

Tuesday, March 24, 2009
POSTER SESSION I: TANTALIZING TITAN
6:30 p.m. Town Center Exhibit Area

Hayne P. McCord T. B. Barnes J. W.

[Titan's Near Infrared Atmospheric Transmission and Surface Reflectance from the Cassini Visual and Infrared Mapping Spectrometer](#) [#1863]

Using a ground calibration target method, we calculate Titan's atmospheric transmission and surface albedo in the 0.8 - 5.0 micron wavelength range. Two of Titan's most interesting features, Tui Regio and Hotei Regio, are depleted in water ice.

Rodriguez S. Crapeau M. Le Mouelic S. Paillou P. Barnes J. W. Brown R. H. Sotin C. Wall S.

[Cassini VIMS and RADAR Altimeter Joint Study of Titan Surface](#) [#1596]

Correlations between Cassini/Altimeter data and VIMS underlying images of Titan's surface suggest the presence of very local enrichments in water ice linked with smooth depressions, maybe hinting an ancient channel connected to a large basin.

Langhans M. Jaumann R. Stephan K. Brown R. H. Buratti B. J. Clark R. Baines K. H.

Nicholson P. D. Lorenz R. D.

[Fluvial Valleys on Titan — A Global Perspective](#) [#1681]

Fluvial valleys on Saturn's largest moon, Titan, are investigated in this study. A global overview about the arrangement of fluvial channels is given. Spectral properties of fluvial regions were analysed based on Cassini-VIMS-data.

Burr D. M. Aliaga-Caro J. F. White B. R. Marshall J. R. Greeley R. Bridges N. T.

[Numerical Modeling of Titan Aeolian Sediment Transport: Preliminary Threshold Wind Speed and Trajectory Results](#) [#2098]

Preliminary numerical modeling of aeolian sediment transport parameters under Titan conditions is provided, for future testing in wind tunnel experiments.

Savage C. J. Radebaugh J.

[Titan as a Laboratory for Linear Dune Formation](#) [#1005]

We present results of a detailed morphological study of Titan's linear dunes showing sediment induration by liquids may be causing differences in dune width and interdune spacing between northern and southern hemispheres.

Neish C. D. Lorenz R. D. Kirk R. L.

[Out of Africa: Radarclinometry of the Sand Seas of Namibia and Titan](#) [#1071]

Far from the Namib; Dunes of organic solids; Mimic quartz cousins.

Stofan E. R. Farr T. Kirk R. L. Lopes R. M. Lorenz R. Lunine J. I. Mitchell K. L. Paillou P.

Radebaugh J. Wall S. W. Wood C. A. Cassini Radar Team

[Morphology of Four Flow Fields on Titan: Implications for Modes of Origin](#) [#1043]

We describe four flow fields associated with channels that have been observed in Cassini Radar data of Titan.

Wood C. A. Stofan E. R. Paganelli F. Lorenz R. D.

[Fluctus and Virgae of Titan](#) [#2277]

Fluctus are bright flows on Titan with lobate margins and linear sources. If they are volcanic features they are evidence for tectonic control. Shiwanni Virgae is dune material that diverts around obstacles. They are not tectonic.

Janssen M. A. Le Gall A. Wye L. C. Zebker H. A. Lorenz R. D. Paillou P.

Paganelli F. Cassini Radar Team

[Anomalous Radar Backscatter from Titan's Xanadu](#) [#1916]

We use simultaneously measured radar reflectivity and microwave emission from the Cassini Radar instrument to show that the radar backscattering seen across Titan's Xanadu region is too high to be explained by any known surface model.

Le Gall A. Janssen M. A. Lorenz R. D. Zebker H. Wye L. Paillou P.

[Radar-Bright Channels on Titan](#) [#1533]

The Cassini SAR observed channels in the Xanadu region of Titan which exhibit very large radar cross-sections. We propose the presence of (transparent) rounded, icy rocks with size larger than the radar wavelength (2.18 cm) to explain observations.

Lorenz R. D. Hayes A. Callahan P. Gim Y. Janssen M. Wall S. Le Gall A. Mitchell K. Zebker H. Wye L. Lunine J. Aharonson O. Kirk R. Wood C. Alberti G.

[Ontario Lacus: Brilliant Observations of a Titan Lake by the Cassini Radar Altimeter](#) [#1990]

Radar altimetry, Ontario, truly flat, Glints like a mirror..

Jaumann R. Neukum G.

[The Surface Age of Titan](#) [#1641]

Although the statistical precision of the Titan cratering results is not very high it is obvious that Titan's surface is partly as old as the other saturnian satellites and has been partly modified and heavily resurfaced .

Zahnle K. Korycansky D.

[Some Possible Consequences of Menvra Impact on Titan](#) [#2390]

The energy released by the Menvra impact was marginally large enough to melt and evaporate significant amounts of water, and thus cause rain. The energy of this and other impacts was large enough to evaporate significant amounts of methane.

Fukuzaki S. Sekine Y. Kurosawa K. Sugita S. Kadono T. Matsui T.

[Impact Devolatilization of Ammonium Sulfate: Implications for the Origin of N₂ in Titan's Atmosphere](#) [#1575]

We assess the role of devolatilization of (NH₄)₂SO₄ in Titan's crust by cometary impacts for the origin of N₂ by laboratory experiments. Our results suggest that the N₂ production for 4.5 Gyr reaches ~2.5–10 times that in the present atmosphere.

Berezhnoy A. A.

[Nitrogen on Early Titan](#) [#1077]

An early NH₃-rich Titan's atmosphere can be converted into the N₂-rich atmosphere without significant changes in the isotopic composition of N and H. The dissociative fractionation factor and the initial atmospheric mass of Titan are estimated.