

THE EARTH'S MAGNETIC FIELD AND ITS DYNAMO ORIGIN

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The Earth's magnetic field is powered by convection occurring in its fluid outer core. Variations in the intensity of core convection over geological time are believed to cause the highly dynamic behaviour of the geomagnetic field, which includes excursions and occasional polarity reversals. Although numerical models of the geodynamo operate in regimes far from that in the Earth's core, they reproduce the dipole-dominated structure of the field in a large region of the parameter space as well as reversals in strongly driven convection.
