

character, regarding the most wonderful class of the cosmical bodies belonging to our solar system, ought not to be entirely passed over in this sketch of a general picture of nature.

Although, as a rule, the tails of comets increase in magnitude and brilliancy in the vicinity of the sun, and are directed away from that central body, yet the comet of 1823 offered the remarkable example of two tails, one of which was turned toward the sun, and the other away from it, forming with each other an angle of 160° . Modifications of polarity and the unequal manner of its distribution, and of the direction in which it is conducted, may in this rare instance have occasioned a double, unchecked, continuous emanation of nebulous matter.*

Aristotle, in his *Natural Philosophy*, makes these emanations the means of bringing the phenomena of comets into a singular connection with the existence of the Milky Way. According to his views, the innumerable quantity of stars which compose this starry zone give out a self-luminous, incandescent matter. The nebulous belt which separates the different portions of the vault of heaven was therefore regarded by the Stagirite as a large comet, the substance of which was incessantly being renewed.†

197, 200, 202, und 230. Also in Schumacher, *Jahrb.*, 1837, s. 149, 168. William Herschel, in his observations on the beautiful comet of 1811, believed that he had discovered evidences of the rotation of the nucleus and tail (*Phil. Trans.* for 1812, Part i., p. 140). Dunlop, at Paramatta, thought the same with reference to the third comet of 1825.

* Bessel, in *Astr. Nachr.*, 1836, No. 302, s. 231. Schum., *Jahrb.*, 1837, s. 175. See, also, Lehmann, *Ueber Cometenschweife* (On the Tails of Comets), in Bode, *Astron. Jahrb. für 1826*, s. 168.

† Aristot., *Meteor.*, i., 8, 11-14, und 19-21 (ed. Ideler, t. i., p. 32-34). Biese, *Phil. des Aristoteles*, bd. ii., s. 86. Since Aristotle exercised so great an influence throughout the whole of the Middle Ages, it is very much to be regretted that he was so averse to those grander views of the elder Pythagoreans, which inculcated ideas so nearly approximating to truth respecting the structure of the universe. He asserts that comets are transitory meteors belonging to our atmosphere in the very book in which he cites the opinion of the Pythagorean school, according to which these cosmical bodies are supposed to be planets having long periods of revolution. (Aristot., i., 6, 2.) This Pythagorean doctrine, which, according to the testimony of Apollonius Myndius, was still more ancient, having originated with the Chaldeans, passed over to the Romans, who in this instance, as was their usual practice, were merely the copiers of others. The Myndian philosopher describes the path of comets as directed toward the upper and remote regions of heaven. Hence Seneca says, in his *Nat. Quæst.*, vii., 17: "*Cometes non est species falsa, sed proprium sidus sicut solis et lunæ: altiora mundi secat et tunc demum apparet quum inimum cursum sui venit;*" and again (at vii., 27), "*Cometes æternos esse et sortis ejusdem, cujus cætera*