micros	1.3	3,910 km. Possibly Central America.
1915	" 19	3 28.7		3 43.3				
				3 55.5	4 3.6	5 22.7	3.0	3,070 km. Porto Rico. Amplitude of P. gradually increased.
1916	" 25	3 49.3	3 54.1	3 59.8				Micros at 15h 22.4m, F merged into next quake.
				16 24.8	16 38.8		1.8	
1917	" 27	15 56.3?		16 28.8		16 33.1	1.5	Light off at 17h 27m, attending instrument,
				17 55.3	18 28.9			
1918	" 27			18 17.8		13 47.3	0.4	
				19 14.7	19 26.3	20 18.2?	1.4	
1919	" 27			12 43.8	12 47.0	13 19.8	0.2	
1920	" 29							

1921	Nov.	2				10	45.4				0.05				
1922	"	3				10	54.4	12	30.8	13	44.2 ²	0.7	Times doubtful.		
						12	25.2								
						12	28.6								
1923	"	5				22	58.5	23	2.5	23	23.1	0.2			
						23	0.8								
1924	"	8	4	50.8	5	0.6	5	11.0	5	29.0	9	18.7	14	8,560 km. Clear record. Epicentre Lat. 51° 26' N. Long. 145° E.	
			4	54.0	5	5.9	5	14.4							
1925	"	11					7	57.4			8	17.6	0.1		
							8	2.8							
1926	"	12	21	50.9	21	55.6	21	57.8	22	5.2	23	17.5	3.3	2,990 km.	
							22	0.0							
							6	14.8							
1927	"	16					19	15.1	20	6.8	Micros		3.0	Small micros going on.	
1928	"	18	19	0.0?	19	4.8	16	33.5?	16	43.5	16	56.6	0.3	May be a dual quake. S. Large, 3,070 km.?	
1929	"	22					16	37.6							
							23	46.6	0	22.5	1	38.7	0.3		
1930	"	23	23	25.7?	23	36.3?	0	17.9							
							2	27.3	2	36.3	3	12.2	0.3		
1931	"	25					2	35.3							
							7	23.8	22h	cont	nu	ing	to	15h	of
1932	"	26	Heavy micros began					7	23.8	7	28.4	8	18.4	0.4	the 27th.
		30					3	22.4	3	4 ² .8	Micros		0.7	Abruptly became smaller at 7h	
1933	Dec.	1	3	14.4?			3	32.4						31.4m.	
							10	5.6	10	9.8	Micros		1.3	5,220 km. S. came in abruptly	
1934	"	2	9	56.0	10	2.9	10	8.7						and large amp.	
							12	15.8	12	38.9	15	21.6	4.8	7,850 km. Well defined. Chili.	
1935	"	3	Micros when other station					12	19.6						
		4	11	59.6	12	8.8	12	15.8	12	38.9	15	21.6	4.8		
							12	19.6							
1936	"	4					18	22.2	18	23.2	18	41.0	0.1		

1937	"	6					7	47.4					0.1	Micros masked other phases.	
1938	"	6	8	47.9?	8	53.2?	8	55.0	9	1.4	Micros		6.8	3,520 km. Vancouver.	
1939	"	6					12	18.5	12	21.7	Micros		0.4	Micros masked early phases.	
							12	20.1							
							5	20.6	5	23.4	5	38.3	0.2	Gradual thickening.	
1940	"	9					18	35.2	18	44.2			0.3	F. merged into next quake.	
1941	"	9					18	39.8							
							19	31.6	19	33.1?	20	35.2	2.2	Early phases lost. Light off 19h	
1942	"	9					19	2.8			19	19.3	0.05	21m.	
1943	"	14					19	37.9	19	50.3	20	2.0	0.2	Gradual thickening.	
1944	"	14					19	43.6							
							20	24.0?							
1945	"	19					9	47.5	9	49.6	Micros		0.7	Heavy micros going on.	
1946	"	21					20	0.3	20	2.2	20	37.1	1.0	4,120 km?. Micros going on during first phases.	
1947	"	23	19	52.8	19	58.7	20	1.0					0.2	Micros masked phases.	
							11	24.2							
1948	"	25					11	31.4							
			Micros going on when other station records small quake.												
			Period of boom 18 seconds. Pillar inclination 1 mm = 0° 45'.												

