Monday, March 1, 2010  
VENUS  
2:30 p.m.  Waterway Ballroom 5

Chairs:  Sue Smrekar  
Gerald Galgana

Geologic Analysis of the Surface Thermal Emission Images Taken by the VMC Camera, Venus Express  [#1133]  
Analysis of Venus Monitoring Camera 1-µm images and surface emission modeling showed apparent emissivity at Chimon-mana tessera and shows that Tuulikki volcano is higher than that of the adjacent plains; Maat Mons did not show any signature of ongoing volcanism.

2:45 p.m.  Bondarenko N. V.  *  
Integrated Study of the Venus Surface with Magellan Data: An Opportunity to Search for Surficial Deposits and Warm Lava Flows  [#1579]  
Magellan data were used to show that the combination of radiometry and scatterometry can be useful for detection of volcanic flows on Venus surface with temperature excess at shallow depth and the presence of extended crater-related deposits not seen in SAR images.

3:00 p.m.  Russell C. T.  *  Strangeway R. J.  Wei H. Y.  Zhang T. L.  
Venus Lightning: What We Have Learned from the Venus Express Fluxgate Magnetometer  [#1215]  
The Venus Express magnetometer sees short (tens of milliseconds) pulses of EM waves in the Venus ionosphere as predicted by the lightning model for the PVO electric pulses. These waves are stronger than similar terrestrial signals produced by lightning.

3:15 p.m.  James P. B.  *  Zuber M. T.  Phillips R. J.  
Geoid to Topography Ratios on Venus and Implications for Crustal Thickness  [#2663]  
Using gravity and topography data from the Magellan mission, we develop a crustal thickness map of Venus. We also calculate geoid to topography ratios in order to identify regions of dynamic support.

3:30 p.m.  Smrekar S. E.  *  Stefan E. R.  Martin P.  Hoogenboom T.  Buck W. R.  
Models of Hecate Chasma, Venus and Implications for Active (?) Extension  [#1422]  
A simple uniform extension model applied to Hecate Chasma provides a good fit to rift style and width for an extensional velocity of ~0.1 cm/yr. The transition between narrow and wide rifts occurs at a similar width (~125 km) as for rifts on Earth.

3:45 p.m.  Galgana G. A.  *  Grosfils E. B.  McGovern P. J.  
Radial Dike Formation on Venus from Upper Lithosphere Magma Chambers: Insights from Models of Uplift, Flexure and Magmatism  [#1777]  
This research explains the coupled effects of magma chamber pressurization and flexure-causing lithosphere uplift on magma reservoir failure, radial dike formation, and magma ascent on Venus.

4:00 p.m.  Clegg S. M.  *  Barefield J. E.  Wiens R. C.  Sharma S. K.  Misra A. K.  Tucker J.  Dyar M. D.  Lambert J.  Smrekar S.  Treiman A.  
Venus Geochemical Analysis by Remote Laser-induced Breakdown Spectroscopy (LIBS)  [#1631]  
This paper focuses on development of the LIBS technique to extract chemical composition and facilitate mineral/rock identification from LIBS spectra acquired under Venus-like conditions. Samples for these experiments were chosen to be geochemically-likely on Venus.
4:15 p.m. Herrick R. R. * Stahlke D. L. Sharpton V. L.
A New Data Set for Venus: Stereo-derived Topography for 20% of the Planet at Km-Scale Horizontal Resolution [#1622]
We have processed the Magellan same-side stereo data to produce topography with km-scale horizontal resolution. We will be describing the processing and showing examples of the data.

4:30 p.m. Hensley S. * Shaffer S.
Repeat Pass Radar Observations of Venus from the Magellan Radar System [#2369]
A demonstration of radar interferometric observation of Venus using Magellan S-band SAR data with a temporal baselines of 243 days is presented.