

For the explanation of what has been said above of the remark of Chinese astronomers on the occasion of their observation of the Comet of March, 837, in the dynasty of Thang, I insert here a translation from Ma-tuan-lin of the verbal statement of the law of direction of the tail. It is said there, "In general, the tail of a comet which is situated eastward from the Sun is directed toward the east, calculating from the nucleus; but if the comet appears to the west of the Sun, the tail turns toward the west."* Fracastoro and Appianus say, still more correctly, "that a line produced through the head of a comet in the direction of the axis of the tail meets the Sun." The words of Seneca are also characteristic: "The tails of comets fly from the Sun's rays." (*Nat. Quæst.*, vii., 20.) While, among the yet known planets and comets, the periods of rotation dependent upon the half-major axis, the *shortest* and the *longest* of the planets, are in the proportion of 1:683, the proportion in the case of the comets is as 1:2670. Mercury (87d·97) is here compared with Neptune

circumstance that, like some other astronomers, he characterizes the first year before the Christian era as *anno 0*. It is to be observed, in conclusion, that Sir John Herschel assumes for the Comet of 1843, seen in full daylight near the Sun, an entirely different period of revolution, one of 175 years, which leads to the years 1668, 1493, and 1318, as the dates of its previous appearances. (Compare *Outlines*, p. 208-372, with Galle, in Olbers's *Cometenbahnen*, p. 208; and *Cosmos*, vol. i., p. 137.) Other combinations by Peirce and Clausen lead to periods of revolution of even $21\frac{4}{3}$ or $7\frac{1}{5}$ years: a sufficient proof how hazardous it is to trace back the Comet of 1843 to the archonship of Asteus. The mention of a comet under the archonship of Nicomachus, in the *Meteorol.*, lib. i., cap. vii., 10, has at least the advantage of showing us that this work was written when Aristotle was at least 44 years of age. It has always appeared to me remarkable that the great man, as he was already 14 years old at the time of the earthquake at Achaia, and of the appearance in Orion of the great comet with a tail 60° in length, should speak with so little animation of so brilliant an object, and content himself with enumerating it among the other comets "which had appeared in his time." The astonishment increases when, in the same chapter, the statement is found that he had seen with his own eyes something misty, even a feeble haza (*κόμεη*), round a fixed star in the hip-bone of the Dog (perhaps Procyon in the small Dog), (*Meteorol.*, i., 6, 9). Aristotle also speaks (i., 6, 11) of his observation of the occultation of a star in Gemini by the disk of Jupiter. With regard to the vaporous or nebulous envelope of Procyon (?), it recalls to my mind a phenomenon of which frequent mention is made in the old Mexican annals according to the *Codex Tellerianus*. "This year," it is said there, "*Citlalcholoa* smoked again;" this is the name of the planet Venus, also called Tlazoteotl in the Aztec language (see my *Vues des Cordillères*, tom. ii., p. 303): this is probably, in the Grecian as well as the Mexican sky, a phenomenon of atmospheric refraction—the appearance of small halos.

* Edward Biot, in the *Comptes Rendus*, tom. xvi., 1843, p. 751.