might be represented by obvious modifications of those theories. I speak of new Inequalities, new Phenomena, such as Copernicus, Galileo, and Tycho Brahe discovered. As, however, these were very soon referred to the Copernican rather than the Ptolemaic hypothesis, they may be considered as developments rather of the new than of the old Theory; and I shall, therefore, treat of them, agreeably to the plan of the former part, as the sequel of the Copernican Induction.

CHAPTER I.

Prelude to the Inductive Epoch of Copernicus.

THE Doctrine of Copernicus, that the Sun is the true centre of the celestial motions, depends primarily upon the consideration that such a supposition explains very simply and completely all the obvious appearances of the heavens. In order to see that it does this, nothing more is requisite than a distinct conception of the nature of Relative Motion, and a knowledge of the principal Astronomical Phenomena. There was, therefore, no reason why such a doctrine might not be *discovered*, that is, suggested as a theory plausible at first sight, long before the time of Copernicus; or rather, it was impossible that this guess, among others, should not be propounded as a solution of the appearances of the heavens. We are not, therefore, to be surprised if we find, in the earliest times of Astronomy, and at various succeeding periods, such a system spoken of by astronomers, and maintained by some as true, though rejected by the majority, and by the principal writers.

When we look back at such a difference of opinion, having in our minds, as we unavoidably have, the clear and irresistible considerations by which the Copernican Doctrine is established *for us*, it is difficult for us not to attribute superior sagacity and candor to those who held that side of the question, and to imagine those who clung to the Ptolemaic Hypothesis to have been blind and prejudiced; incapable of seeing the beauty of simplicity and symmetry, or indisposed to resign established errors, and to accept novel and comprehensive truths. Yet in judging thus, we are probably ourselves influenced by prejudices arising from the knowledge and received opinions of our own times. For is it, in reality, clear that, before the time of Copernicus, the *Helio-*