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Tuesday, July 29, 2014

KNOWLEDGE GAPS, GOALS AND PRIORITIES I

8:30 a.m. E100

Chairs: Brigette Hesman
Mark Showalter

8:30 a.m. Mousis O. *  [Mousis_2035]
Clues to the Formation of the Uranian System from Existing Elemental and Isotopic Measurements [#2035]

9:10 a.m. Hedman M. M. *  French R. G. McGhee-French C.  [Hedman_2013]
What can Uranus’ Rings Tell Us About Uranus’ Internal Structure? [#2013]
We will review the current state of knowledge regarding the shapes and dynamics of Uranus’ narrow rings, and how current and future observations could provide data on the rings’ dynamical environment and the planet’s internal structure.

Uranus Atmospheric Model for Engineering Application [#2001]
Trajectory simulation of an entry vehicle requires an atmospheric model based upon current scientific understanding. A new engineering atmospheric model based upon Voyager-2 data was developed for Uranus that could be used for entry simulations.

9:50 a.m. Zalucha A. M. *  Michaels T. I.  [Zalucha_2017]
A General Circulation Model of Triton’s Atmosphere [#2017]
We have developed a general circulation model of Triton’s atmosphere. This model predicts the wind, as well as temperature and surface pressure, on Triton. The results are compared to Voyager 2 and stellar occultation observations.

10:10 a.m. Coffee Break

10:40 a.m. Soderlund K. M. *  Aurnou J. M.  [Soderlund_2022]
Modeling the Internal Dynamics and Magnetic Fields of Ice Giant Planets [#2022]
We use numerical models of rotating convection and dynamo action to simulate the internal dynamics of ice giant planets and how they may explain the observed magnetic fields, zonal flows and internal heat flux patterns.