Monday, March 20, 2017
TITAN: A MOON THAT RESEMBLES A PLANET
8:30 a.m. Waterway Ballroom 5

Chairs: Michael Malaska
        Jennifer Hanley

8:30 a.m. Chakraborty S. * Immekus C. Thiemens M. H.
Investigating Formation and Evolution of Titan’s Atmosphere Through Its Isotopic Inventory and New
Photochemical Studies [#2032]
Convoluting the new isotopic results of NH₃ photodissociation, past results, and isotopic inventory of
Titan, a mechanism for Titan’s atmosphere will be made.

8:45 a.m. Miller K. E. * Glein C. R. Waite J. H. Jr.
A New Source for Titan’s N₂ Atmosphere: Outgassing from Accreted Organic-Rich Dust in
Titan’s Interior [#2072]
Isotopes, argon / Total abundance agree / Organics matter.

9:00 a.m. Brossier J. F. * Rodriguez S. Maltagliati L. Cornet T. Lucas A. et al.
Equatorial Belt of Titan Revisited Using a Comprehensive Radiative Transfer Model [#1399]
Constrain the surface composition in Titan’s equatorial belt by using an heuristic correction and
applying a radiative transfer model on VIMS IR observations.

Transient Broad Specular Reflections from Titan’s North Pole [#1519]
We test the possibility of observed broad specular reflection from Titan’s north pole in T120 being
recently wetted surface, also called “wet-sidewalk effect.”

9:30 a.m. Hayes A. G. * Soderblom J. M. Donelan M. A. Lorenz R. D.
Modeling and Observing the Role of Wind-Waves on Titan’s Hydrocarbon Seas: Adding Anemometry
to Cassini’s Repertoire [#2065]
We couple a wave generation model to Cassini observations of roughness on Titan’s lakes/sea to
constrain surface winds and use Cassini as an anemometer.

An Updated Approximation of Titan’s Global Topography [#2703]
We have developed an updated global topographic model of Titan using the full ~6% areal coverage of
elevation data from the Cassini mission.

Classification of Labyrinth Terrains on Titan [#2406]
Lost hidden valleys / Labyrinths of mystery / Measured on Titan.

10:15 a.m. Cornet T. * Fleurant C. Seignovert B. Cordier D. Bourgeois O. et al.
Landscape Evolution Through Dissolution on Titan: A 3D Landscape Evolution Model [#1835]
We are using a Landscape Evolution Model adapted to Titan’s chemistry and climate to study the
landscape evolution by dissolution through time at high latitudes.

10:30 a.m. Hanley J. * Pearce L. Thompson G. Grundy W. Roe H. et al.
Methane, Ethane, and Nitrogen Stability on Titan [#1686]
Will Titan’s lakes freeze? / Not when mixed with nitrogen / Might form two liquids!
10:45 a.m.  Heslar M. *  Farnsworth K.  Chevrier V.  Czaplinski E.  Laxton D.  

*Simsulations of Titan Lakes: Potential Methane-Ethylene Evaporitic Deposits* [#2657]

Simulations of Titan surface processes provide spectral evidence for the possibility of methane-ethylene evaporites existing in dry lake beds on Titan.

11:00 a.m.  Cable M. L. *  Vu T. H.  Maynard-Casely H. E.  Hodyss R.  

Laboratory Investigations of Titan Evaporite Materials [#2197]

On Titan’s surface / Like hydrated minerals / Co-crystals abound.

11:15 a.m.  Farnsworth K. *  McMahon Z.  Laxton D.  Chevrier V.  Soderblom J. M.  

*Experimental Study of the Effects of Freezing on Liquid Hydrocarbons on the Surface of Titan* [#1974]

An experimental study under Titan surface conditions of hydrocarbon ice and the presence of nitrogen bubbles.

11:30 a.m.  Czaplinski E. *  Farnsworth K.  Laxton D.  Chevrier V.  Heslar M.  et al.  

*Experimental Results of Evaporite Deposits on Titan Using a Surface Simulation Chamber* [#1537]

In Titan’s cold lakes / Lies a shallow mystery / Evaporating…