

Thursday, March 22, 2018
POSTER SESSION II: MERCURY: FIRST AMONG PLANETS II
6:00 p.m. Town Center Exhibit Area

[R601]

Steinbrügge G. Padovan S. Hussmann H. Steinke T. Stark A. et al. **POSTER LOCATION #2**
[Viscoelastic Tides of Mercury and Implications for Its Inner Core Size](#) [#1978]

We computed Mercury interior structure models and show that a measurement of radial tidal deformations might help to further constrain the inner core size.

Rowland R. L. II Vander Kaaden K. E. McCubbin F. M. Danielson L. R. **POSTER LOCATION #3**
[An Investigation into Sulfur Concentrations at Sulfide Saturation in Silicate Melts Under Reducing Conditions: Implications for the Planet Mercury](#) [#1554]

Investigation of the solubility of sulfur in silicates under low oxygen fugacities relevant to the conditions found on the planet Mercury by MESSENGER.

Vander Kaaden K. E. McCubbin F. M. Rowland R. L. Morris R. V. **POSTER LOCATION #4**
 Reppart J. J. et al.
[Synthesis and Characterization of Fe-Poor Olivine with Applications to Low-FeO Planetary Surfaces](#) [#1230]

Mg endmembers / 1 micron absorption band / How much iron's there?

Wilbur Z. E. Udry A. McCubbin F. M. Combs L. M. Rahib R. R. et al. **POSTER LOCATION #5**
[Aubrite and Enstatite Chondrite Impact Melt Meteorites as Potential Analogs to Mercury](#) [#1355]

We investigate aubrite and enstatite chondrite impact melt meteorites as analogs to Mercury to better understand mercurian igneous processes.

Varatharajan I. Maturilli A. Helbert J. Hiesinger H. **POSTER LOCATION #6**
[Thermal Weathering of Ca-Sulfides and Their Spectral Behavior in Thermal Infrared Under Simulated Mercury Environment Conditions](#) [#1399]

Thermal weathering and emissivity of Ca-sulfides under long exposure of Mercury daytime conditions is studied under simulated Mercury environment conditions.

Watters T. R. Anderson S. E. **POSTER LOCATION #7**
[The Tectonics of Mercury: A Post MESSENGER View](#) [#1539]

The MESSENGER mission revealed Mercury to be a planet with a truly remarkable tectonic story.

Peterson G. A. Johnson C. L. Byrne P. K. Phillips R. J. **POSTER LOCATION #8**
[Distribution of Areal Strain on Mercury: Insights into the Interaction of Volcanism and Global Contraction](#) [#2338]

Areal strain concentrations reveal thrust faulting within Mercury's smooth plains has accommodated more strain from global contraction than previously thought.

Hareyama M. Ishihara Y. Honda C. Ohtake M. **POSTER LOCATION #9**
[Preliminary Unsupervised Classification of the Mercury's Surface Using Multiband Reflectance Data Obtained by MESSENGER/MDIS](#) [#1724]

This report gives a preliminary result of unsupervised classification for reflectance spectra of 8 color (MDR) obtained by MESSENGER/MDIS.

Ostrach L. R. Mest S. C. Prockter L. M. Petro N. E. Byrne P. K. **POSTER LOCATION #10**
[Update on the Geologic Map of the Borealis Quadrangle \(H-1\) on Mercury](#) [#1747]

Geologic map / Borealis quadrangle / A work in progress.

Wright J. Rothery D. A. Balme M. R. Conway S. J. **POSTER LOCATION #11**
[Geological Mapping of the Hokusai \(H05\) Quadrangle of Mercury: Status Update](#) [#2164]

We present the current working version of the first geological map of the Hokusai quadrangle of Mercury.

Olson C. L. Izenberg N. R. Jozwiak L. M. **POSTER LOCATION #12**
[Spectral Characteristics of Mercury's Pyroclastic Deposits: Analysis of Characteristic Parameters and Spatial Variation](#) [#2303]

Analysis of reflectance spectra of Mercury's pyroclastic deposits, revealing compositional variation related to location and previous spectral classifications.

