

Department of Physics Colloquium



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Taming Turbulence in Magnetized Plasmas

From Plasmas for Fusion Energy to Black Hole Accretion Disks

Plasmas in the laboratory and in astrophysical settings vary widely in parameters (e.g. temperature and density) but have one thing in common: they are plagued by instability. Instabilities and associated turbulence are detrimental in laboratory plasmas for fusion energy research, causing heat, particles and momentum to “leak” across the confining magnetic field. In astrophysical plasmas like accretion disks, turbulence is often essential to explain observed rates of momentum transport and accretion. I will talk about instabilities and turbulence in magnetized plasmas and their relevance to achieving magnetic confinement fusion in the laboratory and understanding processes in astrophysical plasmas.



Friday, October 2, 2015

3:30 pm | 2241 Chamberlin Hall