

Tuesday, March 24, 2009

POSTER SESSION I: VENUS GEOLOGY, GEOPHYSICS, MAPPING, AND SAMPLING
6:30 p.m. Town Center Exhibit Area

Peters G. H. Mungas G. S. Murray S. D. Polk J. E. Lindeman R. Beegle L.

[*Venus Analog Testbed for RASP and Sample Collection Testing*](#) [#2518]

Describes a testbed and method for simulating the fluid conditions of Venus in order to test RASP systems to provide samples during *in situ* missions to Venus.

Sharma S. K. Misra A. K. Clegg S. M. Barefield J. E. Wiens R. C. Quick C. R. Dyar M. D.
 McCanta M. C. Elkins-Tanton L.

[*Venus Geochemical Analysis by Remote Raman-Laser Induced Breakdown Spectroscopy \(Raman-LIBS\)*](#) [#2548]

The goal of this presentation is to demonstrate that remote Raman – LIBS spectra can be acquired under Venus conditions to yield quantitative geochemistry on Venus-analog rocks.

Treiman A. H.

[*Canali-forming Magmas: Generation of Carbonate-Sulfate Melts on Venus*](#) [#1347]

Venus' canali, long meandering channels, may have carried carbonate-sulfate (carbonatite) melts. Such liquids may arise by melting weathered basalt, which requires geotherms much hotter than Venus' average, or another heat source (intrusion, impact).

Orth C. P. Solomatov V. S.

[*The Effects of Dynamic Topography and Thermal Isostasy on the Topography and Geoid of Venus*](#) [#1811]

The magnitude of the dynamic topography on Venus is small. Long wavelength global geoid and topography anomalies can be explained by thermal thinning of a thick lithosphere with only a limited contribution from crustal thickness variations.

Guseva E. N.

[*Spacing of Structures in the Rift- and Groove Belt-related Coronae on Venus*](#) [#1152]

The spacing values of structures in the rims of the rift- and groove belt-related coronae on Venus appear to be almost identical.

Martin P. Stofan E. R. Smrekar S. E.

[*Volcano-Tectonics on Venus: A Comparison of Parga and Hecate Chasmata and Perunitsa and Khosedem Fossae*](#) [#1041]

In this study, we are undertaking comparative analysis of chasmata and fracture belt systems on Venus over a range of scales, to help constrain models of the formation and evolution of rift systems and associated volcanic processes on Venus.

Hansen V. L. López I.

[*Implications of Venus Evolution Based on Ribbon Tessera Terrain Relations Within Five Large Regional Areas*](#) [#2306]

We examine ribbon tessera terrain outcrop and structural relations within five large regional areas: A) lowland environment, B) lowland-volcanic rise transition, C) volcanic rise environment, D) mesoland environment, and E) a single planitia basin.

Gleason A. L. Glaze L. S. Herrick R. R. Garvin J. B.

[*Stereo-derived Topography from the Venus Magellan Dataset: An Assessment of the Quantitative Scientific Value of Sub-km DEM Products*](#) [#1253]

Quantitative information is difficult to extract from sub-km DEMs (derived from stereo SAR images) on surface properties and processes for a range of different landforms on Venus, including tesserae, coronae, lava flows, and lava channels.

Ivanov M. A.

[*Embayed Craters on Venus: How do They Correspond to the Catastrophic and Equilibrium Resurfacing Models?*](#) [#1150]

The style of resurfacing on Venus changed significantly during the observable portion of the geologic history from the catastrophic resurfacing to the equilibrium resurfacing.

Ivanov M. A. Head J. W.

[*Geological Mapping of the Fortuna Tessera Quadrangle \(V-2\), Venus: Preliminary Results*](#) [#1151]

Preliminary results of the geological mapping in the V-2 quadrangle on Venus are presented.

Hurwitz D. M. Head J. W.

[*Geologic Map of the Snegurochka Planitia Quadrangle \(VI\): Implications for Tectonic and Volcanic History of the North Polar Region of Venus*](#) [#1174]

We present our progress in mapping the spatial and stratigraphic relationships of material units of Snegurochka Planitia (VI) and our initial interpretations of the tectonic and volcanic history of the region surrounding the north pole of Venus.