

**Thursday, March 24, 2016**  
**POSTER SESSION II: VENUS**  
**6:00 p.m. Town Center Exhibit Area**

[R629]

Russell C. T. Villarreal M. N. Luhmann J. G. Chi P. J. Xiao S. D. et al. **POSTER LOCATION #375**  
[Observations of the Subionospheric Magnetic Field at Venus](#) [#1271]

Venus Express crossed the lower boundary of the Venus ionosphere during aerobraking and found a weak quiet magnetic field.

Jessup K.-L. Imamura T. Nakamura M. Mills F. P. Marcq E. et al. **POSTER LOCATION #376**  
[Advancing Venus Atmospheric Modeling via Coordinated HST-Akatsuki Observations](#) [#1818]

Coordinated HST-Akatsuki observations will enable and expand the science goals of the Akatsuki mission, and improve our understanding of Venus' cloud chemistry.

Peplowski P. N. Lawrence D. J. **POSTER LOCATION #377**  
[Nitrogen Content of Venus' Upper Atmosphere from the MESSENGER Neutron Spectrometer](#) [#1177]

MESSENGER data reveal the nitrogen content of Venus' upper atmosphere.

Mills F. P. Shunmuga Sundaram M. Allen M. Yung Y. L. **POSTER LOCATION #378**  
[Potential Impacts of Heterogeneous Chemistry on Venus' Mesospheric Chemistry](#) [#1936]

This work reports on simulations of the effectiveness of heterogeneous chemistry in stabilizing CO<sub>2</sub>, the primary constituent of Venus' atmosphere.

Mueller N. Tsang C. Smrekar S. Helbert J. Dyar M. D. **POSTER LOCATION #379**  
[Venus Atmosphere Variability as Error Source for Surface Emissivity](#) [#2260]

We show that precision of emissivity derived from Venus Express VIRTIS data is mostly limited by instrumental noise, not by unaccounted atmospheric variability.

Tsang C. McGouldrick K. **POSTER LOCATION #380**  
[Potential Correlations of Topography with Tropospheric Carbon Monoxide on Venus](#) [#1002]

Topographic influence on atmosphere / Venus carbon monoxide / Says it smells, maybe?

Andrews-Hanna J. C. Smrekar S. E. Mazarico E. **POSTER LOCATION #381**  
[Venus Gravity Gradiometry: Plateaus, Chasmata, Coronae, and the Need for a Better Global Dataset](#) [#2907]

Gravity gradiometry using Magellan data reveals new information as well as the need for better data. The proposed VERITAS mission will meet this need.

Tomlinson S. M. Smrekar S. E. Davaile A. **POSTER LOCATION #382**  
[Gravity Modeling of Subduction on Venus](#) [#1734]

Unlike Earth, Venus lacks a global system of plate tectonics; a process directly related to heat loss and likely related to planetary habitability.

Bondarenko N. V. Kreslavsky M. A. **POSTER LOCATION #383**  
[Venus Surface Normal Reflectance Through the Principal Component Analysis of Magellan Radar Altimeter Data](#) [#1854]

Principal component analysis of the Magellan radar altimeter backscattering data provides an independent estimate of surface reflectance at normal incidence.

Rolf T. Steinberger B. Werner S. C. **POSTER LOCATION #384**  
[Dynamic Origin and Implications of Venus' Gravity Spectrum](#) [#1435]

We use dynamic models of Venus' mantle convection to predict the planetary gravity field and compare it to observations to constrain mantle viscosity structure.

Port S. T. Kohler E. Chevrier V. **POSTER LOCATION #385**  
[Bismuth Tellurides and Sulfides Mixtures and Their Relation to Metal Frost on Venus](#) [#2245]

The stability of Bi<sub>2</sub>S<sub>3</sub>, Bi<sub>2</sub>Te<sub>3</sub>, and Te mixtures were experimentally tested in order to determine the source of the radar anomalies on Venus.

Port S. T. Kohler E. Craig P. I. Chevrier V. **POSTER LOCATION #386**  
[Stability of Pyrite Under Venusian Surface Conditions](#) [#2144]

The stability of pyrite was experimentally tested in a Venus chamber and a Lindberg oven under either a simulated Venus or a pure carbon dioxide atmosphere.

