

resentation of the orbits of the planets, such as is given in our most epitomized manuals, there is scarcely any thing to which we could compare the admiration and surprise of these men—the heroes of the early and limited knowledge of that age—excepting, perhaps, that which might have been experienced by Eratosthenes, Strabo, and Claudius Ptolemy, could they have seen one of our maps of the world, on Mercator's projection, not above a few inches in length and breadth.

The return of comets in closed elliptical orbits, as a consequence of the attractive force of the central body, indicates the limits of the solar region. As, however, we are as yet ignorant whether comets may not some day appear in which the major axis may prove to be larger than any that have as yet been observed and calculated, these bodies must be regarded as indicating, in their aphelia, merely the limits to which the solar regions must *at least* extend. Hence we may characterize the solar system by the visible and measurable results of peculiar operating central forces, and by the cosmical bodies (planets and comets) which rotate round the Sun in closed orbits, and are intimately connected with it. The considerations which at present engage our attention do not embrace a notice of the attraction which the Sun may exert on other suns (or fixed stars) lying beyond the limits of these reappearing cosmical bodies.

According to the state of our knowledge at the close of this half of the nineteenth century, the solar region includes the following bodies, arranging the planets according to their respective distances from the central body :

22 PRINCIPAL PLANETS (MERCURY, VENUS, THE EARTH, MARS; *Flora, Victoria, Vesta, Iris, Metis, Hebe, Parthenope, Irene, Astræa, Egeria, Juno, Ceres, Pallas, Hygiea*, JUPITER, SATURN, URANUS, NEPTUNE);

21 SATELLITES (1 belonging to the Earth, 4 to Jupiter, 8 to Saturn, 6 to Uranus, 2 to Neptune);

197 COMETS, whose orbits have been calculated. Of these, 6 are *interior*; *i. e.*, such as have their aphelia inclosed within the outermost of the planetary orbits, *viz.*, that of Neptune: we may very probably add to these

THE RING OF THE ZODIACAL LIGHT, which probably lies between the orbits of Venus and Mars; and likewise, according to the opinion of numerous observers,

THE SWARMS OF THE METEOR-ASTEROIDS which more especially intersect the Earth's orbit at certain points