Tuesday, March 19, 2013 **[T256]**
MOONLAKER: TITAN'S FLUVIAL PROCESSES, SURFACE GEOLOGY AND ATMOSPHERE
1:30 p.m. Montgomery Ballroom

Chairs: **Thomas McCord**
Alexander Hayes

1:30 p.m. McCord T. B. * Hayne P. O. Sotin C.
Constraints on Titan's Surface Composition Using VIMS Solar Occultation Measurements **[#1687]**
VIMS solar occultation observations are used to estimate atmospheric effects and determine surface reflectance and composition.

1:45 p.m. Hayes A. G. * Dietrich W. E. Kirk R. L. Turtle E. P. Barnes J. W. et al.
Morphologic Analysis of Polar Landscape Evolution on Titan **[#2000]**
We will present an examination of Titan's polar landscapes through an examination of the relationships between lacustrine, fluvial, and hillslope morphologies.

2:00 p.m. Wood C. A. * Stofan E. R. Hayes A. G. Kirk R. K. Lunine J. I. et al.
Morphological Evidence for Former Seas Near Titan's South Pole **[#1764]**
Residual small lakes and extensive sea beds attest to extensive surface liquids near Titan's south pole, perhaps 30–50 k.y. ago.

2:15 p.m. Horvath D. G. * Andrews-Hanna J. C. Newman C. E. Mitchell K. L. Stiles B.
Ephemeral Lakes or Long-Lived Seas on Titan: The Importance of Aquifer Properties and Seasonal Climate **[#2997]**
The importance of aquifer properties and climate on the size distribution and seasonality of lakes on Titan is investigated using a groundwater flow model.

2:30 p.m. Glein C. R. * Shock E. L.
Introducing a New Kind of Geochemistry: The Thermodynamics of Cryogenic Fluvial Geochemistry on Titan **[#1229]**
We present a thermodynamic model that allows exploration of the geochemistry that is driven by cold liquid hydrocarbons on Saturn's moon Titan.

2:45 p.m. Malaska M. * Hodyss R.
Laboratory Investigation of Benzene Dissolving in a Titan Lake **[#2744]**
Tiny little rings / Drifting in a Titan lake / Fade away slowly.

3:00 p.m. Wagner A. * Chevrier V. F. Magar S. S. Luspay-Kuti A. Roe L. A.
Evaporation of Ethane-Methane Liquid Mixtures Under Simulated Titan Conditions **[#3047]**
We present the results of an experimental study regarding the evaporation rates of liquid ethane-methane mixtures under simulated Titan conditions.

3:15 p.m. Davies A. G. * Sotin C. Choukroun M. Matson D. L. Johnson T. V.
Methane Clathrate Destabilisation by Heat From Lava Flows: Implications for Supplying Titan's Atmospheric Methane **[#1681]**
The thermal destabilisation of methane clathrates by cryolava flows and intrusions is sufficient to resupply Titan's current atmospheric methane.

3:30 p.m. Moore J. M. * Howard A. D. Schenk P. M.
Bedrock Denudation on Titan: Estimates of Vertical Extent and Lateral Debris Dispersion **[#1763]**
Analysis of Titan's landscape that suggest that ~ 250 m of net bedrock erosion has at least locally taken place and ~1 km of maximum local erosion.

3:45 p.m. Singh S. * Chevrier V. F. Ulrich R.
Numerical Modeling of Titan Fluvial Features **[#2913]**
Minimum constrains of the fluid flows on Titan have been calculated to determine the boulder size with viscosity and temperature-dependent fluid equation.

4:00 p.m. Radebaugh J. * Lorenz R. D. Farr T. G. Kirk R. L. Lunine J. I. et al.
Alluvial Fans on Titan Reveal Materials, Processes and Regional Conditions **[#2641]**
Alluvial fans on Titan reveal vigorous fluvial processes occur or occurred, indicate a prolonged depositional history, and may illuminate climate conditions.

4:15 p.m. Neish C. D. * Lorenz R. D. Molaro J. L. Lora J. Howard A. D. et al.
The Unusual Crater Soi on Titan: Possible Formation Scenarios **[#2079]**
Titan's Soi crater / Barely makes a surface dent / Filled by sediments?

4:30 p.m. Garcia A. * Rodriguez S. Le Gall A. Courrech du Pont S. Narteau C. et al.
Global Mapping and Characterization of Titan's Dune Fields with Cassini: Correlation Between RADAR and VIMS Observations **[#1978]**
We analyzed dunes coverage of Titan's surface and the correlation between the dunes imaged by the RADAR/SAR with the two "brown" and "blue" units given by VIMS.