

least movement; and a uniformity of their mixture may have taken place in the lapse of ages, unless we believe them to possess a repulsive action of which there is no example in those substances we can subject to our observations. Farther, if we admit the existence of particular aërial fluids in the inaccessible regions of luminous meteors, of falling-stars, bolides, and the Aurora Borealis; how can we conceive why the whole stratum of those fluids does not at once ignite, but that the gaseous emanations, like the clouds, occupy only limited spaces? How can we suppose an electrical explosion without some vapours collected together, capable of containing unequal charges of electricity, in air, the mean temperature of which is perhaps  $25^{\circ}$  below the freezing point of the centigrade thermometer, and the rarefaction of which is so considerable, that the compression of the electrical shock could scarcely disengage any heat? These difficulties would in great part be removed, if the direction of the movement of falling-stars allowed us to consider them as bodies with a solid nucleus, as cosmic phenomena (belonging to space beyond the limits of our atmosphere), and not as telluric phenomena (belonging to our planet only).

Supposing the meteors of Cumana to have been only at the usual height at which falling-stars in general move, the same meteors were seen above the horizon in places more than 310 leagues distant from each other.\* How great a disposition to incandescence must have prevailed on the 12th November, in the higher regions of the atmosphere, to have rendered during four hours myriads of bolides and falling stars visible at the equator, in Greenland, and in Germany!

M. Benzenberg observes, that the same cause which renders the phenomenon more frequent, has also an influence on the large size of the meteors, and the intensity of their light. In Europe, the greatest number of falling stars are seen on those nights on which very bright ones are mingled with very small ones. The periodical nature of the phenomenon augments the interest it excites. There are months in which M. Brandes has reckoned in our temperate zone only sixty or eighty falling-stars in one night; and in other months

\* It was this circumstance that induced Lambert to propose the observation of falling-stars for the determination of terrestrial longitudes. He considered them to be celestial signals seen at great distances.