Thursday, May 17, 2012
DAWN OVER VESTA: VESTA, VESTOIDS, AND HED METEORITES
5:20 p.m. Snow Hall

Chairs: Jian-Yang Li
Uri Carsenty

An analysis of the roughness and albedo of 4 Vesta and V-type asteroids based on both Dawn and ground-based data shows that they have a more violent collisional history than other classes of asteroids.

We investigate the changes in the reflectance spectrum of Vesta as a function of the phase angle of observation (“phase reddening”) using Dawn observations. We find changes that are qualitatively similar, but weaker, than Earth based observations.

We present the main results obtained comparing spectral data in the visible-near infrared range of Vesta’s surface acquired by the Dawn spacecraft with those for howardite, eucrite, diogenite (HED) meteorites.

Vesta and Lutetia comparison: topography, crater shapes, mass wasting, variegation, slope distribution, d/D crater ratios.

We conducted impact experiments on metal core-rocky mantle targets simulating iron meteorite parent bodies in order to study the collisional disruption and the formation condition of differentiated meteorite such as irons.

6:50 p.m. Jutzi M. * Gillet P. Barrat J.-A. Asphaug E. Benz W. The Rheasilvia Impact Crater as a Probe of Vesta’s Internal Structure: Results from Numerical Simulations [#6230]
Using results from 3D simulations of the Rheasilvia impact, we investigate the relation between Vesta’s internal structure and the post-impact distribution of crustal layers on the surface.