

## CONCLUSION.

IN concluding the *uranological* part of the *physical description of the universe*, in taking a retrospect of what I have *attempted* (I do not say *accomplished*), after the execution of so difficult an undertaking, I think it necessary once more to call to mind that this execution could have been effected only under those conditions which have been indicated in the *Introduction* to the third volume of *Cosmos*. The attempt to carry out such a cosmical treatment of the subject is limited to the representation of space and its material contents, whether aggregated into spheres or not. The character of the present work differs, therefore, essentially from the more comprehensive and excellent *elementary works on astronomy* which the various literatures of modern times possess. *Astronomy*, as a science, the triumph of mathematical reasoning, based upon the sure foundation of the doctrine of gravitation and the perfection of the higher analysis (a mental instrument of investigation), treats of *phenomena of motion* measured according to *space* and *time*; locality (position) of the cosmical bodies in their mutual and perpetually-varying relations to each other; *change of form*, as in the *tailed comets*; *change of light*, as the *sudden appearance* or total *extinction* of the *light* of distant suns. The quantity of matter present in the universe remains always the same; but from what has already been discovered in the telluric sphere of physical laws of nature, we see working in the eternal *round of material phenomena* an ever-unsatisfied *change*, presenting itself in numberless and nameless *combinations*. Such an exercise of force by matter is called forth by its at least apparent *heterogeneity*. Exciting *motion in immeasurably minute spaces*, this heterogeneity of matter complicates all the problems of *terrestrial phenomena*.

The *astronomical* problems are of a simpler nature. Hitherto unencumbered by the above-mentioned complications, directed to the consideration of the *quantities* of ponderable matter (*masses*), to the *oscillations* producing *light* and *heat*—the *mechanics of the heavens* has, precisely on account of this simplicity, in which every thing is reduced to