

II. *The same Eclipse observed in Fleetstreet, London.* By Mr. George Graham, F. R. S.

*b* 1 11

P. M. 1 28 38 Beginning. Apparent Time.  
 2 29 34 By Estimation the Cuspes Parallel to  
 3 43 22 The End. (the Horizon.)

2 14 44 The Duration.

Quantity eclipsed 5 Dig.  $\frac{716}{1000}$

1000

I Had very correct Observations both of the Sun and Stars, the 26, 27, and 28th, for determining the exact Time by my Clock.

For some Minutes before the Eclipse began, I observ'd the Sun with a Telescope of 12 Foot, furnished with a Micrometer; keeping that Part of the Limb in the middle of the Glass, where I expected the Moon first to touch, and in less than four Seconds of Time, from the Moment I judged the Eclipse begun, it was so considerably advanc'd, that I cannot doubt of having the Beginning to less than three Seconds. I believe the exact Time of ending was within the same Limit, notwithstanding that the Undulation of the Limb was then much greater than at the Beginning. The Parts eclipsed, measured with the Micrometer, at the Time of the greatest Obscuration, were 927 such Parts as the Sun's Vertical Diameter contained 1946; which was taken a little before the Beginning of the Eclipse.

The Sky was clear, and free from Clouds, till near the End, when a narrow one obscured some part of the Sun's Disk, but that part of the Limb where the Eclipse ended, continued clear till after it was over.

By

By this Observation the Beginning differed not  $\frac{2}{3}$ , and the End not  $\frac{1}{2}$  a Minute from Dr. *Halley's* Computation, which he sent me the Day before. And if his Computation, which was made for *Greenwich*, had been reduced to the Meridian of *London*, the Difference would have been still less.

*The same Eclipse was observ'd by Mr. Hawkins at Wakefield, in Yorkshire, to begin at 1 h. 21 m. p. m. and to end at 3 h. 30 m. 3 11. The Sun's Diameter was obscured somewhat more than 5 Digits.*

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III. *De Particulis & Structurâ Adamantum. Epistola Domini Antonii Leeuwenhoek, R. S. Soc. ad Jacobum Jurin, M. D. R. S. Secret.*

POSTquam investigando compereram Metalla quædam, & ipsas etiam Arenas ex perexiguis ejusdem materiæ particulis compositas esse, meditationem meam converti ad Adamantem; scilicet num ille etiam ex istiusmodi constet particulis, quæ quidem ope microscopii conspici possint.

Igitur exiguum quendam Adamantem per microscopium contemplatus, in eâ Adamantis parte quæ polita non erat, & splendore carebat, complures particulas oculis observavi; & Adamantem ex parvis particulis compositum esse comperi. Verum cum hæc nondum mihi satisfacerent; Adamantem in frustra confringere decrevi, ut illum in fragmentis suis considerarem.

Ergo Adamantem, malleo impositum, alio malleo semel iterumque percussi, qui sic percussus in quatuor aut quinque frustra dissiliebat. Quod cum nondum mihi satisfaceret, & Adamantem in exiguissimas miculas comminuere vellem; frustum, quod cæteris majus