

*An Account of an Observation of an Eclipse of the Moon, observed at Moscua in Ruffia, on April 5. 1688. compared with the same observed at Lipfick; whereby the Longitude of the former Place is afcertained: Together with the Latitude of feveral principal Places in the Empire of Ruffia.*

THE Royal Society being defirous to contribute what they may to the rectifying of Geography, and determining the Longitudes of Places, amongst others did recommend the procuring an Eclipse to be observed at *Moscua*, to an eminent Merchant trading there; at whose instance one Mr. *Timmerman*, a Mathematician, refiding on the place, returned the following account.

*April 5. 1688.* half a quarter of an hour after feven in the Evening, the Moon arofe clear, but of a deep red colour without any fign of Eclipse: at  $7^{\text{h}} \frac{1}{2}$  the Moon went into a thick Cloud, but was again clear at  $7^{\text{h}} 38^{\text{m}}$  when the under-side of the Body of the Moon was begun to be obscured, in a clear Sky; fhe being then in the  $25^{\text{th}}$  degree of *Libra*, and  $6^{\circ} \frac{1}{2}$  above the Horizon. (*Suppofe the Center.*)

At  $9^{\text{h}}$  the whole under-side of the Moon was eclipsed, and about 8 minutes after nine, it was at the height, or rather feemed to decrease. At  $9^{\text{h}} \frac{1}{2}$  there was ftill a third part of the Moon Eclipsed. (*Suppofe of her Circumference.*)

About ten it decreased apace, and at  $10^{\text{h}} \frac{1}{2}$  there was but little to be feen: At  $10^{\text{h}} 45'$  it was certainly ended, the Moon being then about  $22^{\circ}$  high. Thus far the Obferver.

The duration of this Eclipse is here made from  $7^{\text{h}} 38'$  to about  $10^{\text{h}} 45'$ , which agrees within 8 or 10 minutes with our Tables, that never err fenfibly in the continuance of Eclipses; and fo much ought to be allowed to an Obferver not fufficiently instructed to diftinguifh the *Penumbra* from the true fhadow, though a small Te-

lescope were used in this Observation, as we are since informed. Let us conclude then, That the end was at  $10^h 40'$  at *Moscua*. We do not find that this Eclipse was observed at *London*, and it was in probability cloudy, and otherwise only the latter part thereof would have been visible : However this defect is in good part supplied by an Observation thereof made at *Lipsick*, by Mr. *Gottfrid Kirck*, and published in his *Ephemerides* for the Year 1689. where the end is determined at  $8^h 54'$  P.M. Hence *Moscua* will be  $1^h 46'$  to the Eastwards of *Lipsick*; and the difference of Meridians between *London* and *Lipsick* being already determined 49 min. it will follow that *Moscua* is  $2^h 35'$  to the East of *London*, or  $38^b 45'$  of Longitude, which from other Accounts we find to be very near that of the City of *Aleppo* in *Syria*.

By the same Hand we have procured the Latitudes of the following Places, observed, as 'tis said, with a large Quadrant.

<i>Moscua</i>	$55^{\circ}$	34
<i>Yereslaw</i>	57	44
<i>Wologda</i>	59	19
<i>Wostak</i>	61	15
<i>Arkangel</i>	64	30

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