

THE REALMS OF SPACE, AND CONJECTURES REGARDING THAT WHICH APPEARS TO OCCUPY THE SPACE INTERVENING BETWEEN THE HEAVENLY BODIES.

THAT portion of the physical description of the universe which treats of what occupies the distant regions of the heavens, filling the space between the globular cosmical bodies, and is imperceptible to our organs, may not unaptly be compared to the mythical commencement of ancient history. In infinity of space as well as in eternity of time, all things are shrouded in an uncertain and frequently deceptive twilight. The imagination is here doubly impelled to draw from its own fullness, and to give outline and permanence to these indefinite changing forms.* This observation will, I trust, suffice to exonerate me from the reproach of confounding that which has been reduced to mathematical certainty by direct observation or measurement, with that which is founded on very imperfect induction. Wild reveries belong to the romance of physical astronomy; yet the mind familiar with scientific labors delights in dwelling on subjects such as these, which, intimately connected with the present condition of science, and with the hopes which it inspires, have not been deemed unworthy of the earnest attention of the most distinguished astronomers of our day.

By the influence of gravitation, or general gravity, as well as by light and radiating heat,† we are brought in contact, as we may with great probability assume, not only with our own Sun, but also with all the other luminous suns of the firmament. The important discovery of the appreciable resistance which a fluid filling the realms of space is capable of opposing to a comet having a period of revolution of five years, has been perfectly confirmed by the exact accordance of numerical relations. Conclusions based upon analogies may fill up a portion of the vast chasm which separates the certain results of a mathematical natural philosophy from conjectures verging on the extreme, and therefore obscure and barren confines of all scientific development of mind.

From the infinity of space—an infinity, however, doubted

* *Cosmos*, vol. i., p. 87. (Compare the admirable observations of Encke, *Ueber die Anordnung des Sternsystems*, 1844, s. 7.)

† *Cosmos*, vol. i., p. 154, 155.