



SEMINAIRE régulier du Service d'Astrophysique

EXCITING WAVES AND MODES IN BLACK-HOLE ACCRETION DISKS AND OTHER ASTROPHYSICAL ROTATING FLOWS

Dong LAI
(Cornell University)

Mardi 22 juin 2010

11h00

I will review recent works on the wave dynamics of black-hole accretion disks, focusing on global disk instabilities and wave modes trapped in the inner disk region. I will explain the role of wave super-reflection and wave absorption at the corotation resonance, as well as how general relativistic effects may help to drive these modes unstable. The effects of disk magnetic field will be emphasized.

Applications to the quasi-periodic oscillations observed in accreting black hole systems will also be discussed. Similar physics are also important for other astrophysical problems involving rotating flows, such as the rotational instability in young neutron stars and planet migration in magnetized disks.



Un café sera servi 15 minutes avant le séminaire

Ce séminaire aura lieu au CEA Saclay – Orme des Merisiers –bâtiment 709, Salle 003.