

Monthly Meteorological Register, at the Provincial Magnetic Observatory, Toronto, Canada West.—October, 1854.

Latitude, 43 deg. 39.4 min. North. Longitude, 79 deg. 21. min. West. Elevation above Lake Ontario, 108 feet.

Day.	Barom. at temp. of 32 deg.				Temp. of the Air.				Mean Temp. + or - of the Average	Tension of Vapour.				Humidity of Air.				Wind.				Rain in Inch.
	G.A.M.	2 P.M.	10 P.M.	Mean.	6 A.M.	2 P.M.	10 P.M.	M'N.		6 A.M.	2 P.M.	10 P.M.	M'N.	6 A.M.	2 P.M.	10 P.M.	M'N.	6 A.M.	2 P.M.	10 P.M.	Mean Vel'y	
1	29.523	29.285	—	—	53.2	61.4	—	—	—	0.365	0.486	—	—	.91	.91	—	—	Calm	SWbS	—	5.74	0.146
2	.535	.466	29.394	29.453	39.5	63.5	49.5	51.55	+ 1.62	.208	.241	0.251	0.251	87	42	.72	.69	Calm	SSW	Calm	3.02	...
3	.119	.287	28.756	28.885	49.2	63.5	52.8	55.77	+ 6.23	.270	.424	.344	.365	78	75	87	83	E N E	E S E	SWbW	8.01	0.466
4	28.949	29.288	29.599	29.313	46.0	56.3	40.9	47.35	— 1.68	.256	.231	.192	.224	83	52	75	70	SWbW	NWbW	NWbW	11.12	...
5	29.818	.886	.841	.856	31.6	56.4	45.2	45.33	— 3.28	.168	.233	.222	.229	95	63	85	78	Calm	W	Calm	2.98	...
6	.886	.813	.816	.837	41.7	63.7	51.7	54.05	+ 5.83	.166	.318	.316	.285	63	55	84	69	Calm	SWbS	SWbW	4.44	...
7	.841	.818	.863	.810	50.3	74.2	60.1	61.48	+13.63	.305	.470	.450	.404	85	57	88	77	SWbW	S W	N W	2.06	0.005
8	.835	.722	—	—	57.2	68.4	—	—	—	.397	.462	—	—	87	68	—	—	Calm	E b S	—	2.02	...
9	.633	.567	.669	.629	50.4	70.7	54.9	57.18	+10.12	.303	.458	.364	.370	84	63	86	80	Calm	W S W	N b E	3.27	0.035
10	.781	.775	.702	.748	50.6	47.0	51.3	50.05	+ 3.38	.330	.286	.340	.309	91	90	91	87	E N E	E N E	E b N	5.79	0.275
11	.626	.548	.493	.549	47.6	68.2	53.0	56.82	+10.57	.306	.486	.367	.387	94	72	93	85	Calm	SSW	Calm	2.35	0.110
12	.447	.435	.627	.524	55.6	64.0	50.8	56.10	+10.13	.403	.496	.298	.387	93	86	81	86	Calm	S W	N N W	4.82	0.016
13	.740	.740	.670	.715	43.1	49.2	44.9	46.07	+ 0.50	.232	.274	.252	.250	84	79	85	81	N	E	Calm	3.50	0.205
14	.387	.295	.465	.385	48.8	53.8	37.7	45.97	+ 0.70	.330	.235	.179	.239	97	58	80	77	E	N W	N N W	13.41	...
15	.519	.461	—	—	36.6	45.7	—	—	—	.155	.130	—	—	72	43	—	—	NWbN	NWbN	—	10.77	...
16	.277	.259	.415	.324	36.6	50.6	42.8	43.05	+ 1.48	.192	.261	.238	.230	89	72	88	84	N W W	W N W	N b W	7.47	0.010
17	.561	.597	.602	.580	35.9	49.2	39.0	40.75	+ 3.48	.180	.225	.207	.212	86	65	88	84	NWbN	SSW	NWbW	3.52	...
18	.596	.731	.873	.743	44.1	41.6	33.0	36.60	+ 7.43	.162	.115	.155	.149	82	44	82	70	W b N	NWbN	NWbN	9.43	...
19	30.012	30.042	30.017	30.034	29.8	45.2	33.4	35.78	+ 8.00	.136	.179	.166	.158	82	60	87	76	Calm	S b W	Calm	2.32	...
20	30.023	30.017	30.006	30.019	36.8	49.9	44.9	43.85	+ 0.28	.173	.237	.226	.211	79	67	76	74	Calm	S S E	Calm	1.85	...
21	30.010	29.993	29.972	29.995	37.0	53.6	42.0	44.50	+ 1.25	.182	.194	.204	.202	83	48	77	71	N b E	S b E	N b E	2.40	...
22	29.943	.924	—	—	46.3	51.5	—	—	—	.249	.290	—	—	80	78	—	—	N N E	E N E	—	6.64	0.055
23	.899	.867	.890	.890	49.2	53.6	52.2	51.40	+ 8.65	.260	.322	.294	.292	76	80	77	78	E b N	E	E b N	4.12	...
24	.941	.953	30.016	.975	48.8	60.8	48.8	52.77	+10.27	.292	.376	.283	.314	86	72	83	80	E b N	S	Calm	0.81	...
25	30.102	30.085	30.072	30.087	50.5	59.7	49.2	53.32	+11.03	.281	.398	.269	.328	78	80	78	81	N b W	S	Calm	0.77	...
26	30.097	30.037	29.988	30.036	41.3	61.1	43.7	48.72	+ 6.73	.211	.398	.262	.287	82	74	93	84	Calm	S S E	Calm	1.74	...
27	29.983	29.944	.906	.942	44.3	55.3	41.5	46.22	+ 4.43	.262	.375	.240	.289	91	88	93	92	Calm	Calm	Calm	0.43	0.040
28	.873	.830	.809	.839	42.4	59.8	50.3	50.90	+ 9.42	.252	.333	.341	.327	94	76	95	89	Calm	E S E	NEbN	2.17	0.015
29	.729	.645	—	—	56.0	57.4	—	—	—	.379	.415	—	—	86	90	—	—	N E b E	NEbE	—	2.39	0.050
30	.655	.592	.498	.574	53.8	62.5	59.1	58.62	+17.67	.363	.388	.426	.401	89	70	87	84	Calm	E b S	E b N	3.58	0.035
31	.374	.278	.278	.311	57.8	58.5	46.4	53.42	+12.67	.442	.398	.282	.371	95	83	90	92	Ca. 1	S S W	W	9.86	0.035
M.	29.639	29.671	29.704	29.695	44.3	57.38	46.89	49.52	+ 4.48	0.256	0.323	0.277	0.287	87	68	85	80	3.13	7.14	3.76	4.60	1.495

