

Tuesday, March 20, 2018

[T203]

TITAN IS TERRIFIC

8:30 a.m. Waterway Ballroom 5

Chairs: Karl Mitchell
Elizabeth Turtle

- 8:30 a.m. Glein C. R. * Colley M. E. Catling D. C. Toner J. D.
[*A New Lesson from Titan: Nitrogen Isotopes as a Possible Recorder of Prebiotic Chemistry on the Early Earth*](#) [#2182]
Titan's HCN / Contains heavy nitrogen / RNA world too?
- 8:45 a.m. Cable M. L. * Vu T. H. Maynard-Casely H. E. Choukroun M. Hodyss R.
[*Molecular Minerals on Titan: The Acetylene Series*](#) [#2717]
Acetylene appears to form co-crystals with many species in Titan conditions. These molecular minerals represent a new and exciting class of compounds on Titan.
- 9:00 a.m. Czaplinski E. * Farnsworth K. Gilbertson W. Chevrier V.
[*Experimental Studies of Ethylene and Benzene Evaporites on Titan*](#) [#1480]
Ethylene, benzene / Titan's lakes evaporate / The hydrocarbons!
- 9:15 a.m. Hedgepeth J. E. * Neish C. D. Turtle E. P. Stiles B. W.
[*Impact Craters on Titan: Finalizing Titan's Crater Population*](#) [#2105]
We are creating a complete catalog of all the craters on Titan and characterize their morphology (depth and diameter) using Cassini RADAR, ISS, and SARTopo data.
- 9:30 a.m. Birch S. P. D. * Hayes A. G. Hofgartner J. D.
[*The Raised Rims of Titan's Small Lakes*](#) [#2076]
We present a study on the observability and distribution of elevated rims that surround Titan's small polar lakes using high resolution topographic data.
- 9:45 a.m. Farnsworth K. * Soderblom J. M. Cornet T. Rodriguez S. Chevrier V.
[*Cassini VIMS Spectral Comparison of Three Brightening Events on Titan's Surface*](#) [#2739]
This study investigates Cassini VIMS spectra of three bright units from the 2009 equatorial storm: Adiri, Yalaing, and Hetpet.
- 10:00 a.m. Panning M. P. * Hurford T. A. Schmerr N. C. Stähler S. C. Vance S. D. et al.
[*Estimation of Seismic Activity on Titan from Tidal Cracking*](#) [#1662]
We estimate the seismic activity on Titan due to tidal cracking using a Gutenberg-Richter relationship and scaling from the moon using tidal dissipation energy.
- 10:15 a.m. Schurmeier L. R. * Dombard A. J. Radebaugh J. Malaska M.
[*Intrusive and Extrusive Cryovolcanism and the Composition of Titan's Icy Crust*](#) [#2934]
Methane clathrate can't / Hold radial labyrinths / Ice lithosphere can.
- 10:30 a.m. Dhingra R. D. * Barnes J. W. Brown R. H. Buratti B. J. Sotin C. et al.
[*Temporal Survey of Rain Events at Titan's North Pole as Revealed by the "Wet-Sidewalk Effect"*](#) [#1262]
We carry a temporal survey of rain events detection on Titan's north pole using "wet-sidewalk effect."
- 10:45 a.m. Kelland J. * Corlies P. Hayes A. G. Rodriguez S. Turtle E. P.
[*Analyzing the Dynamic and Morphological Characteristics of Clouds on Titan Using the Cassini VIMS*](#) [#2836]
We analyze VIMS image cubes in order to develop a cloud observation database while exploring dynamic and morphological characteristics of clouds on Titan.

- 11:00 a.m. Nichols-Fleming F. * Corlies P. Hayes A. G. Adamkovics M.
[*Tracking Short-Term Variations in Titan's Haze Distribution*](#) [#2283]
We present an analysis of the haze distribution on Titan using frequent observations with SINFONI. Preliminary results show significant short-term variations.
- 11:15 a.m. Lombardo N. A. * Nixon C. A. Achterberg R. K. Jolly A. Sung K. et al.
[*C₃H_x Hydrocarbon Abundance in Titan's Atmosphere from Cassini Infrared Spectra*](#) [#2376]
These first measured profiles of propylene in Titan's atmosphere show that the abundance of the gas differs from photochemical model predictions.
- 11:30 a.m. Corlies P. * Hayes A. G. Adamkovics M.
[*Topographic Influencing of Clouds on Titan*](#) [#2280]
We present an analysis of clouds in the Cassini dataset, influenced by topography, and compared against model simulations.