

Monday, March 19, 2012
SPECIAL SESSION: A SEASON IN THE SATURN SYSTEM II
2:30 p.m. Waterway Ballroom 1

Chairs: Linda Spilker
Jani Radebaugh

- 2:30 p.m. Matson D. L. * Johnson T. V. Davies A. G. Castillo-Rogez J. C. Lunine J. I.
[*Enceladus' Gas Budget and Ocean Temperature*](#) [#2411]
 The relationships between water, carbon dioxide, and heat in Enceladus are used to obtain the temperatures of water in the plume-formation chambers and in the subsurface ocean.
- 2:45 p.m. Blackburn D. G. * Goguen J. D. Buratti B. J. Clark R. N. Howell R. R. Spencer J. R.
[*Detection of Thermal Emission from Enceladus' Tiger Stripes with Cassini VIMS*](#) [#1532]
 We announce the detection of thermal emission from Damascus and Cairo with the Cassini VIMS in the 4–5 μm region of the spectrum. These new spectra put strong constraints on the emitting area at the hottest temperatures.
- 3:00 p.m. Ducci M. * Iess L. Armstrong J. W. Asmar S. W. Jacobson R. A. Lunine J. I.
 Racioppa P. Rappaport N. J. Stevenson D. J. Tortora P.
[*The Geodesy of the Main Saturnian Satellites from Range Rate Measurements of the Cassini Spacecraft*](#) [#2200]
 During Cassini's eight-year tour in the saturnian system, the gravity field of the main satellites was inferred from range rate measurements of the spacecraft. Here we present our latest results and an overview of our analysis methods.
- 3:15 p.m. Hendrix A. R. * Buratti B. J.
[*Multi-Wavelength Photometry of the Icy Saturnian Satellites*](#) [#2722]
 We present an analysis of solar phase curves of Enceladus and Dione as measured by Cassini UVIS and VIMS. Results have implications for surface scattering properties and effects from exogenic processes.
- 3:30 p.m. Waite J. H. Jr. * Bell J. M. Lorenz R. Achterberg R. Flasar F. M.
[*A New Titan Atmospheric Model for Mission Engineering Applications*](#) [#1232]
 Titan's polar regions and hydrocarbon lakes are of interest for future exploration. This paper describes a new engineering model of Titan's atmospheric structure with particular reference to the proposed Titan Mare Explorer mission.
- 3:45 p.m. Castillo-Rogez J. C. * Lunine J. I.
[*Tidal Response of Titan's Interior Models Consistent with Cassini-Derived Constraints*](#) [#1707]
 The goal of this paper is to identify to what extent tidal Love number and dissipation factor data can help distinguish between the models proposed so far to explain Titan's moment of inertia derived from Cassini Radio Science observations.
- 4:00 p.m. Radebaugh J. * Le Gall A. Barnes J. W. Lorenz R. D. Lunine J. I.
 Kirk R. L. Cassini Radar Team
[*Stabilized Dunes on Titan Indicate Changes in Climate and Surface Processes*](#) [#2224]
 Dune-like landforms, similar in morphology but not radar backscatter to dunes, have been detected at Titan's mid-high latitudes. We propose they are dunes that were once active but are now immobilized by more recent surface deposits.

- 4:15 p.m. Neish C. D. * Kirk R. L. Lorenz R. D. Bray V. J. Schenk P. Stiles B. Turtle E. Cassini Radar Team
[*Crater Topography on Titan: Implications for Landscape Evolution*](#) [#2412]
Titan crater depths / Shallower than Ganymede / Like whatever, man.
- 4:30 p.m. Kirk R. L. * Howington-Kraus E. Redding B. Callahan P. S. Hayes A. G. LeGall A. Lopes R. M. C. Lorenz R. D. Lucas A. Mitchell K. L. Neish C. D. Aharonson O. Radebaugh J. Stiles B. W. Stofan E. R. Wall S. D. Wood C. A. Cassini Radar Team
[*Topographic Mapping of Titan: Latest Results*](#) [#2759]
High resolution topomapping of Titan's surface reveals a mystery among the dunes and a fresh central peak crater. High precision elevations on the shores of Ligeia Mare and a host of maps of the southern hemisphere are in the works.