

capable of perceiving and admiring the glory and goodness of the Divine Being and of enjoying his rich bounties.

MARS, the next planet, is beyond the Earth's orbit, its diameter above five thousand miles, and its distance from the Sun, (one hundred and forty-five million of miles) nearly double that of the Earth. Its diurnal rotation is accomplished in twenty-four hours and thirty-nine minutes, and it moves round the Sun at the rate of fifty-five thousand miles in an hour, completing its annual revolution in (six hundred and eighty-seven days) a little less than two of our years.

After Mars follows JUPITER the largest of all the planets. His diameter (about 94,100 miles) is about twelve times as great as that of the Earth, and his distance from the Sun four hundred and ninety-six millions of miles. He travels round the Sun at the rate of twenty-nine thousand miles in an hour, and performs his annual revolution in (four thousand three hundred and thirty-two days, fourteen hours, twenty-seven minutes,) something less than twelve of our years. But the rapidity of the motion of this immense planet on its own axis is astonishingly great. It performs its diurnal rotation in less than ten hours, (nine hours fifty-six minutes,) and its day and night are comprised in that short period. It is natural to conclude from its immense distance from the Sun that it must be but scantily provided with light; but to compensate for the disadvantage arising from its distance it is surrounded with several faint substances called belts, which it is probable are a peculiar conformation of its atmosphere, calculated to collect and reflect upon its surface the rays of light and heat which proceed from the Sun. It is also attended by four Satellites or Moons, to give light during the absence of the Sun, to the inhabitants of this enormous globe.—These satellites are frequently eclipsed to us, by the planet passing between them and the Earth. They

have often been found useful in determining the longitude and ascertaining the velocity of light.

SATURN, the next in order, is above nine hundred and eight million of miles from the Sun, and its diameter about seventy-eight thousand miles. Its diurnal motion is performed in ten hours and sixteen minutes; and moving at the rate of twenty-two thousand miles in an hour, its annual circuit round the Sun is performed in about twenty-nine and a half of our years. It is encompassed by a flat, broad, luminous ring, which concentrates, and reflects the rays of the Sun towards its globe, and of course increases their effect. Besides this ring it is also surrounded with several belts similar to those of Jupiter, and evidently intended for the same purpose, the increase of light and heat. In addition to these it is accompanied with no less than seven Moons continually revolving round it and which from their different positions and orbits must almost constantly during the night enlighten that vast world. Notwithstanding the immense distance then of this planet from the Sun, it must be furnished by means of its ring, belts, and moons which collect, concentrate, reflect, and by these means heighten the effect of the Sun's rays, with a degree of light and heat most probably equal, perhaps superior to that enjoyed by the earth. And we may further reasonably conclude that the prodigious rapidity of the diurnal motion of both Jupiter and Saturn is productive of important benefit to the inhabitants of those planets. For notwithstanding the advantage derived from their belts and ring yet the rays of the Sun passing through such an immensity of space must be greatly dispersed before they reach those distant orbs and consequently requiring not only the assistance of the belts and ring to collect and reflect them, but also the speedy return of the Sun to dispel the cold occasioned by his absence during the night and to prevent their globes from being enclosed with perpetual frost.