

Wednesday, March 20, 2013
SPECIAL SESSION: VESTA AS THE HED PARENT BODY
1:30 p.m. Waterway Ballroom 1

[W351]

Chairs: Patrick Peplowski
 Andrew Beck

- 1:30 p.m. Buratti B. J. * Dalba P. A. Hicks M. D. Reddy V. Sykes M. V. et al.
[*Vesta, Vestoids, and HEDs: Dawn, Ground-based, and RELAB Observations*](#) [#1845]
 Spectral differences between the vestoids, the HED meteorites, and Vesta can be explained by a new form of space weathering.
- 1:45 p.m. Claydon J. L. * Crowther S. A. Gilmour J. D.
[*The I-Pu-Xe System in Anomalous and Vestan Eucrites: Was Vesta Unusually Large?*](#) [#2173]
 Vestan eucrites carried on losing xenon for longer than anomalous eucrites. Was extended activity associated with a larger parent body?
- 2:00 p.m. Dietderich J. E. * Lapen T. J. Andreasen R. Righter M.
[*Isotope Systematics of the Type 7 Eucrite Jonzac: A Look into the History of the Eucrite Parent Body Using the Lu-Hf, Pb-Pb and U-Pb Isotopic Systems*](#) [#2879]
 Multiple isotopic dating of type 7 eucrite Jonzac provided an igneous formation age via U-Pb, and metamorphic resetting ages from Lu-Hf and Pb-Pb.
- 2:15 p.m. Satake W. * Buchanan P. C. Takeda H. Mikouchi T. Miyamoto M.
[*Redox States of Cumulate Eucrite Y-75011 and Surface Eucrite Y 980433 as Inferred from Iron Micro-XANES Analyses of Plagioclase*](#) [#1444]
 We focused on surface and cumulate eucrites that were not affected by annealing, in order to estimate whether the deep crust was a relatively more oxidized environment.
- 2:30 p.m. Peplowski P. N. * Lawrence D. J. Prettyman T. H. Yamashita N. Bazell D. et al.
[*Compositional Variability on the Surface of 4 Vesta Revealed Through GRaND Measurements of High-Energy Gamma Rays*](#) [#2754]
 Measurements of high-energy gamma-ray emission have resulted in the identification of regions with eucritic and howarditic/diogenitic elemental compositions.
- 2:45 p.m. Lawrence D. J. * Peplowski P. N. Prettyman T. H. Feldman W. C. Bazell D.
[*Mapping Elemental Variations at Vesta: Dawn Fast Neutron Measurements*](#) [#2303]
 Fast neutron data from the GRaND instrument on Dawn are presented. Variations related to hydrogen and possibly average atomic mass are observed.
- 3:00 p.m. De Sanctis M. C. * Ammannito E. Palomba E. Longobardo A. Capaccioni F. et al.
[*Possible Detection of Olivine on Vesta*](#) [#1460]
 Identifying olivine-rich lithologies on Vesta can constrain different petrologic scenarios. We report the possible detection of olivine based on VIR data.
- 3:15 p.m. Patzer A. *
[*New Data on the Compositions of Silicates in HED Meteorites: Variety is the Spice*](#) [#2468]
 A comprehensive set of new compositional data of HED silicates reveals a variety of endmember compositions far more diverse than previously recognized.
- 3:30 p.m. Frigeri A. * Ammannito E. De Sanctis M. C. Capaccioni F. Tosi F. et al.
[*Vesta Fs and Wo Maps Derived by VIR on Dawn*](#) [#1946]
 Here we report the molar Fe and Ca maps produced by processing VIR mapping spectrometer data onboard the Dawn mission to Vesta.

- 3:45 p.m. Palomba E. * Longobardo A. De Sanctis M. C. Mittlefehldt D. W. Ammannito E. et al.
[Mesosiderite on Vesta: A Hyperspectral Vis-Nir Investigation](#) [#2245]
We develop and test spectral indexes to detect mesosiderite materials on Vesta by means of the Dawn VIR hyperspectral data.
- 4:00 p.m. Zambon F. * Capaccioni F. De Sanctis M. C. Ammannito E. Li J.-Y. et al.
[Mineralogical Composition of the Different Types of Bright Deposits on Vesta](#) [#2510]
Study of the mineralogical composition of the different types of bright deposits on Vesta surface through band center and band depth analysis.
- 4:15 p.m. McSween H. Y. * De Sanctis M. C. Ammannito E. Prettyman T. H. Dawn Science Team
[The Geologic Context for Eucrites/Diogenites/Howardites, and Implications for Their Petrogenesis](#) [#1529]
Mapped occurrences of HED lithologies on Vesta provide new insights that help constrain the asteroid's magmatic evolution.
- 4:30 p.m. Warren P. H. * Isa J. Gessler N.
[Petrology of Secondary Mineral Development, Probably Fluid-Driven, Within the Uniquely Evolved Eucrite Northwest Africa 5738](#) [#2875]
The extremely evolved NWA 5738 eucrite has diverse late alteration products, offering unprecedented insights into fluid-driven alteration processes on Vesta.