XLVIII. *An Account of an Observation of an Eclipse of the Moon, made at* Hawkhill, *near* Edinburgh. *In a Letter to the Astronomer Royal, from* James Lind, *M. D.*

Edinburgh, December 14, 1769.

DEAR SIR,

Read Dec. 21, 1769.

I HERE send you our obfervations on the eclipfe of the Moon, the 12th current; I wifh it had rather been an account of an occultation, but the feeing of them feems to be denied to us : the night of the laft was the only cloudy night that has been here for thefe four weeks paft; the weather having been more like fummer weather than that of winter.

The morning of the eclipfe was very clear, and inclining to froft. Before we got to the obfervatory, near one third of the Moon's difc, where the firft contact began, was covered with a fmoaky appearance, which made us apprehend the eclipfe was begun ; but, on getting to the obfervatory, we faw, by our telefcopes, the Moon's limb was ftill untouched ;

A a a 2   about

about five minutes after, at 16ʰ 30′ 51″ mean time, a thick darkneſs came on the Moon's upper limb, which was ſtill diſtinctly to be ſeen through it. At 16ʰ 39′ 21″ the limb was broke. The middle of the eclipſe was reckoned to be the middle time betwixt the diſappearing of this limb, and the reappearing of the other. I likewiſe ſend you the ſidereal times, by which the obſervations were taken, each obſervation being corrected to leſs than half a ſecond; the mean times are not ſo near, being taken from the other by means of a table; but are ſtill correct enough for obſervations which, of themſelves, cannot be obſerved with great preciſion.

ECLIPSE OF THE MOON,

December 12, 1769, at Hawkhill.

	Sid. time.			Mean time.		
	h	′	″	h	′	″
1ſt contact of darkneſs	9	59	19	= 16	30	51
Moon's limb broke	10	7	50	= 16	39	21
Clear ſpot in or about Terra Pruinæ touched	10	15	22	= 16	46	51
Ditto diſappeared	10	16	02	= 16	47	31
Copernicus { touched	10	28	58	= 17	0	25
central	10	30	32	= 17	1	59
diſappeared	10	31	32	= 17	2	59
Mare Criſium touched	10	59	53	= 17	31	15
Ditto diſappeared	11	9	23	= 17	40	44
Middle of eclipſe	11	32	37	= 18	3	54

	Sid. time.	Mean time.
	h / //	h / //
1ft clear fpot re-appeared, but indiftinctly, being a little cloudy	12 14 24	= 18 45 34
Mare Crifium totally emerged	12 47 10	= 19 18 29
Moon's limb compleated	12 57 24	= 19 28 27
2d contact of darknefs	12 59 24	= 19 30 27
End of fmoaky appearance	13 5 25	= 19 38 27

Towards the end it was very clear, and I maké no doubt but we fhould have feen the fmoaky appearance, had it not been for the day-light coming on.

Since I wrote to you laft, we have taken another meridian obfervation for the latitude, and made it 55° 57′ 30″ N.

In looking into the Abridgment of the Philofophical Tranfactions, Vol. VII. p. 140, I found an account of an annular eclipfe of the Sun, obferved at Edinburgh, by Mr. Mac Laurin, in the year 1737; which may help to determine our longitude for the prefent, till it is done more correctly by occultations of the ftars by the Moon, or eclipfes of Jupiter's fatellites. I am, with refpect,

S I R,

Your moft devoted, humble fervant,

James Lind.

REMARKS

REMARKS BY THE ASTRONOMER ROYAL.

The beginning of the eclipfe was obferved at the Royal Obfervatory at 10^h $20'$ $29''$, and the biffection of Copernicus at 10^h $43'$ $23''$ fidereal time; which, compared with the correfpondent obfervations above, give $12'$ $39''$ and $12'$ $51''$ of time, for the difference of meridians of Hawkhill and Greenwich.

Nevil Mafkelyne.