

do for medicine. All the Seas and Rivers, and all Lands do offer plenty and variety for our Tables ; and may, in time, for our Garments : The *Seas* to yield as good and strong Rayments as Euffe or Mayle ; as the dull Inhabitants of large Territories in the *North* had the wit, long since, and have to this day, to wear shoes and boots of *Fishes skins*, so cleverly sow'd, that their Seams are not easily to be found, saith M. *Martinier* in his New Voyage into the Northern Countries : And that the best sort of men in *Nova Zembla* do wear Vestments of the feather'd Skins of *Penguins*, the feathers outwards ; and make Boats and Canoes of Fish-skins and Fish-bones. And we expect better tidings from the New Arts of *Divining*, concerning the Treasures of the Seas, such perhaps as have layn *ab origine*, and have perpetually increased by shipwracks and tempests. Excellent Volums do offer many Artifices for all occasions and for all humors ; and great Ingeny's will have the wit, rather to chuse to be Masters and Inventors of a New and Ingenuous Artifice, than to serve our Apprenticeship for that which is Vulgar and proletery : No Statute or Law prohibits a man to practise an Invention of his own in any Corporation, if it be for common Utility, and without fraud ; but one may not set up a known Trade, till he hath served an Apprenticeship. But I must not here, nor am I able, to enumerate all the Branches of Philosophy which are advanc'd for this present age, and prepar'd for the future. Enough is done to quicken honest Wit, and Industry, which is generally most of all wanting in most of them that complain of Want.

*A more particular Account of the last Eclipse of the Moon, as it was observed by the Parisian Astronomers, and promised by us in our former Numb. 111. English't out of the French Journal des Scavans.*

**J** *January 11. 1675.* about five a clock 12 *min.* in the Evening, in the Royal Observatory, M. *Cassini*, M. *Picard*, and M. *Roemer*, began to perceive, that the Oriental part of the Moon, by little and little lost its light ; so that at 5 *h.* 25'. they saw a manifest *penumbra* ; then at 5 *h.* 30'. the limb over against the Spot called *Hewelius* grew so dark, that they all agreed, that this was the true beginning of the Eclipse. They saw yet the little Spot *Riccioli*, which disappeared not till 15'. after ; and so the Shadow advanced from spot to spot unto the other opposite limb of the Moon, according to the order below particulariz'd.

Before

Before the Moon was almost altogether immersed into the Shadow of the Earth, there appear'd not any sensible Light in the part Eclipsed, as well by reason of the brightness of the other part yet remaining to be darkened, as of some little Mist then being about the Moon. But that Mist being dispell'd, the Moon totally Eclipsed look'd of a colour red-brown. The Eastern part, which was obscured first, appear'd at first more dusky than the other, and its blackness increased according as the Moon enter'd more and more into the Shadow of the Earth; but a while after, the same blackness pass'd to the other side of the Moon, so that the Western part became in its turn to be of a redish colour, browner and darker than the other.

At 8 h. 7'. the Limb that is about the Spot *Grimaldi*, and which was then next the Horizon, began to clear up: Which made one of the Observers believe, that it was the beginning of the Emerfion. But, the whiteness of this Limb not being then yet great enough, the two other Observers judg'd this return of Clearness a little later, the one at 8 h. 8'. and the other at 8 h. 9'. 30". Yet having in the sequel, a regard to the time of the discovery of the first Spots that came after, they all esteem'd the first Emerfion to have been at 8 h. 8'. And this shews what is to be expected from the Eclipses of the Moon for the determination of the Longitudes, when the Observers do content themselves barely to remark the beginning and the end of the Eclipse.

During the greatest Obscuracion, viz. at 7 h. 21'. the Southern Limb of the Moon was come close to a small Star, of the number of those that cannot be seen without a Telescope; which was compar'd with the Moon, by taking its distances from the Moon and the Shadow before the total Immersion, and afterward until the first Immersion; with a design, by means thereof to find the *Parallax* of the Moon. A little after the beginning of the Emerfion, viz. at 8 h. 9'. 20", another Star, yet less than the former, came out at the darkest side, almost over against the Spot *Langrenus*; which place was taken but to be near so, because then they could discern nothing in that part, though they saw well enough the whole contour or compass of the Moon.

Lastly, at 9 h. 9'. 40". all the three Observers agreed, that the Moon then came out of the Shadow; but there remained a *Penumbra*, which last'd for sometime after.

