

be calculated to derange their action, or to destroy the planet itself. Our first object, therefore, must be to ascertain the celestial relations of the earth as a member of the universe.

#### THE FORM AND DIMENSIONS OF THE EARTH.

From a casual examination of external phenomena, an observer would probably be led to the conclusion, that the earth is an extended plane. This opinion was long entertained by the illiterate, and in different periods of the history of science was believed and taught by the learned. Fabricius, in his "Bibliotheca Græca," gives an account from Photius and others, of the theory proposed by Cosmas Indopleustes, which greatly resembles the systems once taught in the Hindus and Egypt. This theorist maintained that the earth was an immense plane, surrounded by an impassable ocean. A conical mountain was supposed to be situated towards the north, and the sun and stars to perform their diurnal revolutions round it, the sun itself having an oblique motion. By this wild conjecture, he explained the unequal length of day and night, and the variation of the seasons; and accounted for the motion of the heavenly bodies by the assertion, that they are carried round in their courses by celestial spirits.

It is almost impossible to determine the influence of an erroneous theory in retarding the progress of scientific knowledge, and in delaying those benefits which that knowledge confers upon society. When error is cherished as truth, the mind has no incitement to investigation; but, being satisfied with the false opinion, exerts its ingenuity and intelligence to sustain it in the esteem of others. It is a proverbial remark, that first impressions are the strongest; and it must be admitted, that it is more difficult to destroy a belief in a false principle than to discover truth. But this difficulty becomes still greater when the public has adopted the erroneous opinion, and to correct it requires a mind that has sufficient daring to disregard the sentiments of others, and to appeal to posterity rather than its contemporaries. But it must not be forgotten, that erroneous theoretical principles prevent the practical results which may always be expected to follow the establishment of scientific truth. Had the hypothesis of Cosmas Indopleustes maintained its influence over the public mind, it would have prevented men from