

remarkable, that the line of the nodes is almost at right angles with the long axis of the ellipsis ; which corresponds nearly with the comets of the years 1580, 1683, and 1686 : but those had their perihelions northward of the ecliptic ; whereas the perihelion of the last, which we have lately seen, was to the southward of the ecliptic.

I have the honour to subscribe myself, with the most perfect esteem for you, and your sublime studies, very respectfully,

S I R,

Your very humble and obedient Servant,

Hague, 13th Dec,
1757.

D. Klinkenberg.

LXI. *Remarks on the different Temperature of the Air at Edyftone, from that observed at Plymouth, between the 7th and 14th of July 1757. By Mr. John Smeaton, F. R. S.*

S I R,

Read Jan. 12,
1758.

ON the reading of Dr. Huxham's letter at the last meeting, some observations occurred to me, concerning the different temperature of the air, which I had observed at the Edyftone, from what had been observed by the Doctor at Plymouth, between the 7th and 14th of July

July last: which having been desired by some members to be put into writing, I beg leave to trouble you with the following.

Edystone is distant from Plymouth about 16 miles, and without the head-lands of the Sound about 11.

The 7th and 8th were not remarkable at Edystone for heat or cold: the weather was very moderate, with a light breeze at east; which allowed us to work upon the rock both days, when the tide served.

About midnight, between the 8th and 9th, the wind being then fresh at east, it was remarkably cold for the season, as I had more particular occasion to observe, on account of a ship that was cast away upon the rocks. The wind continued cold the 9th all day; which was complained of by some of the shipwrecked seamen, who had not time to save their cloaths; and so fresh at east, as prevented our going near the rocks, or the wreck; and so continued till Sunday the 10th; when, seeing no prospect of a sudden alteration of weather, I returned to Plymouth in a sailing boat, wrapped up in my thick coat. As soon as we got within the headlands, I could perceive the wind to blow considerably warmer; but not so warm as to make my great coat uneasy. Having had a quick passage, in this manner I went home, to the great astonishment of the family to see me so wrapped up, when they were complaining of the excessive heat: and indeed, it was not long before I had reason to join in their opinion.

This heat I experienced till Tuesday the 12th, when I again went off to sea, where I found the air

very temperate, rather cool than warm ; and so continued till Thursday the 14th.

In my journal for Wednesday the 13th I find the following remarks, *viz.* " This evening's tide" (from 6 A. till 12 A.) " the wind at east, but moderate, " with frequent flashes of lightning to the south- " ward. Soon after we got on board the store- " vessel, a squall of wind arose from the south-west " on a sudden, and continued for about a minute ; " part of which time it blew so hard, we expected " the masts to go by the board : after which it was " perfectly calm, and presently after a breeze re- " turned from the east."

And in the journal of the 14th is entered, " This " morning's tide" (*viz.* from 1 M. to 1 A.) " the " air and sea quite calm."

Hence it appears, how different the temper of the air may be in a small distance ; and to what small spaces squalls of wind are sometimes confined.

It may not be amiss further to observe upon this head, that once, in returning from Edystone, having got within about two miles of the Ramhead, we were becalmed ; and here we rolled about for at least four hours ; and yet at the same time saw vessels, not above a league from us, going out of Plymouth Sound with a fresh of wind, whose direction was towards us, as we could observe from the trim of their sails ; and as we ourselves experienced, after we got into it by tacking and rowing.

I am, Sir,

Your most humble Servant,

Furnival's-Inn Court,
12th Jan. 1758.

J. Smeaton.