

Helioseismic Probing of Solar Dynamo Flows

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According to theoretical predictions, the solar dynamo operating in the convection zone generates maximum magnetic fields of about 10^5 G near the tachocline. Detection of a field of this amplitude is a challenging task for helioseimology. We discuss the requirements and previous attempts to detect the magnetic field near the tachocline. It would be easier, however, to detect the flows that drive the dynamo. We describe the flow parameters related to the distribution and amplitude of the magnetic field generated at the bottom of the convection zone. We present the requirements for measurement of these parameters using ground-based and space helioseismic techniques.