

## Soutenance d'Habilitation à Diriger des Recherches



### **MRI-DRIVEN MHD TURBULENCE IN PROTOPLANETARY DISKS : PROPERTIES AND CONSEQUENCES**

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**Jeudi 19 septembre 2013**

**11h00**

Understanding the mechanisms that govern the radial transport of angular momentum in gaseous accretion disks has been the main focus of research in accretion disks theory during the past forty years. It is now believed that accretion is largely driven by the action of magnetohydrodynamic turbulence. Yet, many problems remain. This is particularly true for protoplanetary disks where the coupling between gas and magnetic field is weak, enhancing the effects of dissipative processes. The structure of protoplanetary disks that results is not without consequences for the formation of planetary systems like our own.

In this presentation, I will review the last decade of research activity in that field. Our current understanding of MHD turbulence in protoplanetary disks will be discussed at length. I will then describe a few astrophysical consequences of these properties, like the content of some of the oldest meteorites found in the solar system. As will become obvious during the presentation, progress in that field can be largely attributed to the tremendous increase in computational resources of the past few years and I will also emphasize the limits of the massive simulations we can now perform.

Vous êtes cordialement invités au pot qui suivra la présentation

**Cette soutenance aura lieu au CEA Saclay – Orme des Merisiers  
Bât 713 C – Salle Galilée**