Tuesday, February 4, 2014
VESTA ON THE OUTSIDE: SURFACE COMPOSITION
9:00 a.m. Lecture Hall

Chairs: **Lucille Le Corre**
Vishnu Reddy

9:00 a.m. Reddy V. * Le Corre L. Nathues A. Li J.-Y. McCord T. B. Gaffey M. J. Russell C. T. Raymond C. A.
Vesta Surface Colors and Mineralogy **[#2035]**
We present summary of color observations of Vesta from Dawn Framing Cameras. Comparison of ground based and HST observations of Vesta with those from Dawn is also presented. Nature of color units and their mineralogy is summarized.

9:20 a.m. De Sanctis M. C. * Ammannito E. Combe J. P. Jaumann R. McCord T. B. McFadden L. A. McSween H. Y. Pieters C. A. Raymond C. A. Russell C. T.
Vesta Mineralogy in the Light of Dawn **[#2020]**
The data from Dawn VIR characterized and mapped the mineral distribution on Vesta, strengthened the Vesta–HED linkage, discovered hydrated materials, found olivine in an unexpected location, providing new insights into Vesta's formation and evolution.

9:40 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 **[#2013]**
We use an adapted version of the Modified Gaussian Model on VIR images. Despite focusing on two regions in the southern hemisphere where mantle-rich rocks are expected, we found no olivine. We also look at pyroxenes composition at a local scale.

9:55 a.m. Ruesch O. * Hiesinger H. DeSanctis M. C. Ammannito E. Palomba E. Longobardo A. Capria M. T. Capaccioni F. Frigeri A. Tosi F. Zambon F. Fonte S. Magni G. Raymond C. A. Russell C. T.
Some more Locations of Possible Exposed Olivine on Vesta Using VIR/Dawn Data **[#2030]**
We developed and calibrated specific parameters to isolate the olivine signature within the near-IR data acquired by VIR/Dawn. We found that potential olivine occurs as local exposures mainly within the eastern hemisphere of Vesta.

10:10 a.m. BREAK

10:25 a.m. Palomba E. * Longobardo A. De Sanctis M. C. Marchi S. Zambon F. Tosi F. Ammannito E. Capaccioni F. Capria M. T. Russell C. T. Raymond C. A.
Nature of Dark Material Units on Vesta: Implications for Regolith Formation and Carbonaceous Material Delivery **[#2031]**
A catalogue of dark material units on the Vesta surface is listed. A spectral analysis revealed the carbonaceous chondrites (CC) as main darkening agents and a fine-grained regolith. Implications for regolith formation and CC delivery are discussed.

10:40 a.m. Rivkin A. S. *
Exogenic OH on Vesta: Implications from and for Other Asteroids **[#2040]**
Evidence suggests infall from carbonaceous chondrites, a process that may be widespread, is responsible for the presence of hydrated material on Vesta. I will discuss the implications of this process, both problems it solves and creates.

10:55 a.m. McSween H. Y. * Mittlefehldt D. W. Dawn Science Team
Vesta in the Light of Dawn, but Without HEDs? **[#2016]**
Dawn's exploration of Vesta has depended critically on HEDs. As a way of describing HEDs, we explore what petrologic and geochemical predictions could have been made without these meteorites.

11:15 a.m. DISCUSSION