

*Hinode-3: 3rd Hinode Science Meeting  
Hitotsubashi Memorial Hall, Tokyo  
1-4 December, 2009*

## **A possible roles of Magneto-Rotational Instability in the solar interior**

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**Abstract.** We investigated possible roles of Magneto-Rotational Instability (MRI) in the solar interior by using theoretical and numerical procedures. It is found from our study that the MRI can be active in two specific solar internal regions: One is the lower latitudinal near-surface layer, and the other is the higher latitudinal tachocline region. The nonlinear simulation of the MRI suggests that the MRI-amplified magnetic field reaches the turbulent state with the Komogolov-type spectrum and then saturates after the magnetic energy being amplified at least to a few percent of the rotataional energy. Our results suggest that MRI would be a promissing candidate for driving the turbulent magnetic fields in the quiet region of the SUN and for the anisotropic heating source in the tachocline region.