

**RESULTS OF METEOROLOGICAL
OBSERVATIONS MADE AT THE
MAGNETICAL OBSERVATORY,
TORONTO, CANADA WEST, DURING
THE YEARS 1860, 1861, & 1862**

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Results of Meteorological Observations Made at the Magnetical Observatory, Toronto, Canada West, During the Years 1860, 1861, & 1862 by George Kingston

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GEORGE KINGSTON

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INTRODUCTION.

THE Toronto Magnetical and Meteorological Observatory is situated in the grounds of the University of Toronto, in latitude $43^{\circ} 39' 4''$ N., longitude $5^{\circ} 17' 33''$ W., 108 feet above Lake Ontario, and approximately 342 feet above the level of the sea.

The circumstances attending the establishment of the Observatory by the British Government in 1839-'40, and its transfer to the care of the Provincial Government in 1853, have been described in the introduction to the "Results of Meteorological Observations for the years 1854-'59."

The duties of the Observatory are carried on by the Director, G. T. Kingston, M.A., assisted by Messrs. Walker, Menzies, and Stewart, formerly non-commissioned officers of the Royal Artillery, and observers under the Imperial Government, together with Mr. W. F. Davidson, an additional observer who has been connected with the establishment since the commencement of 1857.

The instruments and the system of observation during the years 1860-'62 continued the same as in the previous years. The regular observation hours for reading the barometer, standard thermometer, and wet-bulb thermometer were 6 A.M., 8 A.M., 2 P.M., 4 P.M., 10 P.M., and midnight; excepting on Sundays, Christmas Day, and Good Friday, when these instruments were read at 6 A.M. and 2 P.M. only. These latter readings, though recorded in the daily register, are not included in the hourly means of the month. The hygrometric tables employed for deducing the pressure of vapour and the relative humidity were those calculated by Professor Coffin, of Lafayette College, Pennsylvania, from the more recent experiments of Regnault. The differences between the barometric pressures and the pressures of vapour have been recorded, in conformity with ordinary usage, as the "Pressures of Dry Air."

At the regular observation hours a record was always made of the general appearance of the sky, including the form, distribution, and motions of the clouds.

The maximum self-registering thermometer was read at 6 A.M., the reading being entered for the meteorological day which terminates at that hour. The minimum self-registering thermometer was read at 2 P.M., the entry being made as belonging to the actual day.

From Robinson's anemometer a continuous record was kept of the direction of the wind during each hour of every day, (Sundays and holidays included,) and its mean velocity, or number of miles passed over by the wind during the hour, the space of each hour being always designated by the point of time with which it commenced. For each of the six observation hours, the instantaneous direction and approximate velocity at the hour were also recorded, such velocity being the distance travelled by the wind during the half-hours preceding and following the hour of observation.