

of Things into Ridicule. Mr. *Leibnitz*, in some Letters which he wrote into *England*, intimated that he had a Prospect of a *perpetual Motion*, founded on the Notion of a *Vital Principle*, or *active Power* in *Matter*. But from the Experiments now mentioned, 'tis evident that if the *Force* of Bodies in Motion could be exalted even to the *infinitth Power* of their *Velocity*; yet since, to answer the Phenomena of Nature with Regard to *Action* and *Re-action*, the same *Force* must necessarily be allowed to all *quiescent* Bodies likewise; it could be of *No Effect*.

III. *Astronomical Observations made at Vera Cruz, by Mr. Joseph Harris. Revised and communicated by Edm. Halley, L. L. D. Astron. Reg. & R. S. S.*

THE Latitude of this Place I found (by several distant Observations made by a Quadrant of four Feet Radius) to be $19^{\circ} 12' N$.

On *March 11, 1727. O. S.* there happen'd here a considerable Eclipse of the Sun, the greatest Obscuration being about $10\frac{1}{2}$ Digits; and having that Morning carefully adjusted the Pendulum Clock, and fixed a Telescope to the Index of the foresaid Quadrant, I observed it to begin in or about the *S. E.* by *S.* Part of the Sun's Disk at $49\frac{1}{2}$ Minutes after Noon apparent Time; the Altitude of the Sun's Center then was $67^{\circ} 53'$.

We could not determine exactly the Middle of this Eclipse, but as near as we could judge, it happen'd about $2^h 30^m P. M.$

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The Eclipse ended in or about the *N. N. E.* Part of the Solar Disk, at $3^{\text{h}} 59' \frac{1}{2}$ P. M. at which Time the Sun's Altitude was $28^{\circ} 34'$.

By comparing these Observations with a Calculation which I made from Mr. *Flamsteed's* Tables, I judg'd *Vera Cruz* to lie $97^{\circ} 30'$ to the Westward of the Meridian of the said Tables.

We had here also a *Lunar* Eclipse *September 29. 1726, O. S.* but it happen'd to be a little cloudy about the Time of its Beginning and Ending, so that we could not get a just Observation.

In the Years 1726, and 1727, I observed here the *Magnetick Variation* several Times, and found it to be about $2 \frac{1}{4}$ Degrees Easterly.

We also observ'd the Variation several Times on our Voyage from *England* towards *Vera Cruz* (having on Board a good Azimuth Compass) but I always found that the best Observations we could make, when compared together, differ'd so much, that we could not depend upon them, to much less than three or four Degrees, or sometimes half a Point of the Compass.