MONTHLY METEOROLOGICAL REGISTER AT H. M. MAGNETICAL OBSERVATORY, TORONTO, C. W.,—SEPTEMBER, 1849.

*Latitude* 43°. 39′.4. *N. Longitude* 79°. 21′.5. *W. Elevation above Lake Ontario*, 108 *Feet.*—(*For the Brit. Amer. Jour. of Med. and Phys. Science.*)

| Day. | Barometer at Temp. of 32°. | | | | Tension of Vapour. | | | | Temp. of the Air. | | | | Humidity of the Air. | | | | Wind. | | | Inches of Rain. | Weather. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 A.M. | 3 P.M. | 10 P.M. | Mean | 7 A.M. | 3 P.M. | 10P.M | Mean | 7A M | 3 P.M | 10P.M | Mean | 7A.M | 3P.M | 10P.M | Mean | 7 A.M. | 3 P.M. | 10 P.M. | | |
| 1, | 29.739 | 29.723 | 29.766 | 29.742 | .253° | .266° | .271° | .265 | 51.0 | 62.6 | 50.6 | 53.8 | .69 | .48 | .75 | .67 | Calm. | N. W. | N. N. W. | — | Gen clear and uncl'ded; very fine day |
| 2, | 29.876 | 29.826 | — | — | .293 | .471 | — | — | 60.5 | 62.8 | — | — | .57 | .81 | — | — | Calm. | S. | —— | — | Unclouded; hazy rnd horizon; fine day |
| 3, | 29.843 | 29.782 | 29.761 | 29.796 | .321 | .462 | .439 | .398 | 50.2 | 67.9 | 59.4 | 58.4 | .90 | .70 | .88 | .82 | Calm. | S. E. by S. | Calm. | — | Zenith cl'r; lt cl'ds and haze rnd hor |
| 4, | 29.742 | 29.721 | 29.712 | 29.729 | .471 | .549 | .527 | .515 | 62.8 | 71.4 | 63.4 | 65.6 | .84 | .73 | .93 | .84 | S. | S. | Calm. | — | Mostly cl'd; a few cl'r spc's occas'n'lly |
| 5, | 29.691 | 29.536 | 29.510 | 29.602 | .546 | .636 | .551 | .569 | 66.8 | 74.6 | 66.0 | 68.4 | .85 | .77 | .89 | .84 | S. by W. | S. by W. | Calm. | — | Mostly cl'd; sheet lightning at 10 pm |
| 6, | 29.529 | 29.466 | 29.460 | 29.486 | .545 | .408 | .346 | .436 | 65.0 | 56.3 | 51.4 | 57.7 | .91 | .92 | .93 | .92 | N. N. W. | N. | N N W | 0.270 | Densely overcast; slight rain all day; ceased about 9.40 pm |
| 7, | 29.530 | 29.640 | 29.745 | 29.635 | .310 | .262 | .260 | .273 | 49.0 | 58.8 | 42.6 | 49.6 | .90 | .51 | .97 | .80 | Calm. | N. W. | Calm. | 0.450 | Gen o'erc'st; faint auroral light at 9 pm |
| 8, | 29.802 | 29.891 | 29.956 | 29.881 | .290 | .361 | .273 | .303 | 47.8 | 57.6 | 46.8 | 50.4 | .89 | .77 | .90 | .84 | N.W.by W | N.W.by N. | Calm. | inappl | Am mostly clouded; pm clear and fine; faint aur lt with streamers 9 to 10 pm |
| 9, | 30.084 | 29.924 | — | — | .291 | .340 | — | — | 55.4 | 60.0 | — | — | .67 | .67 | — | — | Calm. | S. S. W. | —— | — | Am clear; pm lightly overcast |
| 10, | 30.014 | 30.075 | 30.047 | 30.062 | .348 | .418 | .352 | .358 | 51.6 | 61.4 | 52.1 | 55.7 | .83 | .71 | .92 | .82 | Calm. | S. S. E. | Calm. | — | Uncl'ded; hazy rnd hor; very fine day |
| 11, | 30.035 | 29.983 | 29.959 | 29.990 | .374 | .501 | .390 | .414 | 53.4 | 67.4 | 54.8 | 57.8 | .93 | .77 | .92 | .88 | Calm. | E. by S. | Calm. | — | Uncl'ded; hazy rnd hor; very fine day |
| 12, | 29.952 | 29.889 | 29.885 | 29.910 | .346 | .521 | .443 | .431 | 51.4 | 71.2 | 57.0 | 59.3 | .93 | .71 | .97 | .87 | Calm. | S. by E. | Calm. | — | Gen clear; aurora light 10 pm to 1 am; arch and patches 10.30 pm |
| 13, | 29.907 | 29.901 | 29.926 | 29.912 | .377 | .533 | .487 | .466 | 59.0 | 67.3 | 59.7 | 61.0 | .77 | .82 | .97 | .88 | Calm. | E. S. E. | Calm. | — | Densely cl'd; dis thndr in N W at 3 pm |
| 14, | 29.953 | 29.859 | 29.811 | 29.879 | .504 | .546 | .460 | .498 | 61.1 | 68.3 | 58.8 | 62.6 | .96 | .81 | .94 | .90 | Calm. | E. S. E. | Calm. | — | Am densely cl'ded; pm partially cl'ded; dense fog 9 pm |
