Thursday, March 20, 2014 **[R701]**
POSTER SESSION: MERCURY
6:00 p.m. Town Center Exhibit Area

Philpott L. C. Johnson C. L. Winslow R. M. Anderson B. J. Korth H. et al. ***POSTER LOCATION #3***
Analysis of Magnetic Field Data from the Third Mariner 10 Flyby of Mercury: Comparison with MESSENGER Data and Constraints on Secular Variation **[#1169]**
Analysis of magnetic field data from the third Mariner 10 flyby of Mercury and comparison with MESSENGER data yields no evidence for secular variation.

Becker K. J. Becker T. L. Edmundson K. L.
Gaskell R. W. McNutt R. L. Jr. et al. ***POSTER LOCATION #4***
Progress Towards a Global Digital Elevation Model for Mercury **[#2243]**
A key objective of the MESSENGER mission is to collect and characterize global topographic measurements of Mercury. Global DEMs will be created from this work.

Klima R. L. Izenberg N. R. Murchie S. L.
Holsclaw G. M. McClintock W. E. et al. ***POSTER LOCATION #5***
Calibration Issues in Visible and Infrared Spectroscopic Observations of Mercury at High Temperature **[#1978]**
Vis/NIR spectra of Mercury have been collected at higher temperatures than expected. We describe the thermal effects and calibration strategy to mitigate them.

Izenberg N. R. Pashai P. Kochte M. C. Klima R. L. Weider S. Z. et al. ***POSTER LOCATION #6***
Correlation of Mercury Spectral Units with Geology and Elemental Abundance **[#1216]**
A preliminary Mercury map based on MESSENGER VIRS spectral reflectance is compared with geology and color from MDIS imagery and elemental abundance from XRS.

D'Amore M. Helbert J. Ferrari S. Maturilli A. Nittler L. R. et al. ***POSTER LOCATION #7***
Unsupervised Classification of Mercury's Visible-Near-Infrared Reflectance Spectra: Comparison with Major Element Compositions **[#1073]**
Clustering analyses on MASCS/MESSENGER results in a polar and equatorial distinct spectral unit. Comparison with an X-ray spectrometer shows elemental correlation.

Blewett D. T. Denevi B. W. Ernst C. M. Chabot N. L. Neish C. D. ***POSTER LOCATION #8***
Mapping of Optical Maturity on Mercury **[#1131]**
A new method for mapping optical maturity on Mercury, useful for examining relative ages of rayed craters and identifying rays with a compositional component.

Domingue D. L. Peplowski P. N. Nittler L. R. D'Amore M. Helbert J. et al. ***POSTER LOCATION #9***
A Search for Regional Signatures of Space Weathering on Mercury **[#1363]**
This study examines possible regional variations in the space weathering of Mercury's surface due to surface temperature and irradiation of the surface.

Vilas F. Domingue D. L. Helbert J. D'Amore M. Izenberg N. R. et al. ***POSTER LOCATION #10***
Dominici Crater Wall Hollows: Potential Spectral Evidence for Sulfide Mineralogy on Mercury **[#1296]**
MESSENGER MDIS photometry of hollows located on the south wall/rim of Mercurian crater Dominici shows evidence of a spectral absorption feature suggesting CaS.

Vander Kaaden K. E. McCubbin F. M. ***POSTER LOCATION #11***
A Synthesis of Experimental Data Describing the Geochemical Behavior of Lithophile Elements at Extremely Reducing Conditions Seen on Mercury **[#1914]**
Experiments are being conducted to determine the geochemical behavior of typically lithophile elements as a function of decreasing oxygen fugacity.

Lucchetti A. Thomas R. Cremonese G. Massironi M. Rothery D. A. et al. ***POSTER LOCATION #12***
Analysis and Numerical Modeling of a Pit Crater on Mercury **[#1723]**
Analysis of an unusual feature within an impact crater on Mercury, even using the iSALE shock physics code, to confirm if it is due to pyroclastic volcanism.

