

Several of the propositions contained in the former of these treatises are still necessary to be understood, as fundamental parts of astronomy.

The work of Euclid, just mentioned, is of the same kind. Delambre<sup>47</sup> finds in it evidence that Euclid was merely a book-astronomer, who had never observed the heavens.

We may here remark the first instance of that which we shall find abundantly illustrated in every part of the history of science; that man is *prone* to become a deductive reasoner;—that as soon as he obtains principles which can be traced to details by logical consequence, he sets about forming a body of science, by making a system of such reasonings. Geometry has always been a favorite mode of exercising this propensity: and that science, along with Trigonometry, Plane and Spherical, to which the early problems of astronomy gave rise, have, up to the present day, been a constant field for the exercise of mathematical ingenuity; a few simple astronomical truths being assumed as the basis of the reasoning.

#### *Sect. 9.—The Globular Form of the Earth.*

THE establishment of the globular form of the earth is an important step in astronomy, for it is the first of those convictions, directly opposed to the apparent evidence of the senses, which astronomy irresistibly proves. To make men believe that *up* and *down* are different directions in different places; that the sea, which seems so level, is, in fact, convex; that the earth, which appears to rest on a solid foundation, is, in fact, not supported at all; are great triumphs both of the power of discovering and the power of convincing. We may readily allow this, when we recollect how recently the doctrine of the *antipodes*, or the existence of inhabitants of the earth, who stand on the opposite side of it, with their feet turned towards ours, was considered both monstrous and heretical.

Yet the different positions of the horizon at different places, necessarily led the student of spherical astronomy towards this notion of the earth as a round body. Anaximander<sup>48</sup> is said by some to have held the earth to be globular, and to be detached or suspended; he is also stated to have constructed a sphere, on which were shown the extent of land and water. As, however, we do not know the arguments upon which he maintained the earth's globular form, we cannot judge of the

<sup>47</sup> *Ast. Anc.* p. 58.

<sup>48</sup> See Brucker, *Hist. Phil.* vol. i. p. 486.