Geophysical Research Abstracts Vol. 14, EGU2012-11638-1, 2012 EGU General Assembly 2012 © Author(s) 2012



Bayesian inversion of the flow at the Earth's Core Mantle Boundary

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The inverse problem of determining the flow at the Earth's core Mantle Boundary, knowing the Magnetic field and the secular variation, is tackled using a Bayesian formalism. The inversion which is carried out in physical space, is applied to the filtered induction equation where a model to approximate the interactions between the large (resolved) scales and the small (unresolved) scales of the magnetic and velocity fields has been derived.