

direction as the planets. It is but a small one, being seldom visible without a telescope. Its orbit was first computed on its appearance in 1795 (when it was discovered by Miss C. Herschel), and again in 1805 and 1819. Upon this last occasion M. Encke, an eminent computist, found that its motion could not be explained without supposing it to move in an ellipse of the last period I have mentioned—and on searching back into the records of comets he found those two I have just named, which agreed perfectly, and proved to have been really the same.

(34.) Since that time it has been re-observed on every subsequent revolution in '22, '25, '29, '32, '35, '38, '42, '45, '48, '51, '55, and is always announced in the almanacs as a regular member of our system. Its nearest approach to the sun brings it just within the orbit of Mercury, and on one occasion that planet happened to be so very near it on its arrival, that it produced a pretty considerable disturbance of the comet. But here, too, as in the case of Lexell's comet, not the smallest perceptible effect was produced *by* the comet *on* the planet; and thus two valuable pieces of information were gained. *First*; Astronomers were enabled to estimate the mass or weight of that small planet better than by any other means; and *secondly*; It was proved that *this* comet also has no perceptible weight—and is also a mere puff of vapour, or something as unsubstantial.

(35.) There is another strange fact which this comet has revealed. Its successive revolutions are each a little shorter than the last—a small fraction of a day, it is true,