



The LPO Iron Pattern beneath the Earth's Inner Core Boundary

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An Earth's inner core surface pattern for the iron Lattice Preferred Orientation (LPO) has been addressed for various iron crystal polymorphs. The geographical distribution of the amount of crystal alienation was achieved by bridging high-quality inner core probing seismic data [PKP(bc-df)] together with ab initio computed elastic constants. We show that the proposed topographic crystal alignment may be used as a boundary condition for dynamo simulations, providing an additional way to discriminate in between different and, often controversial, geodynamical scenarios.