

Monday, March 17, 2014

[M154]

## VENUS: A RIDDLE WRAPPED IN A MYSTERY INSIDE AN ENIGMA

2:30 p.m. Waterway Ballroom 6

**Chairs:** Bradley Thomson  
Debra Hurwitz

- 2:30 p.m. Weller M. B. \* Lenardic A.  
[\*The Evolution of Terrestrial Planets: Multiple Tectonic Regimes and Diverging Geologic Histories\*](#) [#1576]  
As planets evolve / Stagnant may become active / Active may idle.
- 2:45 p.m. Smrekar S. E. \* Davaille A.  
[\*Subduction of a Sluggish Lid: Examples from Laboratory Experiments and Venus\*](#) [#2713]  
Laboratory experiments with realistic rheology produce subduction at mantle plumes. Geophysical data analysis shows that Venus may exhibit such subduction.
- 3:00 p.m. Ivanov M. A. \* Head J. W.  
[\*The History of Topography on Venus\*](#) [#1079]  
The vast majority (80–85%) of the currently observed long-wavelength topography formed during the earlier global tectonic regime.
- 3:15 p.m. Karimi M. \* Dombard A. J.  
[\*Studying the Viscoelastic Deformation of Mead Basin: Implications for the Thermal History and Rheology of Venus\*](#) [#2625]  
We constrain heat flux and rheology in the vicinity of Mead by simulating lower crustal flow, finding heat fluxes higher than predicted and dry conditions.
- 3:30 p.m. Bondarenko N. V. \* Kreslavsky M. A.  
[\*Venus: New Maps of Multiple Parameters of Meter-Scale Roughness\*](#) [#2266]  
We derived three parameters of meter-scale roughness from Magellan radar altimeter echo profiles. The maps show variability of roughness signatures over plains.
- 3:45 p.m. Le Corvec N. \* McGovern P. J. Grosfils E. B.  
[\*Effects of Crustal-Scale Mechanical Layering on Magmatic Reservoir Failure and Magma Propagation Within the Venusian Lithosphere\*](#) [#2330]  
Finite-element modeling on the influence of mechanical layering on magma chamber stability and radial dike formation within the venusian lithosphere.
- 4:00 p.m. Quick L. C. \* Glaze L. S. Baloga S. M.  
[\*Emplacement of Volcanic Domes on Venus and Europa\*](#) [#1581]  
We present a model for the emplacement of volcanic domes on Venus and consider how this model may apply to the formation of putative cryolava domes on Europa.
- 4:15 p.m. Shalygin E. V. \* Markiewicz W. J. Basilevsky A. T. Titov D. V. Ignatiev N. I. et al.  
[\*Bright Transient Spots in Ganiki Chasma, Venus\*](#) [#2556]  
In data obtained by VMC onboard the ESA VEx we found a few transient phenomena in Ganiki Chasma that we interpreted as evidence of present volcanic activity.
- 4:30 p.m. Kohler E. \* Chevrier V. Johnson N. Craig P. Lacy C.  
[\*Proposed Radar-Reflective Minerals Tested Under Venus Surface and Atmospheric Conditions\*](#) [#2321]  
Results from experiments constraining the origins of the radar anomalies in the venusian highlands are presented.