

being nothing but a mass of thin vapor, is retarded much more than the planets, which are solid, and has actually advanced in its orbit, since its discovery, ten days more than can be explained by the laws of gravity, exclusive of a resisting medium. Some thirty thousand years will elapse before it will fall into the sun, and many millions of years before the same cause would precipitate the planets to the centre ; but it is an interesting conclusion that, ultimately and inevitably, if such a cause exist, ruin must ensue.

Modern discoveries respecting the nature of comets in general open a wide field for the play of the imagination. It seems now to be proved that nearly all of them (say, perhaps, 800) are nothing but thin vapor ; for the fixed stars are visible directly through their centres. They must, of course, be far less dense than the thinnest cloud. And yet these bodies move round the sun in obedience to the same laws as the planets, though liable to greater irregularities. The trains which accompany them, and which are sometimes, as in the comet of 1811, more than 130 millions of miles long, are evidently produced by the action of the sun, but in what way it seems difficult to conceive. In all ages, great anxiety has been manifested lest a collision should take place between the earth and one of these bodies. But the knowledge we now have of their nature teaches us that, even should one of them be encountered in the earth's annual circuit, it is not probable that matter so tenuous could pass through the atmosphere, and that the only effect of such an occurrence would be some slight meteorological change, or perhaps, as one of our countrymen suggests, who has distinguished himself by attention to this and kindred subjects, another splendid meteoric shower might signalize the event.*

* Olmsted's Astronomy, p. 242.