

tremely fine. From half after two in the morning, the most extraordinary luminous meteors were seen in the direction of the east. M. Bonpland, who had risen to enjoy the freshness of the air, perceived them first. Thousands of bolides and falling stars succeeded each other during the space of four hours. Their direction was very regular from north to south. They filled a space in the sky extending from due east  $30^\circ$  to north and south. In an amplitude of  $60^\circ$  the meteors were seen to rise above the horizon at E.N.E. and at E., to describe arcs more or less extended, and to fall towards the south, after having followed the direction of the meridian. Some of them attained a height of  $40^\circ$ , and all exceeded  $25^\circ$  or  $30^\circ$ . There was very little wind in the low regions of the atmosphere, and that little blew from the east. No trace of clouds was to be seen. M. Bonpland states that, from the first appearance of the phenomenon, there was not in the firmament a space equal in extent to three diameters of the moon, which was not filled every instant with bolides and falling stars. The first were fewer in number, but as they were of different sizes, it was impossible to fix the limit between these two classes of phenomena. All these meteors left luminous traces from five to ten degrees in length, as often happens in the equinoctial regions. The phosphorescence of these traces, or luminous bands, lasted seven or eight seconds. Many of the falling stars had a very distinct nucleus, as large as the disk of Jupiter, from which darted sparks of vivid light. The bolides seem to burst as by explosion; but the largest, those from  $1^\circ$  to  $1^\circ 15'$  in diameter, disappeared without scintillation, leaving behind them phosphorescent bands (trabes) exceeding in breadth fifteen or twenty minutes. The light of these meteors was white, and not reddish, which must doubtless be attributed to the absence of vapour and the extreme transparency of the air. For the same reason, within the tropics, the stars of the first magnitude have, at their rising, a light decidedly whiter than in Europe.

Almost all the inhabitants of Cumana witnessed this phenomenon, because they had left their houses before four o'clock, to attend the early morning mass. They did not behold these bolides with indifference; the oldest among