

# BOOK VII.

---

## PHYSICAL ASTRONOMY.

---

### CHAPTER I.

#### PRELUDE TO NEWTON.

---

##### *The Ancients.*

EXPRESSIONS in ancient writers which may be interpreted as indicating a notion of gravitation in the Newtonian sense, no doubt occur. But such a notion, we may be sure, must have been in the highest degree obscure, wavering, and partial. I have mentioned (Book i. Chap. 3) an author who has fancied that he traces in the works of the ancients the origin of most of the vaunted discoveries of the moderns. But to ascribe much importance to such expressions would be to give a false representation of the real progress of science. Yet some of Newton's followers put forward these passages as well deserving notice; and Newton himself appears to have had some pleasure in citing such expressions; probably with the feeling that they relieved him of some of the odium which, he seems to have apprehended, hung over new discoveries. The Preface to the *Principia* begins by quoting<sup>1</sup> the authority of the ancients, as well as the moderns, in favor of applying the science of Mechanics to Natural Philosophy. In the Preface to David Gregory's *Astronomiæ Physicæ et Geometricæ Elementa*, published in 1702, is a large array of names of ancient authors, and of quotations, to prove the early and wide diffusion of the doctrine of the gravity of the Heavenly Bodies. And it appears to be now made out, that this collection of ancient authorities

---

<sup>1</sup> Cum veteres *Mechanicam* (uti author est *Pappus*), in rerum Naturalium investigatione maximi fecerint, et recentiores, missis formis substantialibus et qualitatibus occultis, Phenomena Naturæ ad leges mathematicas revocare aggrossa sunt; visum est in hoc Tractatu *Mathesin* excolere quatenus ea ad *Philosophiam* spectat.