

*phenomenon* (as Sir J. Herschel expresses it) has come to light: and from this has been collected the inference of a resisting medium.

This medium produces a very small effect upon the motion of the comet, as will easily be supposed from what has been said. By Encke's calculation, it appears that the effect of the resistance, supposing the comet to move in the earth's orbit, would be about an eight hundred and fiftieth of the sun's force on the body. The effect of such resistance may appear, at first sight, paradoxical; it would be to make the comet *move* more slowly, but *perform its revolutions* more quickly. This, however, will perhaps be understood if it be considered that by *moving* more slowly the comet will be more rapidly *drawn* towards the centre, and that in this way a revolution will be described by a shorter path than it was before. It appears that in getting round the sun, the comet gains more in this way than it loses by the diminution of its velocity. The case is much like that of a stone thrown in the air; the stone moves more slowly than it would do if there were no air; but yet it comes to the earth *sooner* than it would do on that supposition.

It appears that the effect of the resistance of the ethereal medium, from the first discovery of the comet up to the present time, has been to diminish the time of revolution by about two days: and the comet is ten days in advance of the place which it would have reached, if there had been no resistance.

2. The same medium which is thus shown to produce an effect upon Encke's comet, must also act upon the planets which move through the same spaces. The effect upon the planets, however, must be very much smaller than the effect upon the comet, in consequence of their greater quantity of matter.

It is not easy to assign any probable value, or even any certain limit, to the effect of the resisting medium upon the planets. We are entirely ignorant