

There are other reasons why, at the present time, this colony should cordially accept the office to which it is called. In such an establishment as a national observatory, are the elements of the truest claims to national respect. Shall the British colonies acquiesce in the sentiment so often lurking in the minds of those with whom they have to deal in public or private relations; that a colony is by necessity a place of rude abundance indeed, and a liberty which trenches upon license, but where the refinements of life, the pleasures of the intellect, and the pursuits which lead to other distinction than that of wealth, can never be naturalized? To be respected abroad, we must respect ourselves, and seize with no timid or reluctant hand each occasion, as it arises, for displaying an enlarged and enlightened public feeling. We fancy that were the claims of the colonies to a perfect equality of social position with imperial Britain once cordially admitted, we should have much less of imaginary political grievances; but to attain this, we have to prove a right by measures which the consent of the civilized world receives as true indices of the advancement of a community. The observatory at Toronto may be obscure or distinguished,—a vigorous mainspring to a thousand scientific impulses,—or a mere machine for tracing a tame routine: this must depend upon its system and upon its head, and especially upon the measure of public liberality dealt to it. But what we contend for is, Canada deserves to have an observatory; can maintain, and can appreciate one. Its success, which time alone can test, and which no knowledge or ability at its head can render palpable to every one from the first, must be gained by degrees; nor will any delay in the production of scientific results of importance detract from the credit which will be justly due to the Canadian public for the formation and maintenance of such an establishment.

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No. 1.

From Dr. Lloyd, President of the Royal Irish Academy, to the Earl of Rosse, P. R. S.

TRINITY COLLEGE, DUBLIN, Nov. 13th, 1850.

DEAR LORD ROSSE,—I have to acknowledge the receipt of your Lordship's letter, in which you do me the honour to ask my opinion on the question of the continuance of the Magnetical Observatory at Toronto.

I have long thought that the present state of some of the sciences connected with terrestrial physics demanded a *continuous* system of observation; and therefore the establishment of *permanent observatories* for their effective advancement: and I believe that I could easily cite, in support of this opinion, the authority of Humboldt, Herschel, Kupffer, and others.

I ventured to urge this view at the Magnetical Conference held at Cambridge a few years ago, under the auspices of the British Association; and I believe it was in the hope of carrying it out in this particular instance that it was resolved to recommend to Her Majesty's Government to continue the observatory at Toronto for a limited time, in the hope that before the close of the period arrangements might be made with some of the colonial institutions to take it up.

I am not aware what steps have been taken to carry out this object, or whether they have been taken and failed. Should the latter be the case, the question is of course altered; but, even in that case, I would venture to suggest the importance of the temporary continuance of the observatory on its present footing for some time longer, if it were only to carry out to its completion the trial of the self-registering of magnetical and meteorological

instruments, by photographic processes, which has been instituted there on so large a scale.

The two methods which have been proposed for that purpose (and of which the importance has been recognized by Her Majesty's Government, by the bestowal of liberal pecuniary rewards), are both in operation at Toronto, and under the direction of Captain Lefroy, an officer who is able to give them the fullest trial, as well as to improve and perfect them, so that an experiment of great importance to physical science would probably be interrupted and lead to no conclusion if the observatory were now to be discontinued.

For these and other reasons I believe that it is desirable that an application should be made to Her Majesty's Government, requesting them to direct the continuance of the Magnetical Observatory at Toronto for some time longer, in case that none of the local institutions are in a condition to undertake its management.

I remain, dear Lord Rosse, yours very faithfully,

The Earl of Rosse, &c.

H. LLOYD.

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No. 2.

From Sir John Herschel, Bart., to the Earl of Rosse, P. R. S.
32, HARLEY STREET, Dec. 28th, 1850.

MY DEAR LORD ROSSE,—I entirely agree in the view taken by Dr. Lloyd, relative to the Toronto Observatory. It has become, from the fine series of observations already made there, a local centre of reference for the magnetic and meteorological observations of the whole of Canada and Northern America, of the greatest importance. If continued, whether under the Canadian Government alone, or aided by the Home Government, it would become the national observatory, the centre of diffusion of astronomical and of all exact scientific enquiry, and the zero point of a future trigonometrical survey.

If only temporarily continued, the working out of the recently adopted methods of photographic registry would form a very valuable contribution to the progress of those new methods which promise to supersede all others, both in point of exactness and economy; and I think it would be very desirable, if so continued, that some attempt should be made, pending, to influence the colonial authorities definitively to take it up. Perhaps this might be done, on condition of another three years' continuance: I mean that it might be granted, provided a pledge could be obtained from the colonial authorities that it should afterwards be a colonial establishment.

I remain, my dear Lord, yours very truly,

J. F. W. HERSCHEL.

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No. 3.

From the American Academy of Arts and Sciences to the Earl of Rosse, P. R. S.

CAMBRIDGE, U. S., Nov. 25th, 1850.

MY LORD,—The undersigned, a committee of the American Academy of Arts and Sciences, have been directed to address your Lordship on the subject of continuing the meteorological and magnetical observations at Toronto, in Upper Canada.

The Academy has been led more particularly to take this step in consequence of the organization of a uniform system of meteorological observations in the United States, under the auspices of the Smithsonian Institution. Thirty-seven stations have been established in the State of New York, and twelve in the State of Massachusetts, under the superintendence of one of the committee (Professor Guyot) and are now in successful operation. It is unnecessary to say that this arrangement furnishes very important means of comparison with the observations made