

and it is not surprising that crystals of quartz occur in Carrara marble. In volcanic productions, this pressure no longer exists, and we should find among these the same phenomena which our laboratories and metallurgic operations present. Following this theory, the circumstances that primitive mountains contain gypsum and carbonates, and that water occurs in quartz, very readily admit of explanation. And with regard to this latter phenomenon, the observations detailed by Sir Humphry Davy afford an additional confirmation of the theory in question.

We may explain in the same manner another phenomenon, which is more in connection with the present state of our globe. Many observations shew that the sea stood formerly at a much higher level than it does at present. The water of the sea expands, if the temperature be elevated more than the land. Admitting that the surface of the earth has a temperature of  $80^{\circ}$  of Reaumur, and that the mean depth of the sea may be 96,000 feet, the height of the sea would then be 4000 feet higher than it is at present. If we suppose, as may be done without committing any great error, that the expansion of the primitive mountains is equal to that of glass, and that they have been at a temperature of  $200^{\circ}$ , and even at a much lower one, the water of the sea would cover the secondary mountains, in which we find the remains of marine animals. This explanation of the former height of the sea appears very simple, because the elevated temperature of the earth may have resulted either from its original state of fluidity, or from a geological revolution, which has destroyed, at the same time, the organic beings of a former period.