

Abstract Submitted  
for the DPP11 Meeting of  
The American Physical Society

**Dynamics of torsional oscillations in the solar convective zone**  
PATRICE BEAUDOIN, Université de Montréal, GRPS (SOLAR PHYSICS RESEARCH GROUP) TEAM — In this presentation I will discuss the dynamics of torsional oscillations arising in a magnetohydrodynamical simulation of solar convection producing solar-like polarity reversals of its large-scale axisymmetric magnetic component. I will show that the driving of these oscillations arises not only through periodic variations of the Lorentz force associated with the cycling large-scale magnetic component, but also through magnetically-mediated changes in the other forces controlling the azimuthal dynamics, namely Reynolds stresses, Coriolis force, and Maxwell stresses associated with the small-scale turbulent magnetic component. To this end, various characterizations of the components will be displayed : angular momentum fluxes, force densities and power densities. I will also compare and contrast the properties of these oscillations with their solar counterparts, as measured by helioseismology.

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Date submitted: 13 Jul 2011

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