

Physics & Space Sciences department presents:



## **Numerical Modeling of Planetary Atmospheres**

This presentation will review our current knowledge and research on various processes related to planetary atmospheric physics and dynamics. The data obtained from spacecraft and ground based observations in recent years has increased our knowledge about atmospheric phenomena, but with the growing body of data the number of unanswered questions has also increased. Comparative planetology seeks basic concepts and unifying principles in these observations that different planets share. By identifying these common themes and studying the similarities and contrasts that planets exhibit, we can learn more about the underlying processes.

Advances in computer technology make it possible to carry out more and more complex and realistic simulations using numerical modeling. In these experiments we study a variety of atmospheric phenomena that are not accessible to scientists by any other type of investigation but are tightly constrained by observations. The models provide a framework, a computational laboratory, in which we can validate theories regarding the physics, dynamics and chemistry of the atmospheres of gas giants, exoplanets, and Earth itself. In this presentation, I will show details of our models and the latest results from our Jovian simulations and also discuss plans for future research.



Dr. Csaba Palotai  
University of Central Florida

**Friday, February 22, 2013**

**4:00—5:00 PM**

**OPS Room 140**

**Students: Come meet Dr. Csaba Palotai Friday from 3:00 – 4:00 pm in Room 140.**