Thursday, March 19, 2015  
POSTER SESSION II: OUTER PLANETARY BODIES:  
FROM THE DEPTHS TO THE RINGS  
6:00 p.m.   Town Center Exhibit Area

Vance S. Roberts J. H. Ganse A.  
*Inverse Theory for Planning Gravity Investigations of Icy Moons* [#2751]  
We demonstrate the use of forward and inverse modeling to assess resolution of subsurface mass anomalies in Europa from proposed flyby mission trajectories.

Hay H. C. F. C. Matsuyama I.  
*Numerically Simulating Tidal Dissipation in the Icy Satellites* [#1329]  
We numerically investigate tidal dissipation in the icy satellites incorporating ocean loading, self-attraction, and deformation of the solid regions.

Rathbun J. A. Spencer J. R.  
*Comparison of Tidal Dissipation Models to Global Distribution of Active Ionian Volcanoes from Galileo PPR and New Horizons LEISA* [#1546]  
Heat flow on Io/Which model matches data/PPR, Leisa?

Helbert J. Maturilli A. Ferrari S. Breuer D. Spohn T.  
*Studying Io’s Volcanic History Using Thermal Infrared Measurements* [#1906]  
A new thermal infrared instrumentation to observe Io combined with the unique capabilities of PEL will provide new insights into the evolution of Io.

McGovern P. J.  
*Formation and Growth of Mountains on Io: A Distinct Element Method Modeling Approach* [#2886]  
Mountains on Io/Break from bottom up making/Some jagged rockbergs.

*Diverse Origins of Enceladus’s Ridge Terrains Including Evidence for Contraction* [#2870]  
On Enceladus/Plentiful ridges are found/Same or different?

Martin E. S. Watters T. R. Patthoff D. A.  
*Ancient Ridges and Troughs on Enceladus* [#1620]  
Stress cracked icy shell/Reveals long tectonic tale/Of early terrains.

Scipioni F. Schenk P. Tosi F.  
*Spectroscopic Variation of Water Ice Abundance and Sub-Micron Ice Grains Across Enceladus, Mimas, and Tethys’ Surface Using Cassini VIMS Data* [#1919]  
We present our work mapping the variation of the water ice bands and submicrometer ice grains across Mimas, Tethys, and Enceladus’ surfaces using VIMS-IR data.

Robbins S. J. Bierhaus E. B. Dones L. H.  
*Craters of the Saturnian Satellite System: II. Mimas and Rhea* [#1654]  
Saturn’s moons’ craters/Are many-varied things... so/What are their sources?

Hirata N. Miyamoto H.  
*Rayed Craters on Dione* [#1803]  
Dione, a saturnian mid-sized satellite, appears to have numerous rayed craters. We find 29 rayed craters exceeding 2 km in diameter on 69% on the surface.
Posters:

**Hoogenboom T. Johnson K. E. Schenk P. M.**
*POSTER LOCATION #263*

Contribution of Secondary Craters on the Icy Satellites: Results from Ganymede and Rhea

We investigate secondary crater processes on the icy satellite Ganymede to better understand ages of bodies in the outer solar system.

**Schuman S. Chang V. Do V. Gambhir T. Lalinde B. et al.**
*POSTER LOCATION #264*

Examining Potential for Ice Extrusions in Relationships Between Furrows and Related Terrain on Ganymede

We hypothesize that furrows on Ganymede correlate with albedo and the presence or absence of adjacent craters, supporting the possibility of ice extrusions.

**Cofano A. Komatsu G. Pizzi A. Di Domenica A. Bruzzone L. et al.**
*POSTER LOCATION #265*

Ganymede’s Surface Investigation in Support of the Radar for Icy Moon Exploration (RIME) Instrument

In order to support the JUICE mission and in particular RIME activities, we have initiated a research effort for understanding the geology of Ganymede.

**Walker C. C. Schmidt B. E.**
*POSTER LOCATION #266*

Cracking Up-Wards: An Investigation into the Mechanical Failure of Ice on Europa

We present results illustrating the propagation of basal fracture systems through icy satellite shells and their contribution to fragmentation of the surface.

**Leonard E. J. Yin A. Pappalardo R. T. Patthoff D. A. Schenk P. et al.**
*POSTER LOCATION #267*

Structural Analysis of Very High-Resolution Galileo Images of Europa: Implications for Surface Evolution

Europa’s surface/Unveiling evolution/Through structural maps.

**Byrne P. K. Schenk P. M. McGovern P. J.**
*POSTER LOCATION #268*

Tectonic Mapping of Rift Zones on Rhea, Tethys, and Dione

Moons of Saturn are/Different sizes but cracked/In similar ways.

**Clark C. S. Clark P. E.**
*POSTER LOCATION #269*

Mapping and Graphic Stress Analysis for Icy Satellites Using Constant-Scale Natural Boundary Methods

We use constant scale natural boundary terrain projections with waterlining for icy satellites to provide insights into their surface morphology and processes.

**Scott B. R. Bills B. G.**
*POSTER LOCATION #270*

Cataloging the Motion of Co-Orbitals of the Galilean Satellites

We simulate the motion of bodies placed in a 1:1 orbital resonance with the Galilean satellites for several initial conditions.

**Salmon J. Canup R. M.**
*POSTER LOCATION #271*

Accretion of Mid-Sized Ice-Rich Moons from Expansion of a Primordial Massive Saturnian Ring

We use a hybrid N-body model to study the accretion of Mimas, Enceladus, and Tethys from a primordial massive ice-rich ring around Saturn.

**Ohtsuki K. Yasui Y.**
*POSTER LOCATION #272*

Shapes and Dynamical Evolution of Aggregates Formed by Gravitational Accretion of Particles onto Embedded Moonlets in Saturn’s Rings

Using N-body simulation, we examined shapes and dynamical evolution of aggregates formed by gravitational accretion of particles in Saturn’s rings.