

# **MHD Solutions for Solar Type Convective Envelopes**

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It is thought that the magnetic field responsible for the solar activity is stored in the base of the convective zone. Applying this knowledge to the lower part of the convection zone in the Sun our objective was to investigate some magnetohydrodynamical (MHD) solutions. A first order perturbation approximation was used in order to calculate the small perturbations on the physical parameters, such as density, pressure, temperature and sound speed of a Standard Solar Model (SSM) excluding both rotation and magnetic field (Christensen-Dalsgaard et al., 1996) in the unperturbed equilibrium case. The validity of each approximation is tested and examined from the SSM. The MHD results thus obtained are presented graphically and compared with those of the SSM. The same method can be generalised to other stars with magnetic field and solar type outer convective layer.