The *Diameter* of the Moon, being measured before the Eclipse, was of 32'. 15". 'Tis true, that when she was wholly Eclipsed, she was found less by some Seconds than before the Eclipse: But since 'tis difficult to measure her in that State, there is reason to doubt of this Observation.

The *Times* were noted by great Pendulum-Watches, that had been adjusted by the Sun the same day, and that were afterwards verified the next day: Besides, that before the Eclipse at 4 h. 45'. 1". by the Watches, the Star *Capella* was 45 degrees high towards the East.

*The Particulars, above directed to.*

Time.	The Passages of the Shadow.
H. M. S.	
5. 32. 50.	Beginning <i>Over</i> against the Spot <i>Hewelius</i> .
36. 0.	<i>the first Spot of Grimaldi.</i> Palus Mareotis.
36. 30.	<i>the second limb of Grimaldi.</i>
45. 0.	<i>the middle of Aristarchus.</i> Mons Porphyrites.
46. 0.	<i>Mersennus.</i>
48. 30.	<i>Herigone.</i>
53. 0.	<i>Heraclides.</i>
53. 15.	<i>the first Limb of Copernicus.</i> Ætna.
54. 15.	<i>the middle of Copernicus.</i>
54. 40.	<i>Pitheas, or Hiera Insula.</i>
55. 5.	<i>the second Limb of Copernicus.</i>
57. 40.	<i>the first Limb of Timocharis.</i> Corsica.
59 35.	<i>the first Limb of the Sinus medius Æstuum.</i> Adriatick Sea.
6. 1. 30.	<i>the middle of the Sinus medius.</i>
2. 40.	<i>the first Limb of Tycho or Sinai, and the first Limb of Plato, or the Lacus niger major.</i>
3. 50.	<i>the second Limb of Plato, and the middle of Tycho.</i>
4. 30.	<i>the Centre of the Discus.</i>
9. 0.	<i>the middle of Manilius, or Mons Besbicus.</i>
12. 0.	<i>the middle of Menelaus, or Byfantium.</i>
13. 45.	<i>Dionysius Areop. or Mons Amanus.</i>

Time.	The Passages of the Shadow.
6. 14.30.	<i>Over Plinius.</i>
15.45.	<i>Vitruvius.</i>
20.35.	<i>Endymion, or Lac. Hyperbor. superior.</i>
21. 0.	<i>Promontor. Heraclium.</i>
24.50.	<i>Betwixt Alcuin and Taruntius.</i>
26. 0.	<i>the first Limb of the Caspian Sea, Mare</i> <i>Crisium. Palu. Mæotis.</i>
28.15.	<i>the middle of the Caspian Sea.</i>
29.40.	<i>the other Limb of the Caspian Sea.</i>
30. 5.	<i>the first Limb of Langrenus, or Insula Maj.</i>
3. 5.	<i>the middle of Langrenus.</i>
35.46. Total Immerf.	<i>Betwixt Langrenus and the Caspian Sea.</i>
8. 8. 0. I. Emerfion.	<i>Towards Grimaldus.</i>
12.35.	<i>the first Limb of Grimaldus.</i>
14. 0.	<i>the second Limb of Grimaldus.</i>
20.20.	<i>Mersennus.</i>
24. 5.	<i>Herigone.</i>
24.35.	<i>the middle of Aristarch. and the middle</i> <i>betwixt Herigen and Morin.</i>
26.30.	<i>the middle of Kepler, or Loca paludosa.</i>
28.30.	<i>the first Limb of Tycho.</i>
29.50.	<i>the second Limb of Tycho.</i>
34. 5.	<i>the middle of Copern.</i>
35.35.	<i>the second Limb of Copern.</i>
36.10.	<i>Pitheas.</i>
36.30.	<i>Heraclides.</i>
40. 0.	<i>the first Limb of Timocharis.</i>
42.35.	<i>the first Limb of Plato.</i>
43.45.	<i>the second Limb of Plato.</i>
49.30.	<i>the middle of Manilius.</i>
52.10.	<i>Menelaus and Dionys. Areopag.</i>
55. 0.	<i>Possidonius.</i>
56. 6.	<i>Vitruvius.</i>
59.30.	<i>Endymion.</i>
9. 6.20.	<i>the first Limb of the Caspian Sea.</i>
7.10.	<i>the middle of the Caspian Sea.</i>
8.40.	<i>the other Limb of the Caspian Sea.</i>
9.40. The End.	<i>Between the Caspian Sea and Langrenus.</i>