

Effects of the onset of partial melting on compressional wave velocity of peridotite

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Partial melting has an important influence on the physical properties in the Earth's interior. The low velocity zones identified in seismic observations beneath the mid-ocean ridge and subduction zone, have been partly responsible for the presence of partial melts. The effect of partial melting on elastic properties is thus essential to understanding the deep structure of the Earth's mantle. I report the compressional wave velocity in a peridotite at 1 GPa and up to solidus temperature, which provide a basis for evaluating the effect of the onset of partial melting on seismic wave velocity.

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