

Tuesday, March 19, 2013
POSTER SESSION: TITAN
 6:00 p.m. Town Center Exhibit Area

[T630]

Misiura K. M. Czechowski L. *POSTER LOCATION #465*
[*Evolution of Titan's and Earth's Rivers*](#) [#2218]

In our simulations we compare models of terrestrial and Titan's river. We have found that transport of sediments on Titan is more effective than on Earth.

Witek P. P. Czechowski L. L. *POSTER LOCATION #466*
[*Formation and Evolution of River Deltas on Titan and Earth*](#) [#2866]

We simulate processes of sediment transport and deposition on Titan and Earth to determine similarities and differences of the formation of the river deltas.

Hayes A. G. Lorenz R. D. Donelan M. A. Manga M. Lunine J. I. et al. *POSTER LOCATION #467*
[*Wind Driven Capillary-Gravity Waves on Titan: Hard to Detect or Non-Existent?*](#) [#2009]

We will investigate the conditions necessary for the emergence of capillary gravity waves on Titan's lakes using modern theories of wind wave generation.

Cordier D. Barnes J. W. Ferreira A. *POSTER LOCATION #468*
[*Composition of Titan's Dry Lakebeds: What can be Inferred from the Solubility Theory*](#) [#1468]

Around Titan's poles, dry lakebeds seem to be poor in water ice. Using a model of solubility, we have found an enrichment in butane and acetylene.

Luspay-Kuti A. Chevrier V. F. Wasiak F. C. Roe L. A. Welivitiya W. D. D. P. et al. *POSTER LOCATION #469*
[*Experimental Constraints on Methane Evaporation at the Low Latitudes of Titan*](#) [#2256]

We present experimental results on CH₄ evaporation under simulated conditions similar to those at the Huygens landing site and the implications for Titan.

Singh S. Cornet T. Wagner A. Luspay-Kuti A. Chevrier V. F. et al. *POSTER LOCATION #470*
[*Infrared Study of Hydrocarbons Mixtures Under Titan Simulated Conditions*](#) [#2944]

This study has investigated the infrared properties of several hydrocarbon mixtures of Titan's liquids and ices under Titan simulated conditions.

Cornet T. Le Mouélic S. Rodriguez S. Sotin C. Bourgeois O. et al. *POSTER LOCATION #471*
[*Estimates of Titan's Surface Photometry in the 5 Microns Atmospheric Window Using the Cassini Visual and Infrared Mapping Spectrometer \(VIMS\)*](#) [#2048]

Titan's surface seems to behave as a Lambertian body at first order. We now try to refine its photometric function by testing several empirical photometry laws.

Cornet T. Singh S. Chevrier V. F. Luspay-Kuti A. Wasiak F. C. et al. *POSTER LOCATION #472*
[*Acetylene on Titan: Laboratory Experiments for Remote Sensing Detection Using Cassini/VIMS Data*](#) [#2056]

We acquired infrared spectra of acetylene under Titan simulated conditions. We will compare these spectra to Cassini/VIMS spectra to detect acetylene on Titan.

Luspay-Kuti A. Mandt K. E. Waite J. H. de la Haye V. *POSTER LOCATION #473*
[*The Effect of Photoabsorption Cross Section and Solar Flux on Ethane Production in Titan's Ionosphere*](#) [#2312]

Effects of varying solar flux and N₂ cross section resolutions on the global average C₂H₆ production in the upper atmosphere of Titan are presented.

Kuga M. Carrasco N. Marty B. Rigaudier T. *POSTER LOCATION #474*
[*Nitrogen Isotopic Fractionation During RF-Plasma Gas Discharge Synthesis of Tholins: Implications for the Origin of Titan's Aerosols*](#) [#2233]

We have measured a ¹⁵N-depletion in analogues of Titan's aerosols. This isotopic fractionation has strong implications for the chemistry of Titan's atmosphere.

Sciamma-O'Brien E. M. Salama F. *POSTER LOCATION #475*
[Investigating the Different Steps of Titan's Atmospheric Chemistry at Low Temperature: Gas Phase Analysis](#) [#1836]

A mass spectrometry study of the gas phase in a lab experiment simulating the first and intermediate steps of Titan's atmospheric chemistry at low temperature.

Sciamma-O'Brien E. M. Nuevo M. Salama F. *POSTER LOCATION #476*
[Investigating the Different Steps of Titan's Atmospheric Chemistry at Low Temperature: Solid Phase Analysis](#) [#1839]

Ex situ study of Titan tholins generated in a lab experiment simulating the first and intermediary steps of Titan's atmospheric chemistry at low temperature.

Teanby N. A. Irwin P. G. J. Nixon C. A. de Kok R. Vinatier S. et al. *POSTER LOCATION #477*
[Titan's Middle-Atmosphere Dynamical and Chemical Seasonal Changes at Northern Spring Equinox](#) [#1034]

Seasonal variations of Titan's atmospheric temperature/composition from nine years of Cassini-CIRS infrared spectra indicate a general circulation reversal.

Marounina N. Tobie G. Monteux J. Carpy S. Grasset O. *POSTER LOCATION #478*
[Evolution of Titan's Atmosphere During a Late Heavy Bombardment](#) [#2242]

We present a numerical model of the evolution of the atmosphere of Titan by impacts during an episode of intense cratering, the late heavy bombardment.

Lefèvre A. Tobie G. Choblet G. Cadek O. Le Mouélic S. et al. *POSTER LOCATION #479*
[Titan's Outer Ice Shell Structure and Dynamics Constrained from Cassini Data](#) [#2194]

Using Cassini data, we developed an interior structure model for Titan and computed the stability of the outer ice shell considering different scenarios.

Hodyss R. P. Choukroun M. Beauchamp P. M. Sotin C. Cable M. *POSTER LOCATION #638*
[Titan's Beaches: An Examination of What is Possible and What is Chemically Feasible](#) [#1164]

This presentation provides some of our initial thoughts on how to interpret the notion of "beaches" around the Titan mares.