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

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.

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.

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.

Examining the Distribution and Concentration of Carbon on Mercury [#2257]
Mercury’s carbon / Does it come from the inside? / How much do we find?

The Distribution of Chromium on Mercury’s Surface [#2070]
Shining in X-rays / Hot planet shows chromium / Not evenly spread.

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.