

we call great upon the Earth—the elevation crater of *Rocca Monsina*, *Palma*, *Teneriffe*, and *Santorin*—becomes insignificant when compared with *Ptolemy*, *Hipparchus*, and many others of the Moon. *Palma* has only 24,297 feet diameter; *Santorin*, according to Captain *Graves*, new measurement, 33,148 feet; *Teneriffe*, at the utmost, 53,298 feet: consequently, only one eighth or one sixth of the two craters of elevation of the Moon just mentioned. The small crater of the *Peak of Teneriffe* and *Vesuvius* (from 319 to 426 feet in diameter) could scarcely be seen by the aid of telescopes. *The by far greater number* of the annular mountains have no central mountain; and where there is one, it is described as being dome-formed or level (*Hevelius*, *Macrobius*), not as an *erupted cone with an opening*.* The active volcanoes which are stated to have been seen in the right side of the Moon (May 4, 1783); the phenomena of light in *Plato*, which *Bianchini* (August 16, 1725) and *Short* (April 22, 1751) observed, are here mentioned only as of historical interest, since the sources of deception have long been fathomed, and lie in the more powerful reflection of the terrestrial light which certain parts of the surface of our planet throw upon the ash-colored night side of the Moon.†

* *Arzachel* and *Hercules* are supposed to be exceptions: the former to have a crater upon its summit, the second a lateral crater. These points, important in a geognostic point of view, deserve fresh investigation with more perfect instruments. (*Schröter*, *Selenotopographische Fragmente*, th. ii., tab. 44 and 68, fig. 23.) Hitherto no signs have ever been detected of lava streams collected in deep hollows. The *radiated lines* which issue from *Aristoteles* in three directions are ranges of hills. (*Beer* and *Mädler*, p. 236.)

† *Op. cit.*, p. 151. *Arago*, in the *Annuaire* for 1842, p. 526. (Compare also *Immanuel Kant*, *Schriften der Physischen Geographie*, 1839, p. 393–402.) According to recent and more complete investigations, the temporary changes said to have been observed upon the surface of the Moon (the formation of new central mountains and craters in the *Mare Crisium*, *Hevelius*, and *Cleomedes*), are illusions of a similar nature to the supposed volcanic eruptions perceptible to us upon the Moon. (See *Schröter*, *Selenotopographische Fragmente*, th. i., p. 412–523; th. ii., p. 268–272.) The question, what is the smallest object whose height can be measured with the instruments which are at present at our command? is in general difficult to answer. According to the report of *Dr. Robinson* upon the beautiful reflecting telescope of *Lord Rosse*, extents of 220 feet (80 to 90 yards) are discerned with the greatest distinctness. *Mädler* calculates that, in his observations, shadows of 3" were capable of being measured; a length which, under certain presuppositions as to the position of a mountain, and the altitude of the Sun, would indicate a mountain elevation of 120 feet. However, he points out, at the same time, that the shadows must have a certain degree of breadth in order to be visible and measurable. The shadow of the great pyramid of