

to say that the velocity of light so concluded was found to be somewhat less (and that by about one 30th part) of that which had been hitherto received (192,000 miles per second) and which was concluded from the observed *fact* of its traversing the diameter of the earth's orbit in 16^m. 26^{sec.} of time, and very considerably less than that before obtained by M. Fizeau, with a less perfect apparatus, and a less delicate and refined system of procedure. Now it will not fail to be remarked, that the *time* (16^m. 26^{sec.}) remaining unaltered, and the velocity *diminished* by one 30th, the distance traversed (the diameter of the orbit) in that time will also be diminished by the same aliquot fraction, so that there is a coincidence between the two corrections of the sun's distance, which, coming simultaneously, from such very different sources, cannot but lead to their acceptance, at least provisionally, and until the recurrence of that grand phænomenon, the transit of Venus, which will take place in the year 1874, shall put an end to all uncertainty on the subject of the true numerical dimensions of our system.

(10.) Bearing now these dimensions in mind, let us construct in imagination a figure consisting of concentric circles, to represent the orbits of the planets. Taking the largest, that of Neptune, as 30 feet in diameter, then will that of Uranus measure a little more than 19 feet across, of Saturn somewhere less than 10, of Jupiter rather more than 5, of Mars about 18 inches, and of the earth a foot, while the enormous body of the sun will stand represented in the centre of all by a pellet of very little more than one-ninth of an inch in diameter—the orbits of