

of; whether air be mixed with, or necessary to, its formation; as also how far its power of resistance may reach; are probably not yet known, to a proper degree of exactness. Niewentit fixes the expansion of a cubical inch of water, converted into steam, at 13365, Dr. Defaguliers at 14000, and Mr. Payne at 4000 times. The great scope in this subject from a plenum to a vacuum, if I may be allowed the expression, as also the very useful purposes, to which it has already been, and possibly may be still further applied, will, I hope, be an inducement to those, who are much better qualified, to proceed in so useful an inquiry.

XLVI. *Observatio Eclipsis Lunæ Die 27 Martii, Ann. 1755. habita Uliffipone in Domo Patrum Congregationis Oratorii à Joanne Chevalier ejusdem Congregationis Presbytero, Regiæ Londinensis Societatis Socio, Regiæque Parisiensis Scientiarum Academiæ correspondente.*

Tabulo optico 8 pedum perfecta est observatio cœlo sereno, claroque.

| | | IMMERSIONES. | | |
|-----------------------|-------------------------|-----------------------------------|-------|----|
| | | Hora postmeridiana temporis veri. | | |
| | | h | ' | " |
| Read Dec. 8, | I | 10 | 29 | 50 |
| 1757. | Initium penumb rædubium | 10 | 33 | 35 |
| | Initium eclipsis dubium | 10 | 34 | 05 |
| Certe jam incæperat | — — — | 10 | 44 | 00 |
| Umbra ad mare humorum | — — — | 10 | 44 | 00 |
| | | | Umbra | |

| | h | ' | " |
|---------------------------------|----|----|----|
| Umbra ad Grimaldum — — | 10 | 44 | 53 |
| Grimaldus totus in umbra ——— | 10 | 47 | 58 |
| Mare humorum totum in umbra — | 10 | 51 | 14 |
| Thico incipit mergi — — | 10 | 53 | 29 |
| Thico totus mergitur — — | 10 | 55 | 14 |
| Umbra ad Reinholdum ——— | 11 | 08 | 04 |
| Umbram ingreditur Copernicus — | 11 | 19 | 22 |
| Umbra ad mare nectaris ——— | 11 | 24 | 52 |
| Totum in umbra — — | 11 | 33 | 50 |
| Umbra ad mare tranquillitatis — | 11 | 35 | 24 |
| Promontorium acutum in umbra — | 11 | 45 | 46 |

EMERSIONES.

| | h | ' | " |
|--------------------------------------|----|----|----|
| Incipit emergere ab umbra Copernicus | 12 | 04 | 38 |
| Totus Copernicus extra umbram -- | 12 | 07 | 40 |
| Incipit egredi Grimaldus ——— | 12 | 09 | 38 |
| Totus Grimaldus extra umbram — | 12 | 12 | 38 |
| Incipit emergere mare fœcunditatis | 12 | 31 | 37 |
| Emergit mare humorum ——— | 12 | 36 | 11 |
| Incipit emergere Capuanus ——— | 12 | 39 | 40 |
| Egreditur Schicardus — — | 12 | 48 | 30 |
| Emergit Thico — — | 12 | 51 | 40 |
| Totum mare nectaris egreditur — | 12 | 58 | 09 |
| Finis eclipsis — — | 13 | 13 | 02 |
| Finis penumbræ dubius ——— | 13 | 16 | 50 |