

of the earth. The hypothesis, that they have all originated from the bursting asunder of a planet that once revolved between Mars and Jupiter, is gaining strength, notwithstanding the powerful attack upon it by Leverrier. Professor Alexander, of this country, suggests that the form of this original planet was a mere flattened disk, that flew asunder from its centrifugal force. If so, it is not improbable that those much smaller masses that not unfrequently fall from the heavens, called meteors, had the same origin. If they had, the great problem for astronomers and meteorologists to solve is to make out the series, by discovering asteriods of less and less size, and meteors of larger size. Leverrier suggests that, probably by the close of this century, 100 of the asteriods will have been discovered and described.

Astronomers had demonstrated that the nearest fixed star could not be less than 20 billions of miles from the earth. But they were not satisfied till they could determine the actual distance. I believe that Bessel, of Prussia, was the first who ascertained the annual parallax of a star, viz., 61 Cygni, and found it to be  $0''.3136$ ; that is, the diameter of the earth's orbit, equal 190 millions of miles, as seen from this star, subtends an angle of one third of a second only. From this he deduced its actual distance to be more than 62 billions of miles, (62,481,500,000,000.) Light, travelling from this star at the rate of 200,000 miles per second, would require more than seven years to reach the earth. The parallaxes of other stars have since been ascertained, and some of them are much smaller — not more than the 0.027th of a second. This would make the distance of this star 731,136,000,000,000 miles, and light from it would require 120 years to reach us. What, then, must be the parallax and distance of the telescopic stars! A flash of lightning on the earth would be visible on the moon in a second and a quarter; on the sun, in eight minutes; on