

Tuesday, March 13, 2007

POSTER SESSION I:

VOLCANISM AND TECTONISM ON SATURNIAN SATELLITES

6:30 p.m. Fitness Center

Porco C. Spitale J. Mitchell C. Dones L. Ingersoll A. West R.

Enceladus' Jets: Particle Characteristics, Surface Source Locations, Temporal Variability, and Correlations with Thermal Hot Spots [#2310]

This work reports the first careful attempt to determine the properties of Enceladus' jets — i.e., particle size distributions, altitude profiles, source locations, temporal variability, etc. — in Cassini ISS images, and to correlate the source locations with the hot spots measured by Cassini CIRS.

Stephan K. Jaumann R. Hansen G. B. Clark R. N. Buratti B. J. Brown R. H. Baines K. H. Bellucci G. Coradini A. Cruikshank D. P. Griffiths C. A. Hibbitts C. A. McCord T. B. Nelson R. M. Nicholson P. D. Sotin C. Wagner R.

Distribution of Icy Particles Across Enceladus' Surface as Derived from Cassini-VIMS Measurements [#1747]

We measured the band depths of water ice absorptions at 1.04, 1.25, 1.5 and μm .

Hurford T. A. Helfenstein P. Greenberg R. Hoppa G. V.

A Cycloid-like Rift Near Enceladus' South Pole: Europa-style Production by Tidal Stress [#1844]

One prominent rift on Enceladus' south pole consists of arcuate segments, resembling the shape of cycloidal cracks on Europa. We explore the possibility that a similar mechanism may have caused the cracking on Enceladus as on Europa.

Mitchell K. L. Kargel J. S. Wood C. A. Radebaugh J. Lopes R. M. C. Lunine J. I. Stofan E. R. Kirk R. L. Cassini RADAR Team

Titan's Crater Lakes: Caldera vs. Karst [#2064]

We discuss the origin of sub-circular, steep-sided, lake-containing depressions on Titan. Neither karst/thermokarst nor caldera interpretations are ideal in explaining all observed lake depressions. We suggest that both processes may have occurred.

Wood C. A. Lorenz R. Radebaugh J.

How Titan Works — A Radar Perspective [#2118]

Titan has a young surface with diverse landforms. We speculate that the surface may date only back a half billion years to the time of a thickening of the crust modelled by Tobie, Lunine and Sotin (2006). The radar bright areas appear to the oldest preserved terrain.