

Tuesday, March 24, 2009
POSTER SESSION I: ICY SATELLITES: GELID GEOLOGY/GEOPHYSICS
6:30 p.m. Town Center Exhibit Area

Schulson E. M.

[Frictional Sliding of Cold Ice](#) [#1795]

This paper reviews current knowledge of frictional sliding in water ice Ih, a fundamental process underlying tectonic activity within the icy crusts of Enceladus and Europa, and raises a number of questions.

Bland M. T. McKinnon W. B. Showman A. P.

[Forming Ganymede's Grooves: Producing Large-Amplitude, Complex Deformation](#) [#1690]

We present the first numerical simulations that realistically reproduce the complex deformation observed in Ganymede's grooved terrain. This deformation results from the inclusion of strain weakening effects in the ice rheology.

Dampz A. L. Dombard A. J.

[Time-dependent Flexure on the Icy Satellites of Jupiter and Saturn](#) [#1316]

In this work we explore the "static" assumption of models of lithospheric flexure that have been used on these icy satellites. We find that creep within the lithospheres is non-negligible, leading to progressive thinning of the lithosphere.

Goff-Pochat N. Collins G. C.

[Strain Measurement Across Fault Scarps on Dione](#) [#2111]

In this presentation we display the calculated surface strain over fault sets on Dione, and provide an analysis of the overall surface strain accommodated on Dione.

Wagner R. J. Neukum G. Stephan K. Roatsch T. Wolf U. Porco C. C.

[Stratigraphy of Tectonic Features on Saturn's Satellite Dione Derived from Cassini ISS Camera Data](#) [#2142]

Cassini ISS images were used to derive a stratigraphic sequence of tectonic landforms (troughs, ridges, scarps, lineaments) on Saturn's icy satellite Dione.

Kay J. P. Kattenhorn S. A.

[Searching for Evidence of Active Tectonics on Europa](#) [#2454]

Evidence of recent tectonic activity on Europa logically starts with the geologically young, ridgeless surface fractures. The temporal relationship between young fractures and their orientations could yield information about recent tectonic activity.

Coulter C. E. Kattenhorn S. A. Schenk P. M.

[Topographic Profile Analysis and Morphologic Characterization of Europa's Double Ridges](#) [#1960]

Ridges on Europa have very low slopes and limiting values of height/width that suggest viscoplastic gravitational collapse over time. Variability between ridges may point to disparate formation kinematics.

Singer K. N. McKinnon W. B.

[Pits, Spots, Uplifts, and Small Chaos Regions on Europa: A Search for Regional Variations](#) [#2336]

Mapping of a sample region illustrates how data obtained in ArcMap can be used to investigate the spatial and size frequency distribution of small features on Europa. We hope further mapping will shed light on the physics of feature formation.

Rodriguez N. J. Rathbun J. A. Spencer J. R.

[Europa's Thermal Surface from Galileo PPR](#) [#2166]

We present Galileo Photopolarimeter-Radiometer data of Europa and, from these, model the thermal inertia and bolometric albedo of the surface. We also derive an upper limit for detection of endogenic activity.

El Maarry M. R. Sierks H.

[Geological, Geochemical and Engineering Considerations for Choosing a Landing Site on the Jovian Moon Europa](#) [#2014]

Geological, geochemical, and engineering constraints on choosing a suitable landing site for lander on the jovian moon, Europa, are discussed briefly.

Stryk T. Stooke P. J.

[Triton Crescent Imaging Revisited: Cartography and Geology](#) [#1710]

Voyager 2 images of the outbound crescent of Triton are specially processed, added to a global map and interpreted geologically. Plains, hills, cantaloup-type areas and possible flows are mapped.