

light, and color of comets, the emanations from their heads which, bent backward,* form the tails, from the observations of Hensius (1744), Bessel, Struve, and Sir John Herschel. Besides the magnificent Comet of 1843,† which could be seen by Bowring, in Chihuahua (N.W. America), as a small white cloud from nine o'clock in the morning until sunset, and by Amici, in Parma, at full noon, $1^{\circ} 23'$ eastward of the Sun,‡ the first comet of the year 1847, discovered by

* This formation of *the tail* at the *anterior part* of the comet's head, which has occupied Bessel's attention so much, was the opinion of Newton and Winthrop (compare Newton's *Principia*, p. 511, and *Philos. Transact.*, vol. lvii., for the year 1767, p. 140, fig. 5). Newton considered that the tail was developed most considerably and longer near the Sun, because the *cosmical ether* (which we call, with Encke, the *resisting medium*) was the *densest* there, and the *particulæ caudæ*, strongly heated and supported by the ether, ascended more easily. Winthrop considered that the principal effect did not take place until some time after the perihelion passage, because, according to the law established by Newton (*Principia*, p. 424 and 466), the maxima are universally retarded (in periodical changes of heat as well as in ocean tides).

† Arago, in the *Annuaire* for 1844, p. 395. The observation was made by the younger Amici.

‡ With regard to the Comet of 1843, which appeared with unexampled splendor in Northern Europe during the month of March, near Orion, and approached nearer to the Sun than any hitherto observed and calculated comet, all the details are collected in Sir John Herschel's *Outlines of Astronomy*, § 589-597; and in Peirce, *American Almanac* for 1844, p. 42. On account of physiognomical resemblances whose uncertainty was already shown by Seneca (*Nat. Quæst.*, lib. ii., caps. xi. and xvii.), it was at first considered to be identical with the comets of 1668 and 1689 (*Cosmos*, vol. i., p. 139, note; Galle, in Olbers's *Cometenbahnen*, Nos. 42 and 50). Boguslawski (Schum., *Astr. Nachr.*, No. 545, p. 272) believes on the contrary, that its previous appearances were with a revolution of 147 years, those of 1695, 1548, and 1401; he even calls it the *Comet of Aristotle*, "because he traces it back to the year 371 before our era, and, together with the talented Hellenist Thiersch, of Munich, considers it to be a comet which is mentioned in the *Meteorologicis* of Aristotle, book i., cap. vi." But I would call to mind that the name *Comet of Aristotle* is vague and indefinite. If that one is meant which Aristotle states to have disappeared in Orion, and which he connects with the earthquake in Achaia, it must not be forgotten that this comet is stated by Callisthenes to have appeared *before*, by Diodorus *after*, and by Aristotle *at the time* of the earthquake. The sixth and eighth chapters of the *Meteorology* treat of four comets whose epochs of appearance are characterized by the archons at Athens, and by unfortunate events. In this place those are mentioned in order: the *western* comet which appeared on the occasion of the great earthquake at Achaia, accompanied with floods (cap. vii., 8); then the comet which appeared during the time of the Archon Eucles, the son of Molon; afterward (cap. vi., 10) the Stagirite comes again to the *western* comet, that of the great earthquake, and at the same time calls the Archon Asteus—a name which incorrect readings have changed into Aris