

Current Understanding of the Earth's Core

Sunday, 31 July 2022 11:00 (25 minutes)

The Earth's core may be divided into two main regions: a solid inner core; and a liquid outer core. At the base of the outer core is a seismologically anomalous layer, likely denser than the liquid above. There may also be a low-density layer at the top of the outer core. The solid inner core is divided into two regions: a seismically anisotropic inner zone, and an isotropic layer on top. Although mainly composed of Fe, the core also contains ~5% Ni and one or more light elements. Light element candidates include C,S,Si,O and H. Of these, O is almost certainly present; S or Si are plausible; and C and H are considered less likely. The core may also contain small amounts of noble gases. Radioactive K in the core could affect its cooling history, but current estimates suggest a core K concentration of ~30ppm - too small to have a significant effect.

Attendance type

Virtual presentation

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