

Physics Department Alumni Seminar

Friday October 15th, 2010

12:00 pm in PHSC 108

The role of magnetic fields in stellar evolution

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Abstract:

A stellar object grows by gathering matter from the weakly ionized dust that surrounds it into a structure called an accretion disk. For matter to fall out of orbit and onto the central object it must reduce its angular momentum. Calculations show that the angular momentum transfer from collisions is orders of magnitude too slow to explain measured rates of accretion. We will discuss the theoretical and experimental search for a dramatic enhancement of this transport process induced by the interaction of the accretion disk plasma with a background magnetic field.