Baker E. W. Lang N. P. Nypaver C. A. **POSTER LOCATION #387**  
[Testing Channel Origin Hypotheses in the Mahuea Tholus Quadrangle \(V-49\), Venus](#) [#2711]

We evaluate possible formation processes for channels in the Mahuea Tholus quadrangle on Venus.

Nypaver C. Lang N. P. Baker E. Thomson B. J. **POSTER LOCATION #388**  
[Geologic mapping of the Mahuea Tholus Quadrangle \(V-49\), Venus — An Initial Progress Report](#) [#1338]

We present the initial results of our geologic mapping of the Mahuea Tholus quadrangle (V-49), Venus.

Patterson C. W. Ernst R. E. Samson C. **POSTER LOCATION #389**  
[Pit Chains Associated with Radiating Graben-Fissure Systems on Venus: Formation During Lateral Dyke Injection?](#) [#2097]

Assessing a genetic link between pit chain formation and lateral dyke propagation associated with radiating graben-fissure systems on Venus.

Kurosawa K. **POSTER LOCATION #390**  
[Impact-Driven Water Removal on Steam-Covered Venus-Like Planets](#) [#1839]

I proposed a new concept, referred to as impact-driven planetary desiccation, to explain the lack of the surface water on the current Venus.

King S. D. Prunty A. C. **POSTER LOCATION #391**  
[Is Evidence for Resurfacing on Venus Buried Deep Within the Interior?](#) [#2424]

Venus' young surface / The answer lies deep within / Gravity reveals.

Karimi S. Dombard A. J. Smrekar S. E. **POSTER LOCATION #392**  
[The Potential for Crater Relaxation on Venus](#) [#1385]

We demonstrate the potential for relaxation of larger Venusian craters under higher surface temperatures, and constrain the rheology of Venus' interior.

Smrekar S. E. Hensley S. Dyar M. D. Helbert J. VERITAS Team **POSTER LOCATION #393**  
[VERITAS \(Venus Emissivity, Radio Science, InSAR, Topography and Spectroscopy\): A Proposed Discovery Mission](#) [#2439]

VERITAS answers a key question in planetary evolution: 'How Earth-like is Venus?', using an X-band interferometric SAR, a NIR spectrometer, and gravity science.

Helbert J. Maturilli A. Ferrari S. Dyar M. D. Müller N. et al. **POSTER LOCATION #394**  
[Progress on Studying the Surface Composition of Venus in the Near Infrared](#) [#1947]

First laboratory high temperature emissivity spectra of Venus analog materials for all atmospheric windows between 0.85 and 1.18 micron.

Helbert J. Wendler D. Walter I. Widemann T. Marcq E. et al. **POSTER LOCATION #395**  
[The Venus Emissivity Mapper \(VEM\) Concept](#) [#1913]

VEM is a new instrument concept to study the surface of Venus. In orbit or on an aerial platform will provide new insights into the mineralogy of Venus.

Lee G. Polidan R. Ross F. Sen B. Sokol D.

**POSTER LOCATION #396**

[Venus Atmospheric Maneuverable Platform \(VAMP\) — Pathfinder Concepts](#) [#1688]

VAMP is an atmospheric rover that provides a new way to enter the Venus atmosphere and allows sustained in situ exploration of Venus cloud layers.

Trainer M. G. Mahaffy P. R. Brinckerhoff W. B.

Johnson N. M. Glaze L. S.

**POSTER LOCATION #397**

[Investigating the Origin and Evolution of Venus with In Situ Mass Spectrometry](#) [#1741]

Ancient secrets of / A nascent solar system / Told through noble gas.

Parsons A. M. Grau J. McClanahan T. P. Miles J. Perkins L. et al.

**POSTER LOCATION #398**

[Venus Bulk Elemental Composition Measurements with PING](#) [#2448]

The Probing In situ with Neutrons and Gamma rays (PING) instrument performs fast bulk elemental composition measurements of the near subsurface of Venus.

Wang Alian. Lambert J. L. Hutchinson I.

**POSTER LOCATION #399**

[Fine-Scale, Definitive, and Comprehensive Mineralogy for a Venus Landing Mission](#) [#2182]

We demonstrate the measurements and technologies that would enable the fine-scale definitive mineralogy to be achieved during the next Venus landing mission.