

Tuesday, March 8, 2011
POSTER SESSION I: TITAN EVERYTHING
6:00 p.m. Town Center Exhibit Area

Buckingham L. K. Matthews L. S. Hyde T. W.

[*Tholin Aggregation in Titan's Atmosphere: Developing a Probabilistic Model*](#) [#1466]

The microphysics of aggregation of tholin in Titan's atmosphere is numerically modeled. The collision probability for charged aggregates consisting of spherical monomers is determined for various altitudes for both daytime and nighttime charging conditions.

Jaramillo-Botero A. Cheng M. J. Cvicsek V. Beegle L. W. Hodyss R. Goddard W. A. III

[*First Principles Based Reactive Atomistic Simulations to Understand the Effects of Molecular Hyper-Velocity Impact on Cassini's Ion and Neutral Mass Spectrometer*](#) [#1948]

We have used the recently developed electron force field (eFF) and ReaxFF reactive force field to simulate the hypervelocity impacts experienced by the Cassini ion and neutral mass spectrometer during the Enceladus and Titan encounters.

Trainer M. G. Niemann H. B. Harpold D. N. Atreya S. K. Owen T. C. Kasprzak W. T.

[*Laboratory Simulations of the Titan Surface to Elucidate the Huygens Probe GCMS Observations*](#) [#1399]

We are conducting a laboratory study to simulate the conditions of Titan's surface (temperature, pressure, chemistry) to understand the surface composition as met by the Gas Chromatograph Mass Spectrometer experiment on the Huygens probe.

Collins G. C. Polito P. J. Litwin K. L. Sklar L. S.

[*Resistance of Water Ice to Fluvial Abrasion and Implications for Erosion on Titan*](#) [#2781]

We present measurements of the tensile strength and abrasion susceptibility of pure and impure polycrystalline ice samples, and discuss applications to fluvial erosion on Titan.

Adams K. A. Jacobsen S. D. Thomas S. M. Liu Z. Somayazulu M. Jurdy D. M.

[*Visible and near Infrared Reflectivity of Solid and Liquid Methane: Application to Hydrocarbon Lakes on Titan*](#) [#2038]

Using visible and near-infrared radiation from the National Synchrotron Light Source (NSLS), we report the reflectivity of solid (single crystal) and liquid methane at temperatures from 50–100 K.

Le Mouélic S. Cornet T. Rodriguez S. Sotin C. Barnes J. W. Brown R. H. Buratti B. J.

Baines K. H. Clark R. N. Nicholson P. D.

[*Photometric Properties of Titan's Surface at 5 \$\mu\$ m Investigated with Cassini/VIMS Hyperspectral Images*](#) [#1495]

Global mosaics of Titan have been produced using VIMS hyperspectral images. The properties at 5 μ m are studied using a systematic comparison with the corresponding mosaic of viewing angles.

Stiles B. W. Hensley S. Mitchell K. L. Veeramacheneni C.

[*Extended Titan Topography from SAR*](#) [#1129]

We present surface height profiles of Titan co-located with each Cassini RADAR image from the primary and first extension of the Cassini mission. We exhibit new height profiles and discuss means of extending topographic profiles already produced for earlier observations.

Arnold K. Radebaugh J. Savage C. J. Turtle E. P. Lorenz R. D. Stofan E. R.

LeGall A. Cassini Radar Team

[*Areas of Sand Seas on Titan from Cassini Radar and ISS: Fensal and Aztlan*](#) [#2804]

Outlines of sand seas on Titan have been made using Cassini ISS and RADAR data.

Savage C. J. Radebaugh J.

[*Parameter Analysis of Titan's Dunes Reveals Surface Evolution History*](#) [#2261]

Analysis of Titan's dunes show decrease in dune width and spacing with increasing lat., possibly due to lower sediment mobility or decreasing maturity; and a single population of dunes, possibly due to enduring stability of dune-forming conditions.

Liu Z. Y. C. Radebaugh J. Kirk R. L. Turtle E. P. Stofan E. R. Wood C. A.

[*Mountains on Titan: Height and Slope Analysis*](#) [#2798]

By analyzing the mountain heights and slopes on Titan, we are able to understand more on tectonic origin.

Neish C. D. Lorenz R. D.

[*Titan's Global Crater Population: A New Assessment*](#) [#1412]

Titan's cold surface / Short on craters, big and small / A youthful planet.

Williams D. A. Radebaugh J. Lopes R. M. C. Stofan E.

[*Geomorphologic Mapping of the Menrva Region of Titan*](#) [#1042]

We discuss the results of application of planetary mapping techniques to Cassini RADAR data covering the Menrva region of Saturn's moon Titan.