

plan of creation, and the nature of the formation of the planets, they have all a translatory and rotatory motion in one direction ; that this motion takes place in orbits of slight and but little varying ellipticity, in planes of moderate differences of inclination ; and that the periods of the planetary revolutions have among each other no common measure. Such elements of stability, as it were the maintenance and duration of the planets' existence, are dependent upon the condition of mutual action with a separate circle. If, by the entry of a cosmical body *coming from without*, and not previously belonging to the planetary system, that condition was disturbed (Laplace, *Expos. du Syst. du Monde*, p. 309 and 391), then this disturbance, as the consequence of new attractive forces, or of a collision, might certainly become destructive to the existing system, until finally, after long conflict, a new equilibrium was produced. The arrival of a comet upon an hyperbolic orbit from a great distance, even when want of mass is made up for by immense velocity, can excite apprehension only in an imagination which is not susceptible of the earnest assurances of the calculation of probabilities. The wandering clouds of the *interior comets* are not more dangerous to our solar system than the great inclination of the orbits of some of the *small planets* between Mars and Jupiter. Whatever must be characterized as mere probability, lies beyond the domain of a *physical* description of the universe ; science must not wander into the cloud-land of cosmological dreams.