

Thursday, March 22, 2018
POSTER SESSION II: ICY SATELLITES
6:00 p.m. Town Center Exhibit Area

[R641]

Terada K. Tao C. Terada N. Kasaba Y. Kita H. et al. **POSTER LOCATION #651**
[Study of the Solar Wind Influence on the Jovian Inner Magnetosphere Using an Ionospheric Potential Solver](#) [#2040]

We investigated the asymmetrical variation of the Io plasma torus observed by the Hisaki satellite using a 2-D Jovian ionospheric potential solver.

Michaelides R. J. Schroeder D. M. **POSTER LOCATION #652**
[Assessing the Ability of Radar Sounders to Discriminate Between Corner-Reflections and Point Scatterers: Application to Europa's Chaos Terrains](#) [#1121]

We discuss the ability of planetary radar sounders to discriminate between different scattering regimes for the detection of subsurface water on Europa.

Belgacem I. Schmidt F. Jonniaux G. **POSTER LOCATION #653**
[Estimation of Hapke's Parameters on Selected Areas of Europa Using a Bayesian Approach](#) [#1051]

In preparation for the JUICE mission (ESA), more information is needed about photometric models of the icy moons. This work focuses on Europa and Hapke's model.

Stillman D. E. Grimm R. E. MacGregor J. A. **POSTER LOCATION #654**
[Chloride Salts Prevent Direct Determination of Europa's Icy Shell Thickness via Radar Sounding](#) [#1971]

We present an updated radar attenuation model of Europa supported by 100s of lab measurements. These show the difficulties of penetrating through warm ice.

Montesi L. G. J. Howell S. M. Pappardo R. T. **POSTER LOCATION #655**
[Ice Thickness, Upwelling, and Topography in Bands on Europa](#) [#2173]

Upwelling ice in bands thins the ice shell. Topography implies that surrounding ice is denser than band material and opening rate is less than 10^{-10} m/s.

Hurfurd T. A. Henning W. G. Lekic V. Schmerer N. Panning M. P. et al. **POSTER LOCATION #656**
[Tidally-Driven Seismicity: An Application to Europa](#) [#2414]

Tides give energy / Europa quakes in response / Two processes linked.

Zolotov M. Yu. **POSTER LOCATION #657**
[What Affects the Oceanic Composition on Europa?](#) [#2872]

The accreted composition of Europa strongly affected the oceanic composition. The Mg content in surface materials indicates the oxidation state of the ocean.

Allu Peddinti D. Rhoden A. R. **POSTER LOCATION #658**
[Time Evolution of Ice-Shell Thickness: Effect of Episodic Variations in Tidal Heating](#) [#2565]

Geodynamical investigation into the effect of episodic variation in tidal heating within Europa's ice-shell on the shell thickness as the ice-ocean system forms.

Hay H. C. F. C. Matsuyama I. **POSTER LOCATION #659**
[Icy Satellite Subsurface Oceans: Tidal Dynamics, Dissipation, and the Solid Shell](#) [#2969]

Ice moon of giant / We model ocean sloshing / Smoke on the water?

Ligier N. Carter J. Poulet F. Snodgrass C. **POSTER LOCATION #660**
[Europa, a Dolphin Paradise? Update on Its Surface Properties from a Recent Near-Infrared Ground-Based Campaign with SINFONI/VLT](#) [#2129]

This abstract deals with new near-infrared ground-based measurements of Europa. New insights into surface properties of the satellite will be presented.

Bland M. T. Galuszka D. Mayer D. P. Beyer R. A. Kirk R. L. et al. **POSTER LOCATION #661**
[How Well Do We Know Europa's Topography? Assessing Variability in Digital Terrain Models](#) [#2193]
 On knowing topo / Science and safety depend / European danger.

Malaska M. J. Shirley J. H. Phillips C. B. Fraeman A. A. Valenti M. et al. **POSTER LOCATION #662**
[Europa NIMS Data Reprocessing Pipeline for Detailed Surface Analysis](#) [#1798]
 Galileo NIMS / A difficult dataset / We made easier.

Milazzo M. P. Backer J. W. Mapel J. Berry K. Hansen C. J. **POSTER LOCATION #663**
[Ingestion, Camera Model, and Processing Software for JunoCam Images Based on USGS Astrogeology's Integrated Software for Imagers and Spectrometers \(Version 3\)](#) [#2198]
 Gorgeous Jupiter / Photographs by JunoCam / ISIS3 supports.

Collins G. C. Rathbun J. A. Spencer J. R. Craft K. Pappalardo R. T. et al. **POSTER LOCATION #664**
[The Breadth and Depth of Europa Geology: Plans for Observing Diverse Landforms with Europa Clipper](#) [#2625]
 Clipper flies over / While we plan to see every / European landform.

Culha C. Schroeder D. Haynes M. **POSTER LOCATION #665**
[Assessing the Potential for Detecting Europa's Eutectic Using Radar Sounding](#) [#1295]
 Assessment of the echo return at Europa's eutectic and the implications for future missions.

Nordheim T. A. Paranicas C. Hand K. P. **POSTER LOCATION #666**
[The Near Surface Radiation Environment of Europa, Biosignature Destruction, and Implications for In-Situ Sampling](#) [#2856]
 We have modeled the radiation environment of Europa's near-surface and evaluated the destruction of biosignatures at different depths and surface locations.

Girona T. Berton M. Karani H. Huber C. Head J. et al. **POSTER LOCATION #667**
[On the Freezing of Water Spheres: Linking the Surface Features of Icy Moons to the Dynamics of Subsurface Global Oceans](#) [#1683]
 We explore the generation of extensional tectonism in icy moons through experimental and numerical analyses involving the freezing of water spheres.

Byrne P. K. Regensburger P. V. Klimczak C. Bohnenstiehl D. R. Hauck, II S. A. et al. **POSTER LOCATION #668**
[The Geology of the Rocky Bodies Inside Enceladus, Europa, Titan, and Ganymede](#) [#2905]
 Icy moons are intriguing, no doubt: Hot ice, oceans, and stuff that blows out. But what lies below? Just rock or Cthulhu? With rock mechanics we can find out.

Byers G. Miller J. E. **POSTER LOCATION #669**
[Examining Potential Evidence of Warmer Ice on Leading Hemispheres by Examining Surface Features on Icy Moons of Jupiter and Saturn](#) [#1716]
 We are looking for evidence of factors which make leading hemispheres of icy moons more active, and possibly thinner, above their subsurface oceans.

Mellon M. T. Zanko D. J. Horst S. M. **POSTER LOCATION #670**
[Thermal Conductivity of Water-Ice Regolith and Application to the Outer Solar System](#) [#2395]
 We simulate and examine water-ice regolith (appropriate to outer-solar-system bodies) and measure its thermal conductivity.

Carey E. M. Vu T. Choukroun M. Zhong F. Cohen B. et al. **POSTER LOCATION #671**
[Thermal Conductivity and Specific Heat Measurements of Hydrated Salt Mixtures with Implications for Icy Satellites](#) [#2871]

Thermal conductivity and specific heat are key parts in geophysical modeling of planetary objects, thus we have performed these measurements on hydrated salts.

de Morais A. **POSTER LOCATION #672**
[Geothermal Energy in Planetary Icy Large Objects via Cosmic Rays Muon-Catalyzed Fusion](#) [#1751]

We propose that cosmic rays muons might add energy via catalyzed fusion to the interior of icy large objects of the solar system, interesting to astrobiology.