

Monthly Meteorological Register, at the Provincial Magnetical Observatory, Toronto, Canada West.—July, 1853.

Latitude 43 deg. 39.1 min. North. Longitude, 79 deg. 21 min. West. Elevation above Lake Ontario: 108 feet.

Main meteorological data table with columns for Magnet, Barom. at tem. of 32 deg., Temperature of the air, Tension of Vapour, Humidity of Air, Wind, and Rain/Snow in Inch. Inch. Rows are numbered 1-31.

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

Table showing cardinal directions: North (1013.05), West (516.77), South (1068.57), East (768.43).

Mean direction of the wind E. by S. Mean velocity of the wind - - - 3.70 miles per hour. Maximum velocity - - - 17.3 miles per hour, from 2 to 3 p. m. on 5th.

The column headed "Magnet" is an attempt to distinguish the character of each day, as regards the frequency or extent of the fluctuations of the Magnetic declination, indicated by the self-registering instruments at Toronto.

- (a) A marked absence of Magnetical disturbance. (b) Unimportant movements, not to be called disturbance. (c) Marked disturbance—whether shewn by frequency or amount of deviation from the normal curve—but of no great importance.

The day is reckoned from noon to noon. If two letters are placed, the first applies to the earlier, the latter to the later part of the trace. Although the Declination is particularly referred to, a rarely happens that the same terms are not applicable to the changes of the Horizontal Force also.

Highest Barometer - - - 29.906, at 8 A. M., on 13th. } Monthly range: Lowest Barometer - - - 29.274, at 4 P. M., on 15th. } 0.632 inches. Highest regist'd Temp. - 91.3, at - P. M., on 24th } Monthly range: Lowest regist'd Temp. - 41.6, at - A. M., on 27th } 49.7

The "Means" are derived from six observations daily, viz., at 6 and 8 A. M., and 2, 4, 10 and 12, P. M.

GOLD TESTING.—The gold dust buyers of Southampton use an immense magnet as one means of testing the purity of the gold. By plunging this magnet into a heap of gold dust the freedom of the latter from metalliferous admixture or otherwise is discovered by the quan-

Possible to see Aurora on 25 nights. Impossible to see Aurora on 6 nights. Aurora actually observed on 6 nights. Brilliant display of Aurora on 12th.

Comparative Table for July.

Table with columns: Year, Temperature (Mean, Max. observed, Min. observed, Range), Rain (D'ys, Inches), Snow (D'ys, Inches), Wind Mean Velocity (Miles). Rows include years 1810-1853 and a Mean row.

This month may be considered the dryest that has ever been known for the whole 13 years, the whole fall of rain not amounting to one inch, and the number of hours during which it fell being only 12.7; the mean temperature of the month is 0°.7 below the average of the same number of years, but the march of the temperature has been tolerably steady, a series of 4 cold days occurring from 16th to 19th.

A heavy storm occurred on the 15th, accompanied with violent discharge of hail, westward of Toronto: an observer at Weston states that "five per cent of the hailstones were as large as pullets' eggs, and generally they were as large as cherries," the outline of some of the largest, of a quadrangular shape, measured 2 1/2 by 2 inches.

ity and degree of firmness with which the dust adheres to the magnet. It is this test which detects the superior purity of Australian, as compared with Californian gold.