

of rotation, shows that this axis has been the same ever since the crust of the earth attained its present solid form.

Assuming that the whole materials of the globe may have once been in a fluid, or even a nebular state,\* from the presence of intense heat, the passage of the first consolidated portions of this fluid, or nebulous matter, to a solid state may have been produced by the radiation of heat from its surface into space; the gradual abstraction of such heat would allow the particles of matter to approximate and crystallize; and the first result of this crystallization might have been the formation of a shell or crust, composed of oxidated metals and metalloids, constituting various rocks of the granitic series, around an incandescent nucleus, of melted matter, heavier than granite; such as forms the more weighty substance of basalt and compact lava.

It is now unnecessary to dwell on controversies which have prevailed during the last half century, respecting the origin of this large and important class of unstratified crystalline rocks,

\* The nebular hypothesis offers the most simple, and therefore the most probable theory, respecting the first condition of the material elements that compose our solar system. Mr. Whewell has shown how far this theory, supposing it to be established, would tend to exalt our conviction of the prior existence of some presiding Intelligence.—Bridgewater Treatises, No. III. Chap. vii.