

it 23h. 20m., while Bianchini* of Rome, 1726, assumed the slow rotation of $24\frac{1}{3}$ days. More accurate observations by De Vico, from 1840 to 1842, afford, by means of a great number of spots upon Venus, as the mean value of her period of rotation, 23h. 21' 21".93.

These spots are not very distinct, and are mostly variable; they seldom appear at the boundary of the separation between light and shadow in the crescent-shaped phase of the planet, and both the Herschels, father and son, are consequently of opinion that they do not belong to the solid surface of the planet, but more probably to an atmosphere.† The changeable form of the horns of the crescent, especially the southern, has been taken advantage of by La Hire, Schröter, and Mädler, partly for the estimation of the height of mountains, partly and more especially for the determination of the *rotation*. The phenomena of this changeability are of such a nature that they do not require for their explanation the assumption of the existence of mountain-peaks, twenty geographical miles in height (121,520 feet), as Schröter of Lilienthal stated, but merely elevations like those which our planet presents in both continents.‡ With the little that we know with certainty of the appearance of the surfaces of the planets near the Sun, Mercury, and Venus, and their physical constitution, the phenomenon of an ash-colored light, sometimes observed in the dark parts, and

* Delambre, *Hist. de l'Astron. au dixhuitième siècle*, p. 256–258. The result obtained by Bianchini was supported by Hussey and Flaugergues; Hansen also, whose authority is justly so great, considered it to be the more probable until 1836. (Schumacher's *Jahrbuch* for 1837, p. 90.)

† Arago, on the remarkable observation at Lilienthal on the 12th of August, 1700, in the *Annuaire* for 1842, p. 539. "Ce qui favorise aussi la probabilité de l'existence d'une atmosphère qui enveloppe Vénus c'est le résultat optique obtenu par l'emploi d'une lunette prismatique. L'intensité de la lumière de l'intérieur du croissant est sensiblement plus faible que celle des points situés dans la partie circulaire du disque de la planète."—Arago, *Manuscripts* of 1847. "That circumstance which also favors the probability of the existence of an atmosphere surrounding Venus is the optical result obtained by employing a prismatic telescope. The intensity of the light of the interior of the crescent is sensibly weaker than that of the points situated in the circular part of the planet's disk."

‡ Wilhelm Beer and Mädler, *Beiträge zur Physischen Kenntniss der Himmlischen Körper*, p. 148. The so-called moon of Venus, which Fontana, Dominique Cassini, and Short declared that they had seen, for which Lambert calculated tables, and which was said to have been seen in the center of the Sun's disk, full three hours after the egress of Venus, belongs to the astronomical myths of an uncritical age.