

Cambridge, Mass.
June 11th 1860

Gentlemen;

By virtue of authority from the Hon. Isaac Lucey, Secretary of the Navy, transmitted to me through Captain Duncan N. Ingraham, U.S.N., Chief of the Bureau of Ordnance & Hydrography, I hereby instruct you to proceed to Cumberland House, one of the stations of the Honorable Hudson's Bay Company, British America, for the purpose of making, in its vicinity and on the central line of shadow, observations upon the eclipse of the Sun of the 18th of July of this year -

I transmit to you in company with these instructions a letter addressed to me by His Excellency Sir George Simpson, Governor of the Hudson's Bay Company, furnishing permission for your entrance into the Company's Territory, and securing to you, while there the friendly consideration of the Company's agents.

Our recent and frequent conversations on the subject of this eclipse, and your previous preparation for the event, by reading and otherwise, render it unnecessary that I should enter here into the details of the observations to be made. I have called your special attention, first, - to the bulging protuberances, or rose colored prominences, seen at the time of total obscuration, in order that you may assist if possible,

in determining the question of their origin; and for the purpose of laying down their position approximately I recommend to you to employ the graduated card of Mr Dawes; second, — to the use of the polariscope, in the manner recommended by Arago; and, third, — to the careful examination during the period of darkness, of the regions bordering on the Sun, for the possible discovery of inter-Mercurial planets.

To facilitate this last object, I have supplied you with a map of that part of the heavens, in order that an unknown object may be readily distinguished. And I wish the gentleman who selects this special field of observation, to comply carefully with the recommendations of Mr. Payne, contained in his remarks on the letter of M. Loe Ferrier upon the theory of Mercury.

Your journey to Fort Garry is by established routes of travel, and therefore attended with no difficulty. At Fort Garry you will receive the kind assistance of Mr MacLaurish in making the necessary preparations for crossing Lake Winnipeg, and ascending the Saskatchewan. I wish you from this point to include your companion Mr Scudder in your arrangements, who in return has offered

Mr. J. J. Fernald,
Mr. Simon Newcomb,
Associants, Office of the
Star. Eph. & Transit of Venus,
Cambridge, Mass.

Commander, U.S.A.
Dept. Coast & Geod. Surv.

Dear Mr. Fernald,

I am gentleman,
very deeply obliged to you for the
receipt for your payment,
and in all cases where the mission
is not unaccomplished, you will take
your full and minute report,
and communicate them to me in
note of the results of your observations,
You will keep careful
the place you think best.
I shall leave it to you
to assign him, on that occasion
his services to me on the day of the
eclipse; I shall leave it to you

AMERICAN ACADEMY OF ARTS AND SCIENCES;

BOSTON, MASSACHUSETTS, *March 14th 1877.*

To

William Ferrel, A.M.

DEAR SIR:

We have the honor to inform you that you were this day elected an ASSOCIATE FELLOW of the American Academy of Arts and Sciences.

Charles Francis Adams *President.*

Josiah P. Cooke Jr.
Corresponding Secretary.