

Thursday, March 17, 2005

SPECIAL SESSION

CASSINI AT SATURN III: TITAN SURFACE, RINGS, AND ICY SATELLITES

1:30 p.m. Salon B

Chairs: L. J. Spilker  
T. V. Johnson

- 1:30 p.m. Stofan E. R. \* Elachi C. Lopes R. M. Lorenz R. D. Kirk R. L. Paganelli F. Wood C. A. Wall S. D. Lunine J. Soderblom L. A. RADAR Science Team  
*Mapping of Titan: First Results from the Cassini RADAR* [#1714]  
The first Synthetic Aperture Radar swath across the surface of Titan has revealed a surprisingly complex surface.
- 1:45 p.m. Lopes R. M. \* Elachi C. Stofan E. Paganelli F. Wood C. Kirk R. L. Lorenz R. D. Fortes A. D. Lunine J. Wall S. D. Cassini RADAR Team  
*Cryovolcanic Features on Titan's Surface as Revealed by the Cassini RADAR* [#1885]  
The Cassini RADAR obtained SAR images of about 1.1% of Titan's surface during the spacecraft's fly-by on October 26, 2004. These revealed surface features that are interpreted as the result of cryovolcanism, including extensive flows. New results from the T3 flyby will also be discussed.
- 2:00 p.m. Paganelli F. \* Elachi C. Lopes R. M. West R. Stiles B. Janssen M. A. Stofan E. R. Wood C. A. Lorenz R. D. Lunine J. Kirk R. L. Roth L. E. Wall S. D. Soderblom L. A. Cassini RADAR Science Team  
*Channels and Fan-like Features on Titan Surface Imaged by the Cassini RADAR* [#2150]  
Cassini's SAR data of Titan's surface show fan and flow features, sinuous and linear channels. SAR-bright return suggests surface roughness at the scale and bigger than Ku-band, and possible volume scattering. Correlation of SAR-bright and radiometric cold regions has been observed.
- 2:15 p.m. Wood C. A. \* Lopes R. M. Stofan E. R. Paganelli F. Elachi C.  
*Impact Craters on Titan? Cassini RADAR View* [#1117]  
The first Cassini RADAR image of Titan has revealed no certain impact craters, implying a very young surface. However, a 100-km scale possible two-ring impact basin, if real, suggests differential preservation of large features.
- 2:30 p.m. Lanagan P. D. \* Smith P. H. Tomasko M. G. Doose L. R. Rizk B.  
*DISR Observations of Craters at Titan at the Huygens Landing Site: Insights Anticipated* [#2065]  
Observations of Titan's impact craters near the Huygens landing site as observed by DISR and their implications for Titan will be discussed.
- 2:45 p.m. Spilker L. J. \* Pilorz S. H. Wallis B. D. Brooks S. M. Edgington S. G. Flasar F. M. Pearl J. C. Showalter M. R. Ferrari C. Achterberg R. K. Nixon C. A. Romani P. N. Cassini CIRS Team  
*Cassini CIRS Observations of Saturn's Rings* [#1912]  
The Cassini Composite Infrared Spectrometer (CIRS) acquired thermal spectra of Saturn's rings. CIRS retrieved temperatures for the lit and unlit sides of the rings from 7  $\mu\text{m}$  to 1 mm, including measurements across the ring shadow boundaries.
- 3:00 p.m. Denk T. \* Neukum G. Roatsch T. McEwen A. S. Turtle E. P. Thomas P. C. Helfenstein P. Wagner R. J. Porco C. C. Perry J. E. Giese B. Johnson T. V. Veverka J. Cassini ISS Team  
*First Imaging Results from the Iapetus B/C Flyby of the Cassini Spacecraft* [#2268]  
Cassini had a relatively close flyby at Iapetus on New Year's Eve 2005. The 288 ISS images set various constraints on the origin theories of the dark/bright dichotomy, as revealed multiple surface structures at up to 740 m/pxl size.

- 3:15 p.m. Spencer J. R. \* Pearl J. C. Segura M. Cassini CIRS Team  
*Cassini CIRS Observations of Iapetus' Thermal Emission* [#2305]  
We describe the observations of Iapetus' thermal emission obtained by the Cassini Composite Infrared Spectrometer (CIRS) during its December 31st 2004 Iapetus flyby. Temperatures range from 130 K near the subsolar point to less than 40 K at high latitudes at night.
- 3:30 p.m. Hendrix A. R. \* Hansen C. J.  
*Iapetus and Phoebe as Measured by the Cassini UVIS* [#2272]  
We present results from the Cassini Ultraviolet Imaging Spectrograph covering observations of Iapetus and Phoebe.
- 3:45 p.m. Helfenstein P. \* Thomas P. Veverka J. Denk T. Neukum G. West R. A. Knowles B. Porco C. Cassini Imaging Team  
*A Cassini ISS Search for Regolith-Texture Variations on Tethys* [#2399]  
We search for texture variations on Tethys using ISS NAC polarization images obtained in October 2004. We find no evidence for textural variations on size scales comparable to those of impact craters, but we discover diffuse, possibly exogenic, banded polarization feature.
- 4:00 p.m. Hansen C. J. \* Hendrix A. R.  
*Ultraviolet Views of Enceladus, Tethys, and Dione* [#1594]  
Cassini's Ultraviolet Imaging Spectrograph (UVIS) has observed many of Saturn's icy satellites. Recent results from Enceladus, Tethys and Dione will be reported.
- 4:15 p.m. Johnson T. V. \* Lunine J.  
*Saturn Satellite Densities and the C/O Chemistry of the Solar Nebula* [#1410]  
New values for the solar abundances of carbon and oxygen result in a significant increase in the expected density of condensates from a solar composition nebula. The consequences for densities of Saturn satellites are discussed.
- 4:30 p.m. Neukum G. \* Wagner R. Denk T. Porco C. C. Cassini ISS Team  
*The Cratering Record of the Saturnian Satellites Phoebe, Tethys, Dione and Iapetus in Comparison: First Results from Analysis of the Cassini ISS Imaging Data* [#2034]  
In this paper, we will present results of measurements of the crater size-frequency distributions on Cassini ISS high-resolution images of the Saturnian satellites Phoebe, Tethys, Dione and Iapetus.