

VIII. *Observations of a Solar Eclipse, October 27, 1780, made at St. John's Island, by Mess'rs. CLARKE and WRIGHT. In a Letter from Mr. JOSEPH PETERS to CALEB GANNET, A. M. Rec. Sec. Amer. Acad.*

Halifax, (Nova-Scotia) 27th August 1781.

S I R,

SOME time in the beginning of this summer, Mr. *Winslow* shewed me a paragraph of a letter from you, requesting him, if he could, to obtain the minutes of some observations of the eclipse of the sun, which happened the 27th of October, 1780. I am so unfortunate as not to have any kind of apparatus for observations of that sort; nor is there, that I know of, in this place, any thing of the kind,—these things, however useful, as well as pleasing, being very little attended to in this place.

Since the said application from Mr. *Winslow*, I have received from my friend, Doctor *John Clarke*, who was educated in your College, some minutes of an observation of the fore-mentioned eclipse, made by himself and a Mr. *Wright*, at *Charlotte-town*, on the island of *St. John*, in the gulph of *St. Laurence*. I take the liberty to inclose you a copy of them.

Dr. *Clarke* says, that the observation was made with a reflecting telescope, two feet long, and compleatly fitted for the purpose. A clock was regulated with great accuracy, by means of double altitudes of the sun, taken on several days before and on the day of the eclipse. The observers were deficient only in a micrometer to measure the quantity. They estimated it at 11 digits.

Charlotte-town,

Charlotte-town, by observations of Mr. *Wright*, is in latitude $46^{\circ} 13'$ north, and $62^{\circ} 50'$ west longitude from *London*.

This observation agrees well with the best judgment I could frame of this eclipse, at *Halifax*, by a good watch, regulated by the best time pieces here, to as great exactness as was in my power; except the quantity, which must be something greater here, than at the island. I projected this eclipse to be 11 dig. 30' here, and by the best observations I could make, that was very nearly its real quantity.

I am assured by Mr. *Pool*, of *Yarmouth-Jebouge-Harbour*, on the western coast of this province, that the eclipse there was total for a momentary space.

This, Sir, is the best account I am able to give concerning the phases of this eclipse in these parts; which, if it prove useful in science, or satisfactory to you, I shall think myself happy in having the opportunity of communicating it.

The town of *Halifax*, from observations of Mr. *Desbarres*, is in $44^{\circ} 44'$ north latitude, and $63^{\circ} 30' 30''$ west longitude from *London*.

I am, Sir, your most obedient

And very humble servant,

JOSEPH PETERS.

To Mr. *Caleb Gannett*.

The following are the observations made by Mess'rs. *Clarke* and *Wright*:

	App. Time.
Beginning of the eclipse,	11 ^h . 41' 35" A.M.
D's southern limb at letter <i>a</i> , Plate II. Fig. V.	11 56 30
Ditto in contact with <i>b</i> ,	12 59 20

	App. time.
b 's western limb quitted d ,	1 ^h .28' 38" A.M.
Ditto quitted b ,	1 35 13
End of the eclipse,	2 17 41
Duration,	2 36 6

They missed the contacts with c by altering the position of the telescope.

