

tem is perfect. The contingent part of this proposition possesses all the significance. Neither are the planetary bodies solid, nor do they move *in vacuo*. The effect of the terrestrial liquids is apparent in a considerable lengthening of the sidereal day—which, for the time being, is counterpoised by the shrinkage of the earth—while the effect of the resisting medium has been wrought out in the partial arrest of the whole brood of comets.

The retardation of Encke's comet is such that it would lose one half of its present velocity in 23,000 years. A power which can sensibly check the flight of the filmy comet can also retard, however minutely, the motion of the ponderous planet. Jupiter, by far the largest of the planets, would lose one thousandth of his velocity in seventy millions of years. The length of the period has nothing whatever to do with the result. If the motion be inevitably and perpetually toward precipitation into the sun, the event is as demonstrable as the fall of an aerolite to the earth. Not only are the cloud-like comets slowly approaching the sun in spiral curves, but every revolving planet—every material particle in the solar system—is borne forward by the same unalterable decree. It is the presence of a resisting ether which conditions the precipitation of that meteoric rain which retards the cooling of the sun. The fall of comets and planets to the sun will still farther delay the final refrigeration of that luminary, without averting it.

The proof of the existence of a resisting ether in space has disclosed the decree which records the doom of the solar system. Whewell says: "Since there is such a retarding force perpetually acting, however slight it be, it must in the end *destroy all the celestial motions*. * * * The moment such a fluid is ascertained to exist, the eternity of the movements of the planets becomes as *impossible as a*