

Is it strange that man looks upon light with an awe approaching devotion, and that Milton should exclaim, —

“Hail, holy light! offspring of Heaven, first born,
Or of the eternal, coeternal beam”?

I will only add, in this connection, a statement of La Place respecting attraction: “I have ascertained,” says he, “that between the heavenly bodies all attractions are transmitted with a velocity which, if it be not infinite, surpasses several thousand times the velocity of light.” His annotator estimates it as eight million of times greater than that of light.

Were there time for the details, the science of optics would furnish many other illustrations appropriate to my object — such as the diffraction of light, the splendid colors of their films, and the phenomena of polarization and double refraction. But I must hurry forward. Nor can we be long detained even upon the sublime developments of astronomy. Since the most common and striking of these have been so often and familiarly described in public lectures, and even in the primary school manual, I shall confine my remarks to some principles that are less generally known, or to recent discoveries.

I have always regarded it as one of the greatest achievements of astronomers that they have been able to weigh the bodies of the solar system, so as to state how many pounds avoirdupois they contain, and to ascertain their relative weight compared with that of water. It is certain, for instance, that the mass of Jupiter is more than 322, and less than 323, times the mass of this globe — so accurately has this work been accomplished. The mass of the sun is 359,551 times greater than that of the earth and moon, and 700 times greater than the united masses of all the planets. The