

Lilienthal, in 1804; and Vesta by Dr. Obbers, in the spring of the year 1807. On account of their comparative smallness, these four last planets, are distinguished by the name of *asteroids*.

Jupiter is next in order: this is the largest of all the planets. When viewed through the telescope, several belts are seen across the disc of this planet: they vary in their appearance: and are supposed to be ranges of clouds. Four moons, of different sizes, revolve round Jupiter; and are frequently eclipsed by his shadow.

The next is Saturn, and is nearly twice as far as Jupiter from the Sun; a planet distinguished from all the rest, by a thin, flat, broad, luminous ring, which encompasses the body of the planet, but does not touch it; and appears to be divided into two, by a distinct line in the middle of its breadth. Saturn has seven moons.

Lastly, we observe the Georgium Sidus, discovered in the year 1781 by Dr. Herschel, and which is attended by six moons. For a more particular account of the magnitudes, distances, &c. of the heavenly bodies, we refer the reader to a Table which we intend soon to present for their inspection.

There is another description of bodies which revolve round the Sun, called *Comets*: they are not luminous of themselves, but, like the other planets are opaque bodies, shining by the light of the sun, which they reflect toward us. All the comets revolve round the sun in a manner peculiar to themselves, that is, in elliptical orbits exceeding long and eccentric, yet regulated by laws similar to those of the planets themselves, each describing equal areas in equal times, about the sun as a centre of force. Some of the comets move from west to east, like the planets, while others proceed in a contrary direction from east to west, and in the contrary order of the signs of the zodiac. Some pass nearly in the ecliptic, and some almost perpendicular to it. These orbits being extremely protracted and eccentric, the *aphelion* of a comet is consequently at an immense distance from the sun. In that case the light which they receive from him is too feeble to be reflected to us, and they are only visible when they approach their *perihelion*. The time of their appearance is, therefore, very short, compared with the time of their disappearance.

The most luminous part of the comet is commonly surrounded with a kind of atmosphere, which again seems to emit from it a fainter light, somewhat resembling the Aurora Borealis. The interior part is called the *nucleus*, and the exterior the *beams*, or *hair*, in Latin *coma*, whence the name comet, or hairy star.

The number of the comets is certainly very considerable. Riccioli enumerates 154, others assert that 450 had been seen previous to the year 1771. The tables of Berlin estimate them at 700; and some have supposed that there are millions.

The brief view we have taken of the *Solar System* is enough to show the *being and providence* of God. When we see a piece of machinery we say, 'the hand of an artist has been here': so when we observe the admirable order and regularity of the motions of the heavenly bodies, which altogether compose one vast machine, of which the Earth itself is but a small part, can we help exclaiming, The finger of God is here! Such order and beauty could never have arisen from chance or accident. 'He who thinks,' says Cicero, 'that it had not its origin in mind and understanding, must himself be desolate thereof.' "Lift up your eyes on high, and behold who hath created these things, that bringeth out their host by number: he calleth them all by names by the greatness of his might, for that he is strong in power; not one faileth."—(Is. xl. 26.)

But though the movements of these bodies be so harmonious and uniform, yet to an inconsiderate observer, they would appear confused and irregular;

and, instead of advancing in their orbit, would appear at times to be fixed; and at other times, to move backward. So it is apparently in the ways of God: to an eye of sense, his work sometimes seems at a stand; his purposes of mercy defeated, and the purposes of his word unfulfilled. But this is the conclusion of Ignorance and Unbelief. Could we see as Jehovah sees, we should perceive that circumstances, seemingly opposite, are under his gracious controul, and will eventuate in the promotion of his glory and the spread of His Son's Kingdom.

Were it possible for us to fix our station in the Sun, we should from thence behold the hosts of heaven moving in their several orbits, without the least, even apparent, confusion. It is entirely owing to the situation in which we are placed, that we can ever imagine there is any thing like irregularity in their motions; and should it be our privilege to "appear with Christ in glory," we shall discern that all the ways of the Lord are right, and we in the wrong, in presuming to judge when we ought to have obeyed; and to reason when we ought to have believed his promise and relied on his word; remembering, that what "we know not now, we shall know hereafter."

His purposes will ripen fast,
Unfolding every hour;
The bud may have a bitter taste,
But sweet will be the flower.

As the planets shine with a borrowed lustre, so does every sincere christian derive his light from the radiant beams of the "Sun of Righteousness;" he should therefore "let his light so shine before men, that they may see his good works and glorify his father which is in heaven."

"Jesus, let all thy lovers shine
Illustrious as the sun;
And, bright with borrow'd rays divine,
Their glorious circuit run;
Beyond the reach of mortals, spread
Their light where'er they go;
And heavenly influences spread
On all the world below."

CORRESPONDENCE.

For the Wesleyan.

ON BIRTH-DAYS.

THE day on which we are born into the world, is one of importance, and deserving of commemoration. Then we became heirs to all the joys and sorrows, the wants and cares, the anxieties and vicissitudes, the hopes and fears, to which human beings are subject:—then commences an existence which is never to terminate, and a responsibility is fixed upon us that can never be shaken off, and which will have an important bearing on every period of our future career, and ultimately issue in future shame and misery or in glory and happiness unspeakable. Whether it is a regard to these considerations, which induce persons to commemorate what are called *birth-days*, is by no means certain:—by the generality such seasons are observed only as seasons of merriment and unrestrained festivity; serious thought is studiously banished, and present, corporeal enjoyment form the summit of every wish. I do not intend to say, that all cheerfulness should be discarded on these occasions, especially by the young; but there are, at such times, feelings and reflections I think, more befitting rational, dying, and responsible beings, than that levity and absence of all serious-mindedness, which generally prevail. Were I permitted to throw out a few hints on this interesting, though perhaps novel, subject, I would say,—

Birth-days should be observed with gratitude to God.

Existence itself, is a cause of thanksgiving; because, if the design of Divine Providence in conferring the gift be not thwarted, it may become the source of unnumbered blessings.