

REPORT ON THE OBSERVATORY.

The Corporation of the University.

GENTLEMEN :

I have the honour to present the report on the observatory for the past year.

Meteorological Observations :—The regular meteorological observations, as particularized in the report of the observatory for the year 1888, have been carried forward without interruption. The daily and monthly results have been published in the Montreal Gazette and the monthly summaries in the Canadian Record of Science.

Time Service :—Determinations of clock errors have been made by the observation of 565 stars on 98 nights. The noon time-ball has been regularly dropped, for the use of the shipping of the port, on all week days during the season of navigation. Time signals have also, as in former years, been distributed, continuously, to the various corporations and public Institutions enumerated in the report for 1888. Noon time signals have also been transmitted over the lines of the G. N. W. Telegraph Company to Ottawa for the Government time service. I regret to say, in this connection, that I have not been permitted to complete the work of re-organizing the time service at the Parliament buildings and that the reputation of our service is made to suffer through the insufficiency of the means adopted by the Government at Ottawa, to insure the accuracy of the firing of the noon time-gun.

Exchanges of clock signals with the Toronto Observatory have been made on fourteen days. The average difference between the mean-time clocks of the two observatories on these days was 0.29 and the greatest difference on any one day was 0.97. The comparisons give a probable error for the time of one observatory as compared with that of the other at any instant of 0.22.

Longitudes :—In the summer of 1883 the longitude of this observatory was determined by reference to the position of Harvard College Observatory, in a series of observations extending over four weeks, and conducted with the greatest possible accuracy. Subsequently the longitudes of Toronto and Cobourg were determined by difference from Montreal. During the past year some doubt has arisen as to the accuracy of the trans-atlantic longitude determinations upon which the geographical positions of American stations are made to depend, and it has been suggested that there should be an independent determination for Canada, made by direct connection with Greenwich. Mr. Hosmer, general manager of