Highest Barometer..... 30.121, at 8 a.m. on 26th } Monthly range:
 Lowest Barometer..... 28.731, at 3 p.m. on 3rd } 1.390 inches.
 Highest registered temperature 75° 4, at p.m. on 7th } Monthly range:
 Lowest registered temperature 26° 4, at a.m. on 19th } 49° 0.
 Mean Maximum Thermometer..... 58° 97 } Mean daily range:
 Mean Minimum Thermometer..... 41° 32 } 17° 65.
 Greatest daily range..... 27° 4, from p.m. of 4th to a.m. of 5th.
 Warmest day..... 7th. Mean temperature..... 61° 48 } Difference,
 Coldest day..... 19th. Mean temperature..... 35° 78 } 25° 70.
 Greatest intensity of Solar Radiation, 84° 6 on 9th, p.m. } Range,
 Lowest point of Terrestrial Radiation, 22° 4 on 19th, a.m. } 62° 2.
 Aurora observed on 5 nights: viz. 2nd, 12th, 17th, 18th and 23rd.
 Possible to see Aurora on 20 nights.
 Impossible to see Aurora on 11 nights.
 Raining on 15 days. Raining 45.3 hours; depth, 1.495 inches.
 Particles of Snow fell on 16th, 17th and 18th—quantity inappreciable.
 First Snow of the Season observed on the 16th.
 No Thunder Storms recorded this month.
 Sheet Lightning occurred on the 10th, 17th and 24th.