*Special despatches state that nearly 10,000 persons lost their lives and the Chinese city of Swatow was practically destroyed as a result of this earthquake.

MAGNETIC SUMMARY FOR 1918

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.

1918	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 38.1	7.2	.15941	.00038	.58425	.00009	74 44.3	6 56.7	6 11.8	.15988	.15852	.58548	.58364	
February	37.7	9.0	.15930	33	.58416	18	44.8	7 13.1	6 01.8	.15987	.15799	.58567	.58340	
March	38.1	12.4	.15925	48	.58405	13	44.9	7 25.9	5 17.9	.16229	.15317	.58547	.58046	
April	38.1	13.6	.15921	52	.58392	31	44.9	7 37.0	5 27.4	.16159	.15607	.58560	.58210	
May	38.4	14.2	.15924	59	.58365	31	44.3	7 19.6	6 02.5	.16276	.15469	.58558	.58074	
June	37.8	13.3	.15928	59	.58360	25	44.0	7 21.5	5 57.4	.16088	.15587	.58469	.58121	
July	37.3	15.4	.15924	56	.58348	28	44.1	6 56.6	6 05.1	.16076	.15804	.58491	.58222	
August	38.0	17.5	.15910	61	.58346	36	44.8	7 14.5	5 54.7	.16146	.15705	.58546	.58076	
September	38.4	15.0	.15902	60	.58334	44	45.1	7 20.3	5 56.3	.16023	.15407	.58505	.57966	
October	39.0	10.1	.15895	49	.58342	38	45.6	7 28.5	5 53.0	.15990	.15432	.58445	.57938	
November	39.2	8.5	.15898	35	.58333	22	45.3	7 23.0	5 56.9	.16010	.15686	.58473	.58165	
				34	.58324	25	45.5	7 18.2	6 08.8	.16041	.15653	.58454	.58128	
					.00049	.58366	.00027	74 44.8						

Phenological Observations, 1918.

DATE WHEN FIRST SEEN.

Alder, shedding pollen..	April 15	Wild Geese.....	March 15
Canada Thistle flowering	July 20	Robins	March 15
Trailing Arbutus	April 20	Meadow Larks	March 22
Dandelion	April 17	Blue Birds.....	March 24
Violet, Blue	May 4	Flickers or Golden Wood-	
Columbine	May 25	peckers.....	March 14
Trees, green.....	May 15	Song Sparrows.....	April 19
Red Clover flowering	May 17	Swallows.....	April 13
White Clover	June 11	Orioles.....	May 13
Wild Raspberry	June 12	King Birds	May 14
Cultivated Currant	May 16	Humming Birds.....	May 21
Wild Rose	June 18	Frogs Piping.....	April 7
Trillium	May 3	Earth worm casts, (frost	
Anemone	May 19	out of ground).....	April 5
Maple	April 2	Lakes open.....	April 1
Strawberry, wild	May 15	Rivers open.....	March 16
Strawberry, wild, ripe.	June 12	Ploughing.....	April 2
Lilac flowering..	May 23	Sowing.....	April 13
Apple	May 21	Hay Cutting.....	July 10
Cherry, wild	May 15	Grain Cutting.....	Aug. 2
Cherry, cultivated	May. 15	Potato Planting	April 30
Crocus, cultivated	Mar. 30		
Buttercup	June 15		
Blue-eyed Grass	June 11		
Golden Rod	July 28		

Harbour Notes.

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

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

Winter	Frozen over	Clear of ice	No. of days
1888-89	" 20th	March 15th	85
1889-90	March 1st	" 15th	14
1890-91	January 4th	" 20th	75
1891-92	" 5th	" 31st	86
1892-93	December 22nd	April 7th	106
1893-94	" 30th	March 11th	71
1894-95	" 23rd	April 7th	105
1895-96	" 9th	March 28th	110
1896-97	" 22nd	" 11th	79
1897-98	" 24th	" 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
Longest time frozen, 1831-32		Nov. 10th to Apr. 15th,	162 days
Shortest " " 1889-90		March 1st to 15th.	14 "