Monday, February 3, 2014
VESTA: GEOLOGY OF A SMALL PLANET
1:15 p.m. Lecture Hall

Chairs: **Andrew Rivkin**
Brett Denevi

1:15 p.m. Jaumann R. * Russell C. T. Raymond C. A. Pieters C. M. Yingst R. A. Williams D. A. Buczkowski D. L. Schenk P. De Sanctis M. C.
Vesta's Geological Features **[#2011]**
Vesta's diverse geology exhibits impact basins and craters of all sizes and unusual shapes, ejecta blankets, large troughs, impact basins, enigmatic dark material, and considerable evidence for mass wasting and surface alteration processes.

1:35 p.m. Williams D. A. * Yingst R. A. Garry W. B.
Strategies for the Geologic Mapping of Small Airless Bodies: The Vesta Example **[#2014]**
This presentation will discuss the geologic mapping campaign of the asteroid Vesta that was part of the Dawn Nominal mission, including goals and methods of the mapping program, the challenges of mapping on small airless bodies, and lessons learned.

1:50 p.m. Scully J. E. C. * Russell C. T. Yin A. Jaumann R. Carey E. McSween H. Y. Raymond C. A. Reddy V. Le Corre L. Castillo-Rogez J.
Vestan Gullies and Their Formation Mechanisms **[#2001]**
Gullies are classified, based on morphology, into two types: linear and curvilinear. We propose that curvilinear gullies are morphological evidence for localized water on Vesta, which is in keeping with recent meteorite and remote sensing evidence.

2:05 p.m. Capria M. T. * Tosi F. De Sanctis M. C. Ammannito E. Capaccioni F. Fonte S. Frigeri A. Longobardo A. Palomba E. Zambon F. Schroeder S. Denevi B. Williams D. A. Titus T. Blewett D. Russell C. T. Raymond C. A.
Thermophysical Analysis of Pitted Terrains on Vesta **[#2005]**
Pitted terrains have been found on Vesta, where they are seen as regions with high thermal inertia. We present a detailed analysis of the thermophysical characteristics of this kind of terrains.

2:20 p.m. Tosi F. * Zambon F. Capria M. T. De Sanctis M. C. Capaccioni F. Ammannito E. Titus T. N. Palomba E. Russell C. T. Raymond C. A. Dawn Science Team
Global Resolved Temperature Maps of Vesta **[#2026]**
We present, for the first time, global resolved temperature maps of Vesta as derived by the Visible and Infrared Mapping Spectrometer (VIR) onboard Dawn.

2:35 p.m. Denevi B. W. * Blewett D. T. Buczkowski D. L. Capria M. T. De Sanctis M. C. Le Corre L. Li J.-Y. Marchi S. Nathues A. O'Brien D. P. Petro N. E. Prettyman T. H. Preusker F. Reddy V. Russell C. T. Scully J. E. C. Sunshine J. M. Tosi F. Williams D. A.
The Preservation and Geologic Effects of Exogenic and Hydrated Materials on Vesta **[#2029]**
We review the geologic consequences of the presence of hydrated minerals on an otherwise volatile-poor body, with an examination of how Vesta can inform our understanding of the effects of exogenic materials on other bodies.

2:50 p.m. Prettyman T. H. * Beck A. W. Feldman W. C. Lawrence D. J. McCoy T. J. McSween H. Y. Mittlefehldt D. W. Peplowski P. N. Raymond C. A. Reedy R. C. Russell C. T. Titus T. N. Toplis M. J. Yamashita N.
Vesta's Elemental Composition **[#2043]**
Elemental mapping by Dawn's gamma ray and neutron detector reveals the colorful chemistry of Vesta's howarditic regolith.

3:10 p.m. DISCUSSION