The weather during the week ending 23th was mild and pleasant, and partook in some measure of the character of Indian Summer.
 Sum of the Atmospheric Current, in miles, resolved into the four Cardinal directions.

North.	West.	South.	East.
1446.18	1409.73	636.20	1781.99

Mean direction of the Wind, N 25° E.
 Mean velocity of the Wind, 4.60 miles per hour.
 Maximum velocity, 26.1 miles per hour, from 9 to 10 a. m. on 4th.
 Most windy day, the 14th; mean velocity, 13.41 miles per hour.
 Least windy day, the 27th; mean velocity, 0.43 " "
 During the gale on Saturday the 14th, the velocity of the wind from 3 to 4 p.m. was 25.5 miles, and the mean velocity from noon to 6 p.m. equalled 22.17 miles per hour.

2nd, 10-17 p.m. A large Meteor appeared about 25° S. of zenith, and passing due W. burst in its flight, throwing out a great number of sparks, and left a train of light behind it.

24th, 8-26 p.m. Very large mass of nebulous light (undefined meteor,) appeared near γ Draconis, and, passing between γ & β Urs. Maj., emitted a very strong light and disappeared behind a mass of clouds on N. horizon.

October, 1854, was the warmest on the records of the Observatory; and has been remarkable for sudden changes of temperature; the mean temperature of the 19th was 8° colder than the mean normal temperature of that day, and that of the 30th was 17° warmer than its mean normal temperature. The amount of Rain was small, being the least but two (October, 1841, and 1853) on the list for the last 15 years; it was, in short, a warm, dry month.

Comparative Table for October.

Year.	Temperature.					Rain.		Snow.		Wind. Mean Velocity.
	Mean.	Dif. from Av'ge.	Max. obs'd.	Min. obs'd.	Range	D's.	Inch.	D's.	Inch.	
1810	44.4	-0.8	68.5	23.9	44.6	13	1.860	3
1811	41.6	-3.6	58.3	20.3	38.0	6	1.360	2	...	0.41 lb.
1812	45.1	-0.1	68.5	30.0	38.5	8	5.175	0	...	0.35 lb.
1813	41.8	-3.4	65.7	24.5	41.2	12	3.790	4	2.5	0.4 lb.
1814	43.3	-1.9	69.6	17.8	51.8	7	Impf	4	12.0	0.43 lb.
1815	46.4	+1.2	62.7	20.0	42.7	11	1.760	1	Inap.	0.26 lb.
1816	44.0	-0.6	69.7	20.7	49.0	14	4.180	2	Inap.	0.44 lb.
1817	44.0	-1.2	65.0	20.3	44.7	13	4.390	2	Inap.	0.19 lb.
1818	46.3	+1.1	62.2	26.4	35.8	11	1.550	0	None	4.60 Miles.
1819	45.3	+0.1	59.2	25.5	33.7	13	5.965	1	Inap.	4.76 Miles.
1830	45.4	+0.2	66.6	24.8	41.8	10	2.085	0	None	5.30 Miles.
1851	47.4	+2.2	66.1	25.0	41.1	10	1.680	2	0.3	4.39 Miles.
1852	48.0	+2.8	70.7	29.8	40.9	12	5.280	0	None	4.47 Miles.
1853	44.4	-0.8	64.7	25.5	39.2	10	0.875	2	Inap.	4.72 Miles.
1854	49.6	+4.3	74.2	29.8	44.4	15	1.495	3	Inap.	4.60 Miles.
M'n.	45.17		66.11	24.29	41.83	11.0	2.960	1.7	1.2	4.69 Miles.