Deutsch A. N. Neumann G. A. Head J. W. **POSTER LOCATION #13**
[New Evidence for Surface Water Ice in Small-Scale Cold Traps and in Three Large Craters at the North Pole Region of Mercury from the Mercury Laser Altimeter](#) [#1537]

We map the surface reflectance at 1064 nm at Mercury's north pole to discuss surface ice, and the effects of scales of cold traps on Mercury's total ice budget.

Wright J. Rothery D. A. Balme M. R. Conway S. J. **POSTER LOCATION #14**
[Spatial Distribution and Morphometric Measurements of Circum-Caloris Knobs on Mercury: Application of Novel Shadow Measurements](#) [#2133]

We have mapped the circum-Caloris knobs. Their distribution is consistent with an impact origin. We use laser altimetry and shadows to measure their shapes.

Jones M. J. Izenberg N. R. Hibbitts C. A. Burgess K. D. Stockstill-Cahill K. R. **POSTER LOCATION #15**
[Implications of Olivine Stability for Laboratory Spectroscopy Studies](#) [#1383]

Interpretation of causes of permanent spectral changes in Fe-poor olivine heated in vacuum. Crystal annealing seems unlikely; undetected oxidation is favored.

Morlok A. Hamann C. Martin D. J. P. Joy K. H. Wogelius R. et al. **POSTER LOCATION #16**
[Mid-Infrared Spectroscopy of Laser-Produced Impact Melts](#) [#2118]

We present bulk powder and *in situ* mid-infrared spectra of basaltic melts produced in laser experiments.

Morlok A. Charlier B. Klemme S. Namur O. Sohn M. et al. **POSTER LOCATION #17**
[Spectroscopy of Planetary Analogs for MERTIS on the BepiColombo Mission](#) [#2151]

We present mid-infrared reflectance spectra of analog materials based on remote sensing and petrological experimental data for the surface of Mercury.

Reitze M. P. Morlok A. Hiesinger H. Weber I. Stojic A. **POSTER LOCATION #18**
[Simulating Mercury — Setup of a New High-Temperature High-Vacuum Chamber for Infrared Measurements](#) [#1983]

We simulate the surface of Mercury to investigate the impact of heat and pressure of mid-infrared reflectance spectra.

Hiesinger H. Helbert J. D'Amore M. Maturilli A. Peter G. et al. **POSTER LOCATION #19**
[Status of the Mercury Thermal Radiometer and Thermal Infrared Spectrometer \(MERTIS\) for BepiColombo](#) [#1997]

We report on the status of the Mercury Radiometer and Thermal Infrared Spectrometer (MERTIS), scheduled for launch on BepiColombo in October 2018.

Wohlfarth K. S. Grumpe A. Wöhler C. Morlok A. Hiesinger H. **POSTER LOCATION #20**
[Combined Reflectance and Emittance Spectroscopy in the Thermal Infrared Band: Implications for Mercury](#) [#2519]

We present a combined reflectance and emittance spectroscopy framework for the analysis of TIR spectra on Mercury.

Stojic A. N. Morlok A. Moreau J. Kohout T. Weber I. et al.

POSTER LOCATION #21

[*A Coordinated Shock Recovery and TEM Study: The Effects of Impact Pressures on Melt and npFe Production and Migration Behavior in Porous Materials*](#) [#2042]

We report on planned impact shock experiments in order to investigate the effects of micrometeorite bombardment on planetary regolith.

Hurley D. M. Vervack R. J. Pryor W. Killen R. M.

POSTER LOCATION #22

[*Observations and Modeling of Hydrogen in Mercury's Exosphere*](#) [#1723]

We analyze MESSENGER data to extract the spatial distribution of H in the atmosphere of Mercury. We compare to a model to determine source rates and regions.