

Pressure-Volume Properties of Two Apollo-12 Basalts*

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ABSTRACT

Two vesicular basalts from Apollo 12, 12002,180 and 12022,62 were measured under hydrostatic pressures to 4 kbar in a fluid pressure medium and 40 kbar in a quasihydrostatic pressure medium. Compressibilities obtained by the two methods are presented and compared. The compressibilities of the Apollo 12 basalts are qualitatively similar to that of Apollo 11 basalts; for example, the compressibility of rock 12022 is very high initially, about 18 mb^{-1} , and decreases by more than a factor of five in 2 kbar. Above 2 kbar, the compressibility decreases much more slowly with pressure. Porosity persists to high pressures in the Apollo 12 basalts in an analogous manner to the Apollo 11 samples.

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