| 15, | 29.794 | 29.766 | 29.754 | 29.766 | .480 | .534 | .492 | .508 | 60.0 | 67.6 | 61.8 | 63.5 | .95 | .81 | .91 | .89 | Calm. | E. S. E. | Calm. | 0.005 | Densely cl'ded all day; slt rn 6 to 9 am |
| 16, | 29.630 | 29.551 | — | — | .643 | .619 | — | — | 71.6 | 80.1 | — | — | .85 | .65 | — | — | S.W. by S. | W. by N. | —— | — | Partly cl'd; thunderstorm, lightning and rain 9 pm to midnight. |
| 17, | 29.588 | 29.587 | 29.712 | 29.631 | .448 | .415 | .311 | .409 | 61.7 | 71.6 | 51.0 | 62.1 | .83 | .53 | .76 | .74 | N. N. W. | N.W.by N. | Calm. | 0.145 | Generally cl'd am; cl'r & uncl'd fr 9 pm |
| 18, | 29.841 | 29.859 | 29.898 | 29.864 | .338 | .494 | .272 | .339 | 53.0 | 62.7 | 47.2 | 53.9 | .86 | .89 | .83 | .81 | Calm. | S S W | Calm. | — | Clr save a few lt clouds; faint aur light 9 to 11 pm |
| 19, | 29.984 | 29.917 | 29.866 | 29.923 | .232 | .306 | .305 | .278 | 48.2 | 56.2 | 52.3 | 51.8 | .69 | .68 | .79 | .73 | N. N. E. | E. by S. | E. N. E. | — | Am mostly clear; pm densely o'ercast |
| 20, | 29.797 | 29.695 | 29.616 | 29.710 | .315 | .410 | .366 | .366 | 52.0 | 66.0 | 55.6 | 56.8 | .82 | .66 | .85 | .79 | N. E. | E. by S. | E. by S. | — | Mostly o'erc'st; dropping rain at 11 pm |
| 21, | 29.646 | 29.570 | 29.517 | 29 578 | .328 | .506 | .478 | .436 | 53.8 | 64.4 | 59.5 | 59.7 | .81 | .80 | .96 | .86 | N. N. E. | S. E. by E. | Calm. | inappl | O'erc'st lt haze; lightning in N & N W at 10 and 11 pm |
| 22, | 29.434 | 29.215 | 29.189 | 29.283 | .499 | .382 | .309 | .412 | 60.3 | 71.1 | 54.9 | 62.0 | .97 | .51 | .73 | .77 | Calm. | W. by N. | N. W. | 0.070 | Slt rn fr 6 to 8 am; gen o'rc't; l'tning 6 to 10 pm |
| 23, | 29.339 | 29.474 | — | — | .384 | .275 | — | — | 57.0 | 52.0 | — | — | .84 | .72 | — | — | N. N. W. | N. N. W. | —— | 0.160 | Rn fr 1 to 4 am; densely o'rc't all day; |
| 24, | 29.541 | 29.419 | 29.386 | 29.449 | .204 | .345 | .338 | .293 | 39.8 | 63.8 | 53.8 | 51.8 | .84 | .59 | .83 | .76 | Calm. | W. S. W. | Calm. | — | patches of auroral light 10 and 11 pm |
| 25, | 29.421 | 29.230 | 29.024 | 29.226 | .341 | .492 | .477 | .428 | 50.8 | 65.2 | 62.8 | 59.3 | .93 | .82 | .85 | .85 | Calm. | S. | S. W. by S. | — | Lt detached clds; aur lt fr 10 to 11 pm |
| 26, | 29.292 | 29.378 | 29.531 | 29.399 | .263 | .269 | .211 | .246 | 49.9 | 54.5 | 41.8 | 48.6 | .74 | .64 | .81 | .73 | W. by N. | N. by W. | Calm. | 0.055 | Light clouds am; densely clouded pm; sheet lightning from 9 to 11 pm |
| 27, | 29.627 | 29.515 | 29.463 | 29.539 | .173 | .298 | .319 | .259 | 34.8 | 49.3 | 50.8 | 45.2 | .86 | .86 | .87 | .85 | Calm. | S.W.by W. | Calm. | — | Th'rstorm from midnight to 3 am; day mostly cloudy |
| 28, | 29.558 | — | 29.596 | 29.557 | .312 | — | .367 | .365 | 54.9 | — | 53.4 | 57.7 | .73 | — | .91 | .77 | W. by S. | Calm. | Calm. | 0.015 | Day clouded; slight rain 1 and 2 pm |
| 29, | 29.610 | 29.539 | 29.515 | 29.554 | .351 | .418 | .358 | .365 | 51.1 | 57.0 | 51.6 | 53.4 | .96 | .92 | .96 | .91 | Calm. | Calm. | Calm. | — | Generally clear; hazy round horizon |
| 30, | 29.501 | 29.399 | — | — | .251 | .284 | — | — | 49.6 | 51.8 | — | — | .72 | .74 | — | — | E. | E. by S. | —— | 0.310 | Lightly overcast; raining fr 4 to 10 pm Densely overcast all day |
| Mean | 29.715 | 29.675 | 29.664 | 29.6840 | 0.359 | 0.430 | 0.376 | 0.385 | 53.7 | 64·1 | 54.5 | 57.04 | .86 | .73 | .88 | .82 | 2.75 miles. | 6.84 miles. | 2.70 miles. | 1.480 | Hoar frost on the morning of the 9th (1st of the season), also of the 24th & 27th |

