

Tuesday, April 7, 2015
POSTER SESSION: SURFACE
10:30 a.m. Room 101

Pandey S. Zacny K.

[*Impeller Flow Characterisation for a High Temperature Venus Drill and Sample Delivery System*](#) [#4002]

Venus Drill and Sample Delivery System is being designed to conduct surface operations during future missions. The impact of ambient atmosphere on the performance of pneumatically driven components is investigated using finite volume model approach.

Sharma S. K. Misra A. K. Acosta-Maeda T. E. Dyer M. D. Clegg S. M. Wiens R. C.

[*Time-Resolved Remote Raman Spectroscopy for Venus Exploration*](#) [#4011]

We describe a compact gatable planetary Raman spectrograph developed at the University of Hawaii that is suitable for detecting low concentrations of relevant minerals in a basaltic glass matrix on the Venus surface from a lander.

DeMarines J. Abedin M. N. Moore W. Bradley A. T.

[*From Clouds to Life Detection: The Past, Present, and Future of LIDAR*](#) [#4015]

LIDAR holds promise for Venus exploration with its application to remote sensing of mineralogy, atmospheric chemistry, and biosignatures. We present new developments in LIDAR instrumentation, and discuss potential applications to Venus science.

Hunter G. W. Ponchak G. E. Beheim G. M. Neudeck P. G. Spry D. J. Scardelletti M. C.
Meredith R. D. Taylor B. Beard S. Kiefer W. S.

[*High Temperature Seismometer, Electronics, and Sensor Development for Venus Applications*](#) [#4016]

This poster describes work to develop long-lived seismometry, high temperature electronics, and sensor technologies operational in Venus conditions with the potential to enable new Venus surface missions.

Pauken M. Smrekar S.

[*A Heat Flux Instrument for Measuring Venus Surface Heat Flow*](#) [#4017]

An instrument has been developed to measure the surface heat flow on Venus. Heat flow measurement would provide a better understanding of the evolutionary development of Venus. The instrument uses a semiconductor thermopile to measure heat flow.

Treiman A. H. Dyar M. D.

[*Instrument Requirements for Geochemistry \(Elemental Abundances\): An Approach*](#) [#4020]

An approach for geochemists to generate science-based requirements for elemental analyses on planetary surfaces such as Venus is described.

Landis G. A. Oleson S. R.

[*Venus Rover Design Studies*](#) [#4021]

This paper summarizes studies of rover and lander systems to operate on the surface of Venus analyzed by the NASA Glenn COMPASS team.

Wang A. Wei J. Lambert J. L. Hutchinson I.

[*A Compact Integrated Raman Spectrometer, CIRS, for Fine-Scale Definitive Mineralogy in Venus Explorations*](#) [#4027]

A flight Raman system requires carefully crafted optical configurations with high efficiency optical and opto-electronic components. CIRS and MMRS represent two flexible configurations to be selected by various types of Venus missions.