Rothery D. A. Thomas R. J. Kerber L. ***POSTER LOCATION #13***
Compound Volcanoes on Mercury — Implications for Vent Migration and Longevity **[#1854]**
Mercury's compound volcanos are only hundreds of meters high. Some could have been active episodically for >1 Ga. Vents are explosively excavated and >1 km deep.

Di Achille G. Zusi M. Mazzotta Epifani E. Popa C. Galluzzi V. et al. ***POSTER LOCATION #14***
High Resolution Morphometry of Mercury's Candidate Volcanic Vents Using Mercury Dual Imaging System (MDIS)-Derived Stereo Topography **[#2035]**
We use MDIS NAC orbital images to derive high-resolution topography of Mercury's candidate volcanic vents and study their morphometry.

Kerber L. Besse S. Head J. W. Blewett D. T. Goudge T. A. ***POSTER LOCATION #15***
The Global Distribution of Pyroclastic Deposits on Mercury: The View from Orbit **[#2862]**
Pyroclastic deposits are found to be widespread across the surface of Mercury. Associated morphologies range from deep pits to positive volcanic edifices.

Thomas R. J. Rothery D. A. Conway S. J. Anand M. ***POSTER LOCATION #16***
The Timing and Distribution of Pyroclastic Volcanism on Mercury **[#1123]**
The first study to date pyroclastic activity on Mercury, dating the thickest deposits to 3.8–3.27 Ga and smaller-scale activity possibly within the last 1 Ga.

Whitten J. L. Head J. W. Denevi B. W. Solomon S. C. ***POSTER LOCATION #17***
Formation of Intercrater Plains on Mercury **[#1219]**
Most intercrater plains were emplaced volcanically based on the unit distribution and the stratigraphic relationships between secondary craters and smooth plains.

Sehlke A. Whittington A. ***POSTER LOCATION #18***
Rheology of Lava Flows on Mercury: An Experimental Study **[#2275]**
Rheology experiments on lava composition appropriate to Mercury.

Ackiss S. E. Buczkowski D. L. Ernst C. McBeck J. Edrich S. et al. ***POSTER LOCATION #19***
Knob Heights Within the Circum-Caloris Geologic Units on Mercury: Interpretations of the Geologic History of the Region **[#2328]**
Circum-Caloris / Study formations with knobs / How high? How many?

Selvans M. M. Watters T. R. James P. B. Solomon S. C. ***POSTER LOCATION #20***
Statistical Analysis of the Distribution of Tectonic Features and Crustal Thickness in the Northern Hemisphere of Mercury **[#1442]**
We assess the geographic relationship between faults and crustal thickness on Mercury. We find potential for influence of mantle flow on scarp localization.

Hiesinger H. Helbert J. Peter G. Walter I. D'Amore M. et al. ***POSTER LOCATION #21***
The Mercury Thermal Radiometer and Thermal Infrared Spectrometer (MERTIS) for BepiColombo: A Status Report **[#1912]**
We have built, calibrated, and delivered the MERTIS instrument to ESA for integration on the spacecraft. The instrument is now fully functional and integrated.

Helbert J. D'Amore M. Maturilli A. Säuberlich T. Walter I. et al. ***POSTER LOCATION #22***
What the MErcury Radiometer and Thermal infrared Imaging Spectrometer (MERTIS) Instrument will see on Mercury — Creating Synthetic Data from MESSENGER Results **[#1458]**
We have performed calibration measurement with analog materials at temperatures of up to 500°C with the MERTIS qualification and flight model at PEL at DLR.

Aboudan A. Colombatti G. Debei S. Palumbo P. Flamini E. ***POSTER LOCATION #23***
Determination and Uncertainty Analysis of Mercury Libration Using Bepi Colombo HRIC Images **[#1696]**
BepiColombo HRIC images will be used to investigate Mercury's interior measuring planet libration. Libration fitting method and its uncertainty are presented.

Vaughan W. M. Head J. W. ***POSTER LOCATION #24***
Criteria for Identifying Mercurian Meteorites **[#2013]**
We present new criteria for identifying meteorites from Mercury based on recent observations of Mercury by the MESSENGER spacecraft.