

Thursday, March 20, 2003  
VENUS  
9:30 a.m. Salon A

Chairs: A. F. Chicarro  
T. Hoogenboom

Hansen V. L. \*

*In Situ Partial Melt on Venus: Evidence for Ancient Water?* [#1152]

Shield terrain comprises countless tiny lava flows that coalesced to form an ultra-thin discontinuous regionally extensive mechanically strong layer; lava represents point-source crustal partial melt and may provide evidence for ancient Venus water.

McGill G. E. \*

*Kinematics of a Linear Deformation Belt; the Evolution of Pandrosos Dorsa, Venus* [#1012]

The directional vs. non-directional models for venusian stratigraphy may be evaluated by means of detailed analyses of selected regions or features, such as deformation belts. Almost all structures in Pandrosos Dorsa are older than adjacent regional plains.

Ivanov M. A. \* Head J. W.

*Evolution of Three Largest Coronae on Venus, Heng-O, Quetzalpetlatl, and Artemis: Preliminary Results* [#1188]

Stratigraphic analyses show that very large coronae initiated structural deformation before regional plains emplacement and differed significantly in amounts of volcanism.

Smrekar S. E. \* Moreels P. Franklin B. F.

*Global Characterization of Polygonally Fractured Terrain on Venus and Implications for a Climate Change Origin* [#1738]

We examine the size, morphology, stratigraphy, and geologic setting of 204 polygon terrains found using an automated watershed method. Stresses resulting from climate change-induced temperature variations predict the observed characteristics.

Hoogenboom T. \* Smrekar S. E. Anderson F. S. Houseman G.

*Admittance Survey of Type 1 Coronae on Venus: Implications for Elastic Thickness* [#1372]

We survey the admittance signature of 105 Type 1 coronae on Venus to determine the controlling parameters which govern Type 1 coronae formation.

Abdrakhimov A. M. \*

*Petrochemical Comparison of Venus' Rocks with Terrestrial Oceanic Igneous Rocks Using the Discriminant Method* [#1215]

The goal of this work is to compare the analyzed Venus' rocks and terrestrial oceanic igneous rocks to search for similarities/dissimilarities in their chemistry, which is correlated with geodynamic environment.

Carter L. M. \* Campbell D. B. Campbell B. A. Margot J. L.

*Searching for Surficial Deposits on Venus Using Multi-Polarization Radar* [#1809]

Arecibo radar observations were used to search for surficial deposits on Venus. Dual-polarization measurements allowed mapping of the fraction of linear polarization in the echo. The maps show surface layers associated with several craters, as well as from areas of wind streaks and dome fields.

Bondarenko N. V. \*

*Dark Crater-related Deposits on Venus in Radar Cross-Section — Emissivity Domain* [#1290]

Diffuse features (parabolas and halos) associated with impact craters on Venus are considered as deposits of loose material. A model of electromagnetic wave reflection by such features is applied to the observed emissivity and radar cross-section.

Basilevsky A. T. \* Head J. W. Setyaeva I. V.

*Impact Craters of Venus with  $D > 5$  km Classified Based on Degree of Preservation of the Associated Radar-Dark Deposits* [#1222]

Venusian craters  $> 5$  km in diameter are classified based on presence and type of the associated radar dark deposits which are used to roughly estimate the crater age. These estimates are dependent on crater size. Potential latitude effect was not found.