

Thursday, March 22, 2018
MERCURY: FIRST AMONG PLANETS I
8:30 a.m. Waterway Ballroom 5

[R503]

Chairs: Kathleen Vander Kaaden
Lauren Jozwiak

- 8:30 a.m. Genova A. * Goossens S. Mazarico E. Lemoine F. G. Neumann G. A. et al.
[New Insights into Mercury Interior with the MESSENGER Mission](#) [#1659]
 Our new measurements of Mercury's moments of inertia provide evidence of the presence of a large solid inner core.
- 8:45 a.m. Johnson C. L. * Plattner A. M. Phillips R. J. Philpott L. C. Kinczyk M. et al.
[The Distribution and Origin of Mercury's Lithospheric Magnetization](#) [#1505]
 We present models for Mercury's lithospheric magnetization and discuss its distribution and origin.
- 9:00 a.m. Hood L. L. * Oliveira J. S. Spudis P. D. Galluzzi V.
[Investigating Sources of Mercury's Crustal Magnetic Field: Further Mapping of MESSENGER Magnetometer Data](#) [#2109]
 The occurrence of magnetic anomalies associated with some impact basins/craters but not others is a new constraint on crustal magnetic source models.
- 9:15 a.m. Boukaré C.-E. * Parman S. W. Parmentier E. M. Anzures B.
[Spatial Partitioning of Sulfur in the Mercury's Crystallizing Magma Ocean](#) [#1964]
 We use experimentally determined sulfur solubility in silicate melts to predict the depth at which sulfides precipitate in the Mercury's magma ocean.
- 9:30 a.m. Anzures B. A. * Parman S. W. Milliken R. E.
[Effect of Sulfur Speciation on Chemical and Physical Properties of Heavily Reduced Mercurian Melts](#) [#1694]
 Changes in sulfide speciation (FeS, MgS, CaS, Na₂S) influence activities, stability of phases, polymerization, and viscosity.
- 9:45 a.m. Sori M. M. *
[Mercury's Thin Crust](#) [#1048]
 Mercury's gravity and topography show that its average crustal thickness is 26 +/- 11 km, thinner than previously calculated. Several implications follow.
- 10:00 a.m. Rodriguez J. A. P. * Domingue D. L. Kargel J. S. Baker V. R. Teodoro L. F. et al.
[Evidence of Pervasive Collapse Over a Buried Volatile-Rich Crust on Mercury](#) [#1309]
 Tectonically induced devolatilization of buried volatile-rich materials on Mercury produced some of the solar system's oldest and largest chaotic terrains.
- 10:15 a.m. Kreslavsky M. A. * Zharkova A. Yu. Head J. W.
[Meter-Scale Surface Textures on Mercury: Comparison with the Moon](#) [#1394]
 Like on the Moon, regolith gardening smooths the surface. Small craters are in equilibrium. Finely Textured Slope Patches have no analog on the Moon.
- 10:30 a.m. Leight C. J. * Ostrach L. R.
[Characterizing Impact Melt on Mercury](#) [#2553]
 Impact melt on Mercury has several fine-scale features which distinguish it from volcanic-sourced melt.

- 10:45 a.m. Jozwiak L. M. * Izenberg N. R. Olson C. L. Head J. W.
[*Investigating the Age of Mercury's Pyroclastic Deposits*](#) [#2324]
We investigate the ages of Mercury's pyroclastic deposits using stratigraphic and spectral analysis. We find evidence geologically recent explosive volcanism.
- 11:00 a.m. Klima R. L. * Blewett D. T. Denevi B. W. Ernst C. M. Murchie S. L. et al.
[*Examining the Distribution and Concentration of Carbon on Mercury*](#) [#2257]
Mercury's carbon / Does it come from the inside? / How much do we find?
- 11:15 a.m. Nittler L. R. * Crapster-Pregont E. Frank E. A. McCoy T. J. McCubbin F. M. et al.
[*The Distribution of Chromium on Mercury's Surface*](#) [#2070]
Shining in X-rays / Hot planet shows chromium / Not evenly spread.
- 11:30 a.m. McCubbin F. M. * Vander Kaaden K. E. Hogancamp J. Archer P. D. Jr. Boyce J. W.
[*Can Silicon-Smelting Contribute to the Low O/Si Ratio on the Surface of Mercury?*](#) [#2156]
Silicon smelting / Plausible on Mercury? / It would appear so.