

scribe a retrograde orbit round the Sun. It also follows, from the views thus developed, that the non-appearance, during certain years, in any portion of the Earth, of the two streams hitherto observed in November and about the time of St. Lawrence's day, must be ascribed either to an interruption in the meteoric ring, that is to say, to intervals occurring between the asteroid groups, or, according to Poisson, to the action of the larger planets* on the form and position of this annulus.

The solid masses which are observed by night to fall to the earth from fire-balls, and by day, generally when the sky is clear, from a dark small cloud, are accompanied by much noise, and although heated, are not in an actual state of incandescence. They undeniably exhibit a great degree of general identity with respect to their external form, the character of their crust, and the chemical composition of their principal constituents. These characteristics of identity have been observed at all the different epochs and in the most various parts of the earth in which these meteoric stones have been found. This striking and early-observed analogy of physiognomy in the denser meteoric masses is, however, met by many exceptions regarding individual points. What differences, for instance, do we not find between the malleable masses of iron of Hradschina in the district of Agram, those from the shores of the Sisim in the government of Jeniseisk, rendered so celebrated by Pallas, or those which I brought from Mexico,† all of which contain 96 per cent. of iron, from the aërolites of Siena, in which the iron scarcely amounts to 2 per cent., or the earthy aërolite of Alais (in the Department du Gard), which broke up in water, or, lastly, from those of Jonzac and Juvenas, which contained no metallic iron, but presented a

* "It appears that an apparently inexhaustible number of bodies, too small to be observed, are moving in the regions of space, either around the Sun or the planets, or perhaps even around their satellites. It is supposed that when these bodies come in contact with our atmosphere, the difference between their velocity and that of our planet is so great, that the friction which they experience from their contact with the air heats them to incandescence, and sometimes causes their explosion. If the group of falling stars form an annulus around the Sun, its velocity of circulation may be very different from that of our Earth; and the displacements it may experience in space, in consequence of the actions of the various planets, may render the phenomenon of its intersecting the planes of the ecliptic possible at some epochs, and altogether impossible at others."—Poisson, *Recherches sur la Probabilité des Jugements*, p. 306, 307.

† Humboldt, *Essai Politique sur la Nouv. Espagne* (2de édit.), t. iii. p. 310.