ICY SATELLITES OF JUPITER AND SATURN: SALUBRIOUS SURFACES
1:30 p.m. Waterway Ballroom 6

Chairs: Amanda Hendrix
Jani Radebaugh

1:30 p.m.

**Opposition Surges of the Satellites of Saturn from the Cassini Visual Infrared Mapping Spectrometer (VIMS)** [#1738]
The Cassini Visual Infrared Mapping Spectrometer returned observations of the opposition surge for Enceladus, Tethys, Dione, Rhea, and Iapetus. Each body shows a surge at phase angles of 1–12 degrees, and three exhibit a larger surge under 1 degree.

1:45 p.m.
McCord T. B. * Hansen G. B. Combe J-Ph. Hayne P.

**Hydrated Minerals on Europa’s Surface** [#1736]
Heavily hydrated materials on Europa’s surface shows more evidence of salts and locations consistent with endogenic processes.

2:00 p.m.
Dalton J. B. * Shirley J. H. Prockter L. M. Kamp L. W.

**Compositional Gradients of Anti-Jovian Surface Units on Europa from Despiked Galileo NIMS Observations** [#2511]
We have detected compositional gradients of hydrated sulfuric acid and hydrated salts on Europa.

2:15 p.m.
Hendrix A. R. * Johnson R. E.

**Europa: A New Look at Galileo UVS Data** [#2526]
Europa observations from the Galileo UVS are studied to investigate the distribution of the 280 nm absorption feature. The absorber is more abundant on the trailing hemisphere; a correlation exists between absorption strength and dark features (linea and chaos regions).

2:30 p.m.

**Three-Dimensional Views of Titan’s Diverse Surface Features from Cassini RADAR Stereogrammetry** [#1413]
Cassini RADAR has returned high resolution stereo images of dozens of areas on Titan. Digital topography extracted from the images provides new insight into lakes, dunes, mountains, flows, and other features including the enigmatic Ganesa Macula.

2:45 p.m.

**Cassini Evidence for Active Cryovolcanism on Saturn’s Moon Titan** [#2262]
We report evidence for surface morphology changes on the surface of Saturn’s satellite Titan from information returned by the Visual and Infrared Mapping Spectrometer (VIMS) aboard the Cassini Orbiter spacecraft. This is strong evidence for active cryovolcanism on Titan.

3:00 p.m.

**Assessing Cryovolcanic Resurfacing on Titan** [#1906]
We estimate the significance of cryovolcanism as a Titan resurfacing mechanism. To resurface Titan in this way over geological time (~0.5 Ga) requires only a very low effusion rate, so detection of active cryolava flows may be difficult.
Stofan E. R.  Lopes R. M.  Farr T. G.  Mitri G.  Cassini Radar Team  
*Evidence of Extensional and Compressional Tectonism and Erosion in Titan's Xanadu Province [#1037]  
Titan's Xanadu province, bright to all instruments and extending over 1000 km, is one of the oldest terrains on Titan. We suggest its origin and evolution have been controlled and shaped by compressional and extensional tectonism in its icy crust.

3:30 p.m.  Jaumann R.*  Stephan K.  Sotin C.  Brown R. H.  Langhans M.  Soderblom J.  
*Erosion and Stratigraphic Relations on Titan [#1599]  
Bohai Sinus is one of the most prominent disintegration areas between bright and dark materials and exhibit similar spectral signatures as the Huygens landing site. Thus morphological and compositional information can be brought into context.

3:45 p.m.  Sotin C.*  Mielke R.  Choukroun M.  Neish C.  Barmatz M.  Castillo J.  Lunine J.  
Mitchell K.  
A Titan chamber has been set up in order to investigate the physical and chemical behavior of drops of liquid methane and ethane with substrates of water ice. They imply that Titan's subsurface must be saturated with liquid hydrocarbons.

Lorenz R. D.  Stofan E. R.  Lopes R. M. C.  Vance S.  Cassini RADAR Team  
*A Global Subsurface Alkanofer System on Titan? [#1966]  
Hydrocarbon sea, under Titan's icy wastes flows from pole to pole.

4:15 p.m.  Furfaro R.*  Kargel J. S.  Candelaria P.  
*Modeling the Thermal State of Titan Volatiles and Shallow Melting Involving Hydrocarbons, Organics and Ice [#1828]  
This paper is about modeling the thermal environment within, beneath and adjacent to hydrocarbon sand dunes overlying a water-ice crust on Titan. Finite element modeling provides a key basis for the analysis.

4:30 p.m.  Wood C. A.*  Kirk R.  Lorenz R. D.  
*Numbers, Distribution and Morphologies of Impact Craters on Titan [#2242]  
Cassini Radar reveals seven certain impact craters on Titan and 50 more possible ones. The craters have two distinct rim morphologies, normal lunar-like and jagged. Excess craters are on the leading hemisphere and a deficiency is in the north polar region.