

Tuesday, March 20, 2018  
**21ST CENTURY VENUS I: ATMOSPHERE TO INTERIOR**  
 1:30 p.m. Waterway Ballroom 5

[T254]

**Chairs:** **Lori Glaze**  
**Peter James**

- 1:30 p.m. Glaze L. S. \* Garvin J. B.  
[\*Exploring Venus: Never Give Up, Never Surrender\*](#) [#2024]  
 The lack of any selected in situ Venus missions is increasing the sense of urgency to complete our comparative suite of planetary observations.
- 1:45 p.m. Gilmore M. S. \* Stein A. J. Treiman A. H. Greenwood J. P.  
[\*Formation Rates and Mechanisms for Low Emissivity Materials on Venus Mountaintops and Constraint on Tessera Composition\*](#) [#1229]  
 Tessera terrain shows different behavior under crater parabolas of varying types. Tessera materials exhibit lower emissivity than do plains materials.
- 2:00 p.m. Byrne P. K. \* Ghail R. C. Şengör A. M. C. Klimczak C. Hahn R. M. et al.  
[\*The Lithosphere of Venus Has Been Broken and, in Places, Mobile\*](#) [#1935]  
 We all know a planet called Venus, whose surface we study with keenness. But its got crustal blocks, that shuffle and lock—perhaps a new plate tectonic genus?
- 2:15 p.m. Ghail R. C. \* Holman B. Lawrence H. Mason P. J. Byrne P. K. et al.  
[\*Venus Crustal Tectonics Analogous to Jostling Pack Ice\*](#) [#1408]  
 Tectonically, the Venesian surface resembles the terrestrial continents, but if Earth's continents are like drifting icebergs, Venus harbors a sea of pack ice.
- 2:30 p.m. King S. D. \*  
[\*Stationary Plumes in Stagnant Lid Convection: Application to Venus\*](#) [#1606]  
 A numerical investigation of the role of giant impacts in disrupting stable mantle planforms.
- 2:45 p.m. Barnes H. A. \* Smrekar S. E.  
[\*Constraints on Subduction on Venus from Radar Imaging, Topography, Composition, and Gravity Data\*](#) [#1884]  
 Plume induced subduction provides explanation for the majority of features found at coronae on Venus. ArcGIS and Matlab are used to examine multiple data sets.
- 3:00 p.m. James P. B. \*  
[\*Tectonic Stresses Associated with Mantle Convection on Venus\*](#) [#1278]  
 Dynamic flow in the mantle of Venus imparts stresses to the lithosphere with sufficient amplitudes to drive tectonism.
- 3:15 p.m. Unterborn C. T. \* Schmerr N. C. Irving J. C. E.  
[\*The Devil in the Dark: A Fully Self-Consistent Internal Seismic Model for Venus\*](#) [#1768]  
 We calculate self consistent mineralogical and seismic models for potential Venesian compositions for comparison to results of potential future missions.
- 3:30 p.m. Herrick R. R. \*  
[\*Using Stereo-Derived Topography for Venus to Search for New Craters in the Tessera and to Re-Evaluate Tectonic Destruction of Craters\*](#) [#1740]  
 Tessera Craters / Are there new ones to be found? / Maybe, maybe not!

- 3:45 p.m. Knicely J. J. \* Herrick R. R.  
[Analyses of Mid-Sized Venusian Volcanoes Covered by Stereo Images](#) [#2953]  
We classify mid-sized Venusian volcanoes and find significant post-emplacement deformation as well as what appear to be resurgent domes within coronae.
- 4:00 p.m. Port S. T. \* Briscoe A. C. Chevrier V.  
[Stability of Metal Sulfides on Venus](#) [#2082]  
Metal sulfides were tested in a Venus Chamber to observe the effects of Venusian conditions on these minerals, and if they can be possible sulfur source/sinks.
- 4:15 p.m. Mueller N. T. \* Tsang C. Lebonnois S. Smrekar S.  
[Regional Venus Surface Temperature Variations in Models and Infrared Observations](#) [#2400]  
We present evidence for regional temperature variations in VIRTIS on Venus Express data that are similar to those calculated by a General Circulation Model.
- 4:30 p.m. Weller M. B. \* Lenardic A. Jellinek M.  
[Life Potential on Early Venus Connected to Climate and Geologic History](#) [#2808]  
Surface, fits and starts / Can it be habitable? / Yes, life might have been.