

Monday, March 17, 2014

[M106]

VESTA AND CERES

8:30 a.m. Montgomery Ballroom

Chairs: Debra Buczkowski
David Blewett

- 8:30 a.m. Neumann W. * Breuer D. Spohn T.
[*Shallow Magma Ocean on Vesta and Implications for the HEDs*](#) [#2046]
We show that in contrast to previous studies a whole-mantle magma ocean does not form on Vesta if partitioning of ^{26}Al is considered.
- 8:45 a.m. Hoff C. M. * Jones J. H. Le L.
[*Experimental Constraints on a Vesta Magma Ocean*](#) [#1634]
A MELTS-derived magma ocean model for the differentiation of Vesta was experimentally tested, revealing differences between MELTS and experimental data.
- 9:00 a.m. Williams D. A. * Jaumann R. McSween H. Y. Jr. Raymond C. A. Russell C. T.
[*A Proposed Time-Stratigraphic System for Protoplanet Vesta*](#) [#1381]
We propose a time stratigraphic system and geologic timescale for Vesta, based on geologic mapping and integrated studies of Dawn data.
- 9:15 a.m. Clenet H. * Jutzi M. Barrat J.-A. Gillet Ph.
[*Adapted Modified Gaussian Model: No Detection of Olivine in Regions Predicted to be Mantle-Rich from Models of Planet-Scale Collisions*](#) [#1349]
MGM dedicated to olivine-pyroxene(s) mixtures was applied on Dawn VIR images. Olivine was not found in the Rheasilvia region, arguing in favor of a thick crust.
- 9:30 a.m. Cheek L. C. * Sunshine J. M.
[*Spectral Mixture Analysis as a Tool for Characterizing the Distribution of Vesta's Olivine-Rich Material*](#) [#2735]
The geologic context and materials associated with Vesta's olivine is explored by merging spectral and imaging data to provide clues to their petrologic origin.
- 9:45 a.m. Lunning N. G. * McSween H. Y. Tenner T. J. Kita N. T.
[*Olivine from the Mantle of 4 Vesta Identified in Howardites*](#) [#1921]
With our identification of the first vestan mantle samples, we can directly examine the evolution of Vesta in ways that were previously not possible.
- 10:00 a.m. Daly R. T. * Schultz P. H.
[*How much of the Impactor \(and Its Water\) Ends up in Vesta's Regolith?*](#) [#2070]
We use experiments at the NASA AVGR to assess projectile survival and water retention from impacts into asteroid regoliths, with direct applications to Vesta.
- 10:15 a.m. Schäfer M. * Nathues A. Hoffmann M. Cloutis E. A. Reddy V. et al.
[*Serpentine in Exogenic Carbonaceous Chondrite Material on Vesta Detected by Dawn FC*](#) [#1745]
Dawn Framing Camera reveals for the first time an absorption feature in dark material deposits on 4 Vesta that can be attributed to serpentine in CM meteorites.
- 10:30 a.m. Blewett D. T. * Denevi B. W. Roatsch T. Schroeder S. E. Tosi F. et al.
[*Surveying Vesta's Styles of Space Weathering and Surface Mixing*](#) [#1208]
Spectral analysis of space-weathering trends in various Vesta terrains, and the nature of the unusually colored material near Oppia crater.

- 10:45 a.m. Karimi M. * Dombard A. J.
[*Studying the Possible Viscoelastic Deformation of the South Polar Craters of Vesta*](#) [#2666]
We find these craters are unlikely to have evolved via lower crustal flow, which suggests their high-standing central peaks are a product of their formation.
- 11:00 a.m. Buczkowski D. L. * DeSanctis M. C. Nathues A. Hoffman M. Roatsch T. et al.
[*Vesta's Dark Ribbon: A Fluidized Ejecta Flow?*](#) [#2165]
We propose that a roughly linear unit of distinct material on Vesta, informally referred to as the “dark ribbon”, represents a fluidized ejecta flow.
- 11:15 a.m. Mori M. * Sekine Y. Shibuya T. Kuwatani T. Suzuki K. et al.
[*Reaction Conditions for Formation of Alteration Minerals on Ceres Inferred from Hydrothermal Experiments*](#) [#1698]
We show that low CO₂ concentrations in Ceres are required for formation of brucite, which is inconsistent with the outer solar system origin of the icy dwarf.
- 11:30 a.m. Rivkin A. S. * Asphaug E.
[*The Case of the Missing Ceres Family*](#) [#1649]
Ceres' paradox / Goddess of fertility / Yet no family.