

Tuesday, March 18, 2014

[T642]

POSTER SESSION: AT DAWN WE RIDE TO VESTA AND CERES
6:00 p.m. Town Center Exhibit Area

- Palmer E. E. Sykes M. V. *POSTER LOCATION #555*
[*The Observational Bias of Thermal Spectra Due to Subpixel Variations*](#) [#2441]
 We evaluate the thermal spectrum of a rough terrain on Vesta. We identify that the observed irradiance is a mixture of hot and cold regions that are unresolved.
- Li J.-Y. Buratti B. J. De Sanctis C. M. Denevi B. W. Hoffmann M. et al. *POSTER LOCATION #556*
[*The Photometric Properties of Vesta and the Implications*](#) [#1583]
 We will discuss the photometric properties of Vesta from Dawn Framing Camera data, and the implications on the photometric studies of asteroids.
- Hoffmann M. Nathues A. Schäfer M. Christensen U. Sierks H. et al. *POSTER LOCATION #557*
[*Dawn FC Color Data: Results of Advanced Processing for Vesta*](#) [#1737]
 Dawn FC color images of Vesta reveal unprecedented lithologic detail shown by examples of nonlinear color ratios, which were derived using cluster analysis.
- Nathues A. Hoffmann M. Schäfer M. Thangjam G. Reddy V. et al. *POSTER LOCATION #558*
[*Distribution of Potential Olivine Sites on the Surface of Vesta by Dawn FC*](#) [#1740]
 We report about the most recent results of our olivine mapping of the vestan surface based on Dawn Framing Camera Data.
- Thangjam G. Nathues A. Mengel K. Hoffmann M. Schaefer M. et al. *POSTER LOCATION #559*
[*Olivine Rich Exposures in Bellicia and Arruntia Craters on Vesta Using Dawn FC*](#) [#1755]
 We present the most recent findings of olivine in the Bellicia and Arruntia crater on Vesta based on Dawn Framing Camera data.
- Beck A. W. Lunning N. G. De Sanctis M. C. Hiroi T. Plescia J. et al. *POSTER LOCATION #560*
[*A Meteorite Analog for Olivine-Rich Terrain in Unexpected Locations on Vesta*](#) [#2499]
 Here we test the hypothesis that olivine-rich impact melts in howardites represent the olivine-rich terrains identified in unexpected locations on Vesta.
- Sarafian A. R. Marschall H. R. Nielsen S. G. McCubbin F. M. Monteleone B. *POSTER LOCATION #561*
[*An Earth-Like Hydrogen Isotopic Composition of Vesta as Revealed by Apatite*](#) [#2106]
 We measured H isotopes in several eucrites and determined the source of hydrogen for Vesta is similar to carbonaceous chondrites.
- Ruesch O. Hiesinger H. DeSanctis M. C. Ammannito E. Palomba E. et al. *POSTER LOCATION #562*
[*Distribution of the Near-IR Spectral Signature of Olivine on Vesta with VIR/Dawn Data: The Ultramafic Side of Vesta's Surface*](#) [#1715]
 We characterized and mapped the near-IR signature of olivine on Vesta with VIR/Dawn. Local enrichments in olivine are found. Their implications are discussed.
- Ruesch O. Hiesinger H. Williams D. A. Nathues A. Prettyman T. H. et al. *POSTER LOCATION #563*
[*Marcia Crater, Vesta: Geology, Mineralogy, Composition, and Thermal Properties*](#) [#2010]
 Marcia Crater is the largest well-preserved young impact on Vesta. Its characteristics and relevance are presented.
- Longobardo A. De Sanctis M. C. Palomba E. Reddy V. Nathues A. et al. *POSTER LOCATION #564*
[*Key Features of the Lucaria Quadrangle of Asteroid Vesta*](#) [#2042]
 A mineralogical analysis of the Lucaria quadrangle is performed, with particular care to Publicia and Aelia Craters, Lucaria Tholus, and equatorial troughs.

Schmedemann N. Kneissl T. Neesemann A. Michael G. Wagner R. J. et al. **POSTER LOCATION #565**
[The Signature of Secondary Cratering on 4 Vesta and Tethys](#) [#1960]

We compare measured crater SFDs of Vesta, Mimas, and Tethys. Very steep distributions found on Vesta and Tethys may result from secondary cratering.

Scully J. E. C. Yin A. Russell C. T. Buczkowski D. L. Williams D. A. et al. **POSTER LOCATION #566**
[Geomorphology and Structural Geology of Saturnalia Fossae and Adjacent Structures in the Northern Hemisphere of Vesta](#) [#1809]

A structural mapping study shows that the Saturnalia Fossae and adjacent structural features in Vesta's northern hemisphere form by impact-related processes.

Yamashita N. Prettyman T. H. Reedy R. C. **POSTER LOCATION #567**
[Retrieving More Elements from Dawn's Gamma-Ray Spectrometer](#) [#2674]

We provide an overview of the processing steps of Dawn's GRaND data that are required for further elemental analyses of Vesta's Al, Mg, K, Th, and possibly Ni.

De Sanctis M. C. Ammannito E. Palomba E. Longobardo A. Mittlefehldt D. W. et al. **POSTER LOCATION #568**
[Vesta Evolution from Surface Mineralogy: Mafic and Ultramafic Mineral Distribution](#) [#1748]

Vesta, the HED parent body, experienced complex igneous processes, and olivine and diogenite distribution is a key to understand its evolution.

De Sanctis M. C. Formisano M. Capria M. T. Ammannito E. Capaccioni F. et al. **POSTER LOCATION #569**
[Ceres Water Regimes: Simulation of Surface Temperatures and Water Sublimation](#) [#1738]

Ceres is a key object to understand the water story in the solar system. We simulate the thermal surface properties and water sublimation regime.

Neumann W. Breuer D. Spohn T. **POSTER LOCATION #570**
[Modelling of the Thermo-Chemical Evolution of Ceres](#) [#2055]

We have tested the possibility of whether Ceres' low density can be explained with a porous interior, and show that the porous structure is rather unlikely.

Neveu M. Desch S. J. Castillo-Rogez J. C. **POSTER LOCATION #571**
[Modeling Core Cracking, a Key Factor in the Geophysical Evolution and Habitability of Ceres](#) [#1120]

We model core cracking on icy bodies, a major (but so far overlooked) factor in their geophysical evolution and habitability. The model is applied to Ceres.