

ually become possible to construct a topographical chart of the Moon, based upon actual observations; and since, in the opposition, the entire half-side of the Earth's satellite presents itself at the same moment to our investigation, we know more of the general and merely formal connection of the mountain groups in the Moon, than of the orography of a whole terrestrial hemisphere containing the interiors of Africa and Asia. Generally the *darker* parts of the disk are the lower and more level; the *brighter* parts, reflecting much sunlight, are the more elevated and mountainous. Kepler's old description of the two as *sea* and *land* has long been given up; and the accuracy of the explanation, and the opposition, was already doubted by Hevel, notwithstanding the similar nomenclature introduced by him. The circumstance principally brought forward as disproving the presence of surfaces of water on the Moon was, that in the so-called *seas of the Moon*, the smallest parts showed themselves, upon closer examination and very different illumination, to be completely *uneven*, polyhedral, and consequently giving much *polarized* light. Arago has pointed out, in opposition to the arguments which have been derived from the irregularities, that some of these surfaces may, notwithstanding the irregularities, be covered with water, and belong to the bottoms of seas of no great depth, since the uneven, *craggy* bottom of the ocean of our planet is distinctly seen when viewed from a great height, on account of the preponderance of the light issuing from below its surface over the intensity of that which is reflected from it. (*Annuaire du Bureau des Longitudes* for 1836, p. 339-343.) In the work of my friend, which will shortly appear, on astronomy and photometry, the probable absence of water upon our satellite will be deduced from other optical grounds, which can not be developed in this place. Among the low *plains*, the *largest* surfaces are situated in the northern and eastern parts. The indistinctly bounded *Oceanus Procellarum* has the greatest extension of all these, being 360,000 geographical miles. Connected with the *Mare Imbrium* (64,000 square miles), the *Mare Nubium*, and, to some extent, with the *Mare Humorum*, and surrounding insular mountain districts (the *Riphæi*, *Kepler*, *Copernicus*, and the *Carpathians*), this *eastern* part of the Moon's disk presents the most decided contrast to the luminous *south-western* district, in which mountain is crowded upon mountain.* In the northwest region, two basins present them-

* Beer and Mädler, p. 273.