

**Tuesday, March 20, 2012**  
**POSTER SESSION I: VENUS TOPOGRAPHY, MODELING, AND GEOLOGY**  
**6:00 p.m. Town Center Exhibit Area**

Mitchell K. L. Hensley S. Nunes D. C. Shaffer S. J. Deen R. Ansar A.

[\*Automated Stereogrammetry of Venus\*](#) [#2744]

We automate F-BIDR stereo processing to obtain precise and extensive terrain data, complete with formal error calculation and updated ephemerides. Results will eventually be released to the community with a viewing/editing tool.

Shang K. Shum C. K. Fok H. S. Guo J. Y. Matsumoto K. Yi Y.

[\*Venus Topography and Potential  \$k\_2\$  Modeling Using Planet-Wide Differenced Altimeter Measurement\*](#) [#1973]

PVO and Magellan provided Venus altimetry with distinct accuracy. We combined both data using differenced altimetry for orbit adjustment to develop a topography model. Simulation indicates that  $k_2$  estimation may be feasible using altimetry.

Murphy B. S. Metcalfe K. S. Ruiz G. Curtin L. G. Chestler S. R. Penido J. C.

Muller J. K. Grosfils E. B.

[\*Magma Reservoir Rupture Beneath a Venustian Edifice: When Does Lithospheric Flexure Become Significant?\*](#) [#1060]

This FEM study assesses the conditions for which lithospheric flexure beneath a volcanic edifice affects the characteristics of magma reservoir failure on Venus. We examine variable elastic thickness, edifice geometry, and magma reservoir geometry.

Galgana G. A. McGovern P. J. Grosfils E. B.

[\*The Formation of Giant Radiating Dike Systems on Venus: Insights from Elastoplastic Flexural Models\*](#) [#1662]

This research presents modes of radial dike formation, magma ascent, and propagation within the venustian lithosphere using elastoplastic finite element models.

Matiella Novak M. A. Buczkowski D. L.

[\*Structural Mapping Around Irnini Mons, Venus\*](#) [#2070]

An investigation of the numerous structures around Irnini Mons at the highest possible resolution (75 m/pixel) is likely to reveal the relative timing of the structures and thus shed light on the deformation history of this region of Venus.

Shaw B. G. R. Bleamaster L. F. III

[\*Structural Mapping of Devana Chasma, Venus: Implications for Coronae/Chasmata Relations\*](#) [#2088]

Structural analysis of Devana Chasma for a comparative assessment of styles of coronae and other volcano-tectonic manifestations in rift zones with other extensively studied chasmata with ArcGIS mapping at a scale of 1:1,000,000 of surface features.

Lang N. P. Lopez I.

[\*Constraints of the Evolution of Three Venustian Coronae\*](#) [#1552]

Volcanism at venustian coronae manifests itself in a variety of ways including large-scale flows, small volcanic constructs or shields, and steep-sided domes or tholi. Our work presented here aims to constrain the causes of this volcanic diversity.

McGowan E. M. McGill G. E.

[\*Geologic Map of the Lachesis Tessera Quadrangle \(V-18\), Venus\*](#) [#1517]

Preliminary geologic mapping results for the Lachesis Tessera (V-18) quadrangle on Venus are presented.

Pierce N. P. Lang N. P.

[\*Preliminary Geological Overview of the Mahuea Tholus Quadrangle \(V49\), Venus\*](#) [#1682]

This is an introduction to the geology of the Mahuea Tholus quadrangle (V49) on Venus. Topics of interest include the volcano Mahuea Tholus, canali, coronae, and rifting.

Guseva E. N. Basilevsky A. T. Head J. W.

[\*Photogeologic Mapping of the Thetis Regio Quadrangle \(V-36\), Venus\*](#) [#1384]

The results of this work permitted us to identify and map 13 material and 3 structural units, two of which (material of lineated plains and material of rift plains) are specific to this region.