Highest Barometer, 30.124 on 10th, at 9 a.m. } Monthly
Lowest do. 28.999 on 25th, at 11 p.m } Range 1.125
Highest Temperature observed, 80°.1 on 16th, at 3 p.m. } Monthly
Lowest do 32°.7, on 27th, at a.m. } Range 47.4
Mean Max. Therm., 65°.38 } Mean Daily Range, 16°.04
Mean Min. do 49°.34 }
Extreme Daily Range, 27°.9 from 3 pm of 17th to am of 18th
Mean Temperature, at 2 pm, 64.37 } Differ., 13.26
Do do at 6 am, 51.11 }
Warmest Day, 5th; mean temperature, 68°.37.
Coldest Day, 27th; " 45°.18.

The means are deduced from six observations daily, viz., 6, am, and 2 and 10 pm, and 7 am, and 3 and 11 pm.
Further explanatory notes will be found at the foot of all the Registers for 1845, 1846 and 1847.
Magnetic Disturbances on 12th, from 16th to 20th, G. M. Time. Range of Declination, 1°.0.

Sum of the Atmospheric Currents in miles resolved into the four Cardinal directions.

| North | West | South | East |
|---|---|---|---|
| 1060.1 | 1165.2 | 928.3 | 683.5 |

Mean velocity of the wind, 4.23 miles per hour.
Maximum velocity, 18.0 miles from 11 pm to midnight 25th
Most Windy Day, 22d.—Mean veloc per hour, 8.02 miles
Least do. 12th, " " 1.19
Most Windy Hour, noon; mean veloc, 6.99 miles per hour
Least Windy Hour, 6 am; " 2.51 " "
Mean Diurnal Variation, 4.45 miles per hour.

| Year. | Temperature. Mean. | Max. | Min. | Range. | Rain. No. Days. | Inches. | Wind. Winds. | Calms | Snow. Mean force. | Days. | inch |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1840, .. | 51.40° | 73.6° | 30.2° | 43.4° | 4 | 1.380 | | | 0 | | — |
| 1841, .. | 61.50 | 80.2 | 37.7 | 42.5 | 9 | 3.340 | 195 | 117 | 0.26 | 0 | — |
| 1842, .. | 55.60 | 82.6 | 27.9 | 54.7 | 12 | 6.160 | 402 | 222 | 0.45 | 0 | — |
| 1843, .. | 58.98 | 89.0 | 32.2 | 56 8 | 10 | 9.760 | 420 | 204 | 0.67 | 0 | — |
| 1844, .. | 58.47 | 81.8 | 23.2 | 53.6 | 4 | 0.230 | 283 | 317 | 0.26 | 0 | — |
| 1845, .. | 55.91 | 79.6 | 34.0 | 45.6 | 16 | 6.245 | 395 | 225 | 0.34 | 0 | — |
| 1846, .. | 63.41 | 84.3 | 37.3 | 47.0 | 11 | 4.595 | 381 | 243 | 0.33 | 0 | — |
| 1847, .. | 54.91 | 74.5 | 35.0 | 39.5 | 15 | 6.665 | 442 | 182 | 0.33 | 0 | — |
| 1848, .. | 58.39 | 80.4 | 23.1 | 52.3 | 11 | 3.115 | 192 | 63 | 0.46 | 0 | — |
| 1849, .. | 57.04 | 89.1 | 32.7 | 47.4 | 9 | 1.480 | 181 | 119 | 0.21 | 0 | — |