saurait suffire à l'explication des variations signalées par cet astronome"—"that the supposition of intermittent variations in the diaphaneity of the atmosphere would not suffice for the explanation of the changes indicated by that astronomer.

Immediately after the observations of this great astronomer at Paris, and of his friend Fatio de Duillier, an inclination to similar labors showed itself in Indian travelers (Father Noël, De Bèze, and Duhalde); but isolated reports (for the greater part only describing the gratification experienced at the unusual prospect) are not available for the sound discussion of the causes of the variability. It is not by rapid travels or so-called voyages round the world, as the labors of the active Horner have recently shown (Zach, *Monatl. Corresp.*, bd. x., p. 337–340), that the deserved object is to be obtained. It is only by a permanent stay of several years in some tropical country that the problem of variable configuration and luminous intensity can be solved. Therefore, the most is to be expected for the subject which now occupies us, as well as for the entire science of meteorology, from the ultimate diffusion of scientific culture throughout the equinoctial world—the former Spanish America—where large populous towns, Cuzco, La Paz, Potosi, are situated between 10,700 and 12,500 feet above the level of the sea. The numerical results which Houzeau was able to obtain, though certainly based upon only a small number of observations, make it probable that the major axis of the zodiacal light no more coincides with the plane of the Sun's equator, than the vapory mass of the ring whose molecular condition is unknown to us extends beyond the Earth's orbit. (Schum., *Astr. Nachr.*, No. 492.)

V.

FALLING STARS, FIRE-BALLS, AND METEORIC STONES.

Since the spring of 1845, when I published the *Delineations of Nature*, or the general survey of cosmical phenomena, the previous results of the observation of aërolites and periodic streams of falling stars have been abundantly extended and corrected. Much has been subjected to a stricter and more careful criticism, especially the discussion, so important for the whole of this mysterious phenomenon, of the *divergence*, *i. e.*, the situation of the point of departure in the recurring epochs of swarms of falling stars. The number of these epochs, also, of which, for a long time, the *